State Route 74
Lower Ortega Highway Widening

ORANGE COUNTY, CALIFORNIA
DISTRICT 12 – ORA – 74, PM 1.0/1.9
EA 086920
SCH# 20070771038

Draft Environmental Impact Report

Prepared by the

State of California Department of Transportation

November 2008

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General Information About the Document

What Is In This Document:

The California Department of Transportation (Department) has prepared this Draft Environmental Impact Report (EIR), which examines the potential environmental impacts of the proposed project − widening of State Route 74 (SR-74) from two lanes to four lanes from Calle Entradero to the City of San Juan Capistrano (City)/County of Orange (County) limits − located in the City of San Juan Capistrano, Orange County, California. The document describes why the project is being proposed; alternatives for the project; the existing environment that could be affected by the project; the potential impacts from each of the alternatives; and the proposed avoidance, minimization, compensation, and/or mitigation measures.

What You Should Do:

- Please read this Draft Environmental Impact Report. Copies of this document as well as the technical studies are available for review at:

  California Department of Transportation, District 12
  3347 Michelson Drive, Suite 100
  Irvine, California 92612
  http://www.dot.ca.gov/dist12/Lower74_DEIR.html

  City of San Juan Capistrano
  Planning Services Department
  32400 Paseo Adelanto
  San Juan Capistrano, California 92675

  San Juan Capistrano Regional Library
  31495 El Camino Real
  San Juan Capistrano, California 92675

- Attend public hearing on January 14, 2009.
- We welcome your comments. If you have any comments regarding the proposed project, please send your written comments to the Department by January 30, 2009.
- Submit comments via postal mail to:

  California Department of Transportation, District 12
  Smita Deshpande
  Chief, Branch A, Environmental Planning
  3337 Michelson Drive, Suite 380
  Irvine, California 92612-8894
  Attention: Scott Shelley

- Submit comments via email to: lower74EIR_D12@dot.ca.gov.

What Happens Next

After comments are received from the public and reviewing agencies, the Department may: (1) give environmental approval to the proposed project; (2) undertake additional environmental studies; or (3) abandon the project. If the project is given environmental approval and funding is appropriated, the Department could design and construct all or part of the project.

For individuals with sensory disabilities, this document can be made available in Braille, large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to California Department of Transportation, Attn: Scott Shelley, Environmental Planning, 3337 Michelson Dr. Suite 380, Irvine, California 92612-8894, or call (949) 724-2705, or use the California Relay Service TTY number (800) 735-2929.

SCH# 20070771038
12-ORA-74- PM 1.0/1.9
EA 086920

State Route 74 Lower Ortega Highway Widening

Widen State Route 74 from two lanes to four lanes from Calle Entradero (PM 1.0) to the City/County limits (PM 1.9)

DRAFT ENVIRONMENTAL IMPACT REPORT

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

11-24-2008
Date of Approval

Cindy Quon
District Director
California Department of Transportation
District 12

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Summary

S.1 Project Description

The State of California Department of Transportation (Department) proposes to widen State Route 74 (SR-74) from two lanes to four lanes from Calle Entradero (Post Mile [PM] 1.0) to the City of San Juan Capistrano (City)/County of Orange (County) limits (eastern City limit) (PM 1.9). The Department is the Lead Agency for the California Environmental Quality Act (CEQA) and the City is a Responsible Agency under CEQA. The total length of the project is approximately 0.9 mile (mi). Figures 1-1 and 1-2 show the regional location of the project and project vicinity maps. Additionally, this project is included in the Southern California Association of Governments (SCAG) 2008 Regional Transportation Plan (RTP), as amended, and is also listed under State Highway projects on page 11 of the 2006 Regional Transportation Improvement Program (RTIP).

The existing SR-74 alignment consists of four through lanes from I-5 that transition into three through lanes which, at approximately 330 feet (ft) east of Calle Entradero, transition into two through lanes.

Five roadways intersect with SR-74 from the south, within the project limits: Calle Entradero, Via Cordova, Via Cristal, Via Errecarte, and Avenida Siega. North of SR-74, Via Cordova becomes Hunt Club Drive, Avenida Siega becomes Shade Tree Lane, and Via Cristal and Via Errecarte are T intersections. Additionally, to the north of SR-74, Strawberry Lane, Toyon Drive, and Palm Hill Drive provide access to hillside private properties.

Sidewalks exist intermittently throughout the project area on the north and south sides of SR-74. These sidewalks begin outside the western limits of the project.

S.2 Purpose and Need

S.2.1 Project Purpose

The purpose of the project is to accomplish the following specific objectives:

- Relieve existing and future traffic congestion and improve the flow of traffic on SR-74.
- Accommodate planned growth and development in the surrounding areas.
- Provide improvements consistent with local planning documents.
- Gap closure.

The project is a proposed solution to the deficiency identified in the need statement below.

S.2.2 Project Need

SR-74 serves as a key connection route between Orange and Riverside Counties. The closest other roadways that provide this connection are State Route 91 (SR-91), located approximately 26 mi to the north, and State Route 76 (SR-76), which is approximately 32 mi to the south. Both of these facilities are heavily traveled. As a result of the distance to alternative connectors, SR-74 experiences a consistent amount of regional traffic, despite the rural design of much of the roadway. In addition to serving this regional demand, the subject segment of SR-74 also serves as a primary access to the City. Because of topography, SR-74 is one of the few arterial highways within the City that extends to the east much beyond I-5.

The City developed a Circulation Element as part of the General Plan for City planning policies. The plan evaluates the transportation needs of the community within the framework of the planned transportation network of the county, region, and state. The Orange County Master Plan of Arterial Highways (MPAH) and the City of San Juan Capistrano designate Ortega Highway as a primary arterial highway, a four-lane divided roadway. In Table C-6 of the City's Circulation Element, the widening of Ortega Highway is planned as a long-range roadway improvement and is to be widened to four lanes from Calle Entradero to the east City limits.

The City has a 2002 Strategic Transportation Plan (STP) that includes the widening of Ortega Highway. The plan evaluated local and regional transportation issues and land development projects to assess the significant traffic impacts on the City's streets and State highways.

The need for this project is based on an assessment of the existing and future transportation demand and current and predicted future traffic on SR-74 as measured by level of service (LOS). LOS is based on the ratio of traffic volume to the design

capacity of the facility. It is expressed as a range from LOS A (free traffic flow with low volumes and high speeds resulting in low densities) to LOS F (traffic volumes exceed capacity and result in forced flow operations at low speeds, resulting in high densities).

The following discussion demonstrates existing and forecast traffic demand on SR-74.

Existing Deficiencies

Increasing traffic on SR-74 has degraded the highway LOS, particularly during peak hours. During the a.m. peak hour, the highway experiences between LOS D and LOS E and during the p.m. peak period, LOS D.

The existing SR-74 is four through lanes (two travel lanes in each direction) from I-5 to approximately 330 ft east of Calle Entradero, where it transitions to three through lanes and then to two through lanes (one travel lane in each direction). The widening of SR-74 east of the City limits, known as the Lower 74 Widening Project-County Portion, is currently being widened to four through lanes from 2,000 ft east of the Antonio Parkway/La Pata Avenue intersection to the City limits. Following construction of the County portions of the SR-74 widening, SR-74 will be four through lanes both east and west of the project limits for the City portions. Therefore, the two-lane section of SR-74 proposed to be widened to four lanes for the City portions is an existing choke point that results in traffic congestion as the roadway narrows to two lanes east of Calle Entradero. The City portions of the widening project would provide a gap closure that would relieve traffic congestion by widening SR-74 to four lanes through the project limits. Following construction of the City portions, SR-74 would be four through lanes from I-5 to 2,000 ft east of the Antonio Parkway/La Pata Avenue intersection.

Projected Deficiencies

Traffic congestion through the project area is expected to increase with the continued growth in the region. By 2035, the LOS on SR-74 is projected to deteriorate to substandard levels. The mainline would operate at LOS F in 2035 in the peak hours if SR-74 is not improved. There would be considerable delays, and the operating speed would be less than 35 mph.

Social and Economic Demands

A review of the growth projections adopted by SCAG indicates continuing growth in the region that the project serves. The population in Orange County is expected to

increase from 2.8 million in 2000 to over 3.7 million in 2035, an increase of nearly 25 percent. Growth in Riverside County is projected to increase from 1.5 million in 2000 (U.S. Census Bureau 2000) to 3.6 million in 2035 (Riverside County Projections 2006), an increase of 140 percent. This regional growth will continue to place a high demand on SR-74.

The following are the alternatives under consideration. For more detailed information, please refer to Chapter 1, Project Description.

Build Alternatives 1 and 2

Common Features of the Build Alternatives

- Reconstructed sidewalk.
- Intersection improvements.
- Reconstruction of driveways.
- Addition of pedestrian and bicycle facilities.
- Right-of-way acquisitions (sliver acquisitions).
- Cut and fill.
- Drainage improvements.
- Retaining walls.
- Noise attenuation.
- Signals and lighting.
- Utilities.
- Pavement rehabilitation.

Unique Feature of Build Alternative 1

- Removal of existing meandering sidewalk.

Unique Features of Build Alternative 2.

- Reconstructed sidewalk (in addition to those noted under common features listed above).
- Retaining walls (in addition to those noted under Common Features listed above).

No Build Alternative

The No Build Alternative would not include any improvements to the project and would result in substantial delays in traffic and LOS F operating conditions along the mainline.

Planning Status

The estimated cost for the project is approximately $26,000,000. The project is funded by the County of Orange. Construction for this project is expected to start in the fall of 2011 and be completed in the fall of 2013.

S.3 Areas of Controversy and Unresolved Issues

Based on comments received during public review of the previously circulated environmental document for this project, an Initial Study with Proposed Mitigated Negative Declaration (IS [Proposed MND]), as well as comments received during several public information meetings, the following public concerns have been raised:

- Noise attenuation.
- Removal of the meandering sidewalk along the north side of SR-74 under Alternative 1.
- Visual impacts to the SR-74 corridor.
- Community interest in the addition of a traffic signal.

Special attention has been paid to these concerns during the preparation of this Draft Environmental Impact Report (EIR) and its revised backup studies. Each substantive environmental comment received on the IS (Proposed MND) has been considered and addressed in this Draft EIR**.** These comments can be found in Appendix H (bound separately). Technical studies completed for the IS (Proposed MND) have been updated for the Draft EIR to address the comments. A list of these studies can be found in Appendix F.

S.4 Summary of Potential Impacts by Alternative

Table S-1 summarizes the potential adverse impacts of the Build and No Build Alternatives, based on the findings of this Draft EIR.

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Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
Land Use (Temporary)	This alternative would have no temporary impact on land use since construction is not required.	This alternative will have no temporary land use impacts.	This alternative will have no temporary land use impacts.	None required.	No impact.
Land Use (Permanent)	This alternative would be inconsistent with the City's General Plan.	This alternative will have less than significant land use impacts due to sliver acquisitions and will not conflict with adopted goals or policies.	This alternative will have less than significant land use impacts due to sliver acquisitions and will not conflict with adopted goals or policies.	None required.	Less than significant.
Growth (Temporary)	The No Build Alternative does not require construction; therefore, there would be no temporary impacts on growth-inducing factors.	Build Alternative 1 would not have any temporary impacts on growth-inducing factors since temporary construction does not induce growth.	Build Alternative 2 would not have any temporary impacts on growth-inducing factors since temporary construction does not induce growth.	None required	No impact.
Growth (Permanent)	This alternative does not require construction; therefore, there would be no impact on growth-inducing factors.	Growth impacts of this alternative are considered less than significant since the adjacent land is built out with and/or entitled for suburban, mostly single-family, residential uses.	Growth impacts of this alternative are considered less than significant since the adjacent land is built out with and/or entitled for suburban, mostly single-family, residential uses.	None required.	Less than significant.
Community Impacts/ Population and Housing (Temporary)	The No Build Alternative does not increase population and housing; therefore, there would be no temporary impact on population and housing.	Build Alternative 1 would temporarily affect local communities. Temporary construction impacts would include disruption of local traffic patterns and access to residences and businesses; increased traffic congestion; and	Build Alternative 2 would temporarily affect local communities. Temporary construction impacts would include disruption of local traffic patterns and access to residences and businesses, increased traffic congestion; and increased noise.	Implementation of the Traffic Management Plan (TMP) would minimize temporary impacts to population and housing.	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
		increased noise, vibration, and dust.			
Community Impacts/ Population and Housing (Permanent)	The No Build Alternative does not increase population and housing; therefore, there would be no temporary impact on population and housing.	Build Alternative 1 would not increase population or housing figures for the area in relation to growth, composition, or demographics since no full property acquisitions are required.	Build Alternative 2 would not increase population or housing figures for the area in relation to growth, composition, or demographics since no full property acquisitions are required.	None required.	No permanent impact.
Community Impacts/ Economics (Temporary)	The No Build Alternative would not result in temporary economic impacts since it does not require construction.	Since Build Alternative 1 does not displace any businesses, no loss of employment, loss of tax revenue, or reduction in income level is expected. Build Alternative 1 would have a short-term beneficial effect on employment by generating direct and indirect employment opportunities during construction.	Since Build Alternative 2 does not displace any businesses, no loss of employment, loss of tax revenue, or reduction in income level is expected. Build Alternative 2 would have a short-term beneficial effect on employment by generating direct and indirect employment opportunities during construction.	None required.	Less than significant beneficial impact.
Community Impacts/ Economics (Permanent)	Employment and tax revenue could be adversely affected due to delays for commuters and consumers. The delay in the movement of goods and services can result in increased costs to businesses, which are often passed on to the	Build Alternative 1 does not displace any businesses, and no loss of employment, loss of tax revenue, or reduction in income level is expected. The small amount of tax revenue loss from sliver acquisitions would not substantially alter the tax base.	Build Alternative 2 does not displace any businesses, and no loss of employment, loss of tax revenue, or reduction in income level is expected. The small amount of tax revenue loss from sliver acquisitions would not substantially alter the tax base.	None required.	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
	consumer. Therefore, the No Build Alternative would have a substantial impact on economics within the local community.				
Community Impacts/ Community Facilities and Services (Temporary)	The No Build Alternative would not result in temporary impacts to community facilities or services. It would not result in removal or change of access to facilities or services, nor would it create new demand for community services, since no capital improvements are included with this alternative. Therefore, the No Build Alternative would not have any temporary impact.	Build Alternative 1 would remove the sidewalk along the north side of SR-74 between Calle Entradero and Via Cordova. Temporary impacts associated with this removal would be limited.	Build Alternative 2 would straighten the existing sidewalk on the north side of SR-74 from Calle Entradero and Via Cordova. This would result in a temporary impact to pedestrian movement during construction of the realigned sidewalk.	Implementation of the TMP would minimize temporary impacts to pedestrian movement.	Less than significant.
Community Impacts/ Community Facilities and Services (Permanent)	SR-74 west of the project limits is currently four lanes, and upon completion of the County portions SR-74, will be four	Build Alternative 1 would remove the sidewalk along the north side of SR-74 between Calle Entradero and Via Cordova. A new sidewalk would be constructed east of Avenida	Build Alternative 2 would straighten the existing sidewalk on the north side of SR-74 from Calle Entradero and Via Cordova. A short retaining wall would be required along the existing limit of	Implementation of Mitigation Measures V-1 through V-4 would reduce impacts (Key Views 2 and 3) due to vegetation/tree removal and construction of walls as a result	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
	lanes to the east of the City limits. Therefore, under the No Build Alternative, traffic demand would exceed capacity, and speeds will vary greatly, which will result in significant delays.	Siega and would connect to the County sidewalk system to provide continuity. This would be a beneficial impact. There would be no impact to the existing equestrian trail or to any future signal/pedestrian crossing under Build Alternative 1.	the public right-of-way. Most, if not all, of the trees within this area along the north side of the roadway would be removed. A new sidewalk would be constructed east of Avenida Siega and would connect to the County sidewalk system to provide continuity. This would be a beneficial impact. There would be no impact to the existing equestrian trail or to any future signal/pedestrian crossing under Build Alternative 2.	of both Build Alternatives.	
Community Impacts/ Community Character and Cohesion (Temporary)	This alternative does not require construction; therefore, there will be no impact on community character and cohesion, and there will be no relocations.	Construction of Build Alternative 1 would temporarily affect local communities. Temporary construction impacts would include disruption of local traffic patterns and access to residences and businesses; increased traffic congestion; and increased noise, vibration, and dust.	Construction of Build Alternative 2 would temporarily affect local communities. Temporary construction impacts would include disruption of local traffic patterns and access to residences and businesses; increased traffic congestion; and increased noise, vibration, and dust.	Minimization measures include: Coordination with property owners regarding the construction schedule, and phasing shall be included in the TMP.	Temporary impacts as a result of construction are considered less than significant.
Community Impacts/ Community Character and Cohesion (Permanent)	This alternative would affect access to community facilities and services, since traffic demand will exceed capacity and	This alternative includes removal of existing vegetation (including trees) and constructing noise barriers and retaining walls. Based on the subjective human perception of community	This alternative includes removal of existing vegetation (including trees) and constructing noise barriers and retaining walls. Based on the subjective human perception of community	Mitigation measures include: V-1, V-2, V-3 and V-4, as discussed in Section 2.1.6, Visual/Aesthetics.	Permanent impacts to community character are considered significant even after mitigation is incorporated.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
	speeds will vary greatly, which will result in considerable delays. An increase in forecasted congestion for the study area would result in substantial impacts to community character by increasing air pollution and traffic congestion.	character, the widening of SR-74 in this area is a potentially significant impact for Key Views 1, 4, and 5 on community character. Build Alternative 1 will not have an impact on community cohesion since SR-74 is an existing highway traversing the study area.	character, the widening of SR-74 in this area is a potentially significant impact for Key Views 1, 4, and 5 on community character. Build Alternative 2 will not have an impact on community cohesion since SR-74 is an existing highway traversing the study area.	Minimization measures include: Compliance with the Department's Right of Way Manual, which requires compensation at fair market value for property acquisitions and minimizes project impacts. Additionally, coordination with property owners regarding the construction schedule and phasing will be included in the TMP.	Permanent impacts as a result of the 10 sliver acquisitions are considered less than significant.
Community Impacts/ Relocation (Temporary)	No temporary residential or business relocations necessitating relocation would be required under the No Build Alternative, and this alternative would have no temporary relocation impacts.	No temporary residential or business relocations necessitating relocation would be required under Build Alternative 1.	No temporary residential or business relocations necessitating relocation would be required under Build Alternative 2.	None required.	No impact.
Community Impacts/ Relocation (Permanent)	No permanent residential or business relocations necessitating relocation would be required under the No Build Alternative, and there would be no permanent impacts.	Ten small sliver acquisitions of right-of-way would be required in various locations throughout the project limits for both Build Alternatives. No permanent impacts to access are anticipated as a result of the proposed project.	Ten small sliver acquisitions of right-of-way would be required in various locations throughout the project limits for both Build Alternatives. No permanent impacts to access are anticipated as a result of the proposed project.	Compliance with the Department's Right of Way Manual would avoid relocation impacts.	No impact.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
Utilities and Emergency Services (Temporary)	This alternative does not require construction; therefore, there will be no impact on utilities and emergency services.	During construction, Alternative 1 would require the relocation or protection in place of several utility facilities.	During construction, Alternative 2 would require the relocation or protection in place of several utility facilities.	Minimization measures include: The Department would coordinate with the affected service provider in each instance of relocation or protection in place to ensure that work is during times of low demand and in accordance with the appropriate requirements and criteria. Coordination with the utility providers would be initiated during the preliminary engineering phase of the project and would continue through final design and construction, consistent with Department requirements. The Department would coordinate with emergency service providers to avoid emergency service delays by ensuring that all providers are aware well in advance of temporary road closures and detours. The Department would also coordinate with emergency	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
				service providers to avoid emergency service delays by ensuring that all providers are aware well in advance of temporary road closures and detours. Please see Chapter 1, Project Description for details on the Traffic Management Plan.	
Utilities and Emergency Services (Permanent)	Emergency services (police, fire, and emergency vehicle services) may be delayed as traffic congestion worsens and the level of service in the project area declines, resulting in a significant impact.	There will be no long-term disruptions in service as a result of utilities within the study area being relocated or replaced, and there are no permanent impacts to utilities.	There will be no long-term disruptions in service as a result of utilities within the study area being relocated or replaced, and there are no permanent impacts to utilities.	None required.	No impact to emergency services.
Traffic and Transportation /Bicycle and Pedestrian (Temporary)	This alternative does not require construction; therefore, there will be no impact to traffic, transportation, bicycle, or pedestrian facilities.	Temporary traffic delays and detours during construction.	Temporary traffic delays and detours during construction. Under Alternative 2, pedestrian traffic will be temporarily disrupted as the existing sidewalk on the north side of State Route 74 (SR-74) between Calle Entradero and Via Cordova is reconstructed.	Minimization measures include: A Traffic Management Plan (TMP) will be prepared for the SR-74 Widening project. During construction, some traffic delays are anticipated.	Less than significant.
Traffic and Transportation /Pedestrian	The No Build Alternative would not meet the purpose and	Due to growth in traffic between 2008 and 2035, traffic exiting local streets and attempting to	Due to growth in traffic between 2008 and 2035, traffic exiting local streets and attempting to turn left	The following project component will ensure that traffic and transportation	Less than significant.

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Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
and Bicycle Facilities (Permanent)	need to enhance capacity in the long term. The mainline would operate at level of service (LOS) F. The No Build Alternative would not address existing and forecast traffic conditions and would have significant impacts to traffic and transportation.	turn left onto westbound State Route 74 (SR-74) would incur extended delays due to a lack of gaps in the through traffic.	onto westbound State Route 74 (SR-74) would incur extended delays due to a lack of gaps in the through traffic.	impacts as a result of the proposed project are less than significant: The project will provide eastbound left-turn lanes at the unsignalized intersections and allow U-turns at these locations to alleviate side street delays. This would facilitate the movement of minor street traffic onto the State Route 74 (SR-74) via a right turn and then a U-turn at the next available intersection.	
Visual and Aesthetics (Temporary)	This alternative does not require construction; therefore, there will be no impact on visual and aesthetics.	Temporary adverse visual impacts during construction, such as views of construction activity, truck hauling, excavation activity, and detour signage. Construction impacts will cease following project completion, and adverse impacts to existing landscape would diminish and be eliminated over time as replacement landscaping matures.	Temporary adverse visual impacts will occur during construction, such as views of construction activity, truck hauling, excavation activity, and detour signage. Construction impacts will cease following project completion, and adverse impacts to existing landscape would diminish and be eliminated over time as replacement landscaping matures.	Minimization measures include: All landscaping currently maintained by the City of San Juan Capistrano (City) shall be replaced with similar landscaping.	Less than significant.
Visual and Aesthetics (Permanent)	This alternative does not require construction; therefore, there will be no impact on visual and aesthetics.	Implementation of Alternative 1 would widen State Route 74 (SR-74) to four lanes and would generally introduce curb and gutter, retaining wall structures, sound walls, new sidewalk	Implementation of Alternative 2 would widen State Route 74 (SR-74) to four lanes and would generally introduce curb and gutter, retaining wall structures, sound walls, reconstructed	Minimization measures include: Erosion control seed species shall be determined by the California Department of Transportation (Department)	Less than significant for Key Views 2 and 3. Significant for Key Views 1, 4, and 5.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
		(Avenida Siega to the City of San Juan Capistrano [City]/County of Orange [County] line), and ornamental landscaping throughout the project limits. This would change from a rural landscape to a more suburban landscape. Therefore, the visible change in character/quality at Key Views 1, 4 and 5 would remain significant even after implementation of mitigation measures.	sidewalk, and ornamental landscaping throughout the project limits. This would change from a rural landscape to a more suburban landscape. Therefore, the visible change in character/quality at Key Views 1, 4, and 5 would remain significant even after implementation of mitigation measures.	District Landscape Architect to ensure that the mix and application strategy are appropriate for the specific soil composition of the area. To maintain the context of the adjacent communities (color, form, and texture), the project shall install landscaping along proposed wall features and adjoining hillsides that is compatible with the existing landscaping. Landscape shall include trees (where feasible), shrub/groundcover mass planting, and vines on opaque sound walls and/or retaining walls to soften the hardscape features and reduce the adverse environmental impacts (such as glare and radiant heat). All selected species within California Department of Transportation (Department) right-of-way shall share similar water requirements. The new landscape concept and plant palette shall be determined in consultation with the Department District Landscape Architect during the Project	

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
				Design Phase. All landscaping currently maintained by the City of San Juan Capistrano shall be replaced with similar landscaping. Trees that are removed shall be replaced where feasible. Where speeds are posted greater than 35 miles per hour (mph), large trees (trees with trunks over four inches in diameter when mature) shall be placed outside the clear recovery zone (30 feet [ft] from the travel lane). Small trees (trees with trunks four inches in diameter or less when mature) shall be used to replace the trees within the clear recovery zone. Tree spacing for small trees can be adjusted to account for the removal of existing mature trees. All utilities that are to be moved shall be placed underground, where feasible, in coordination with the California Department of Transportation (Department) and the City of San Juan	

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
				Capistrano. Mitigation measures include: **V-1** For trees (including coast live oak trees) that are removed, the California Department of Transportation (Department) will prepare a planting plan for approval by the City of San Juan Capistrano Planning Commission. The planting plan shall be in compliance with Section 9-2:349 of the City of San Juan Capistrano Municipal Code and shall require the replacement of trees at a minimum ratio of 1:1. The plan shall identify trees to be replanted within the State right-of-way and those to be planted off site. As part of this planting plan, the Department will recommend that the City of San Juan Capistrano install native tree	

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
				species. The City Tree Removal Permit process can be referenced in Appendix J of this document. **V-2** To maintain consistency with the existing infrastructure (i.e., walls, sidewalks) in the project area, architectural treatments for the structure elements of the project shall be determined in consultation with the California Department of Transportation (Department) District Landscape Architect and the City of San Juan Capistrano during the Plans, Specifications, and Estimate (PS&E) phase. **V-3** To minimize visual impacts caused by the extensive large-scale walls, wall aesthetic enhancements shall be developed as a theme treatment (i.e., terraced,	

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
				color treatment, textural treatment, varying materials) for all new retaining walls and sound walls within the proposed project. Structural themes (i.e., walls, sidewalk) shall be similar in character to the surrounding environment. The elements shall be determined in consultation with the Department District Landscape Architect and the City of San Juan Capistrano during the Plans, Specifications, and Estimates (PS&E) phase. The visual simulations included in this Visual Impact Assessment represent standard wall treatments only and are subject to change. **V-4** To minimize visual impacts caused by the replacement sidewalk, aesthetic enhancements shall be implemented (i.e., color treatment,	

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
				textural treatment, varying setbacks from the highway, use of material other than concrete) for the replacement sidewalk.	
Cultural Resources (Temporary)	This alternative does not require construction; therefore, there will be no impact on cultural resources.	There are no temporary impacts to cultural resources.	There are no temporary impacts to cultural resources.	None required.	No impact.
Cultural Resources (Permanent)	This alternative does not require construction; therefore, there will be no impact on cultural or historical resources.	Potential to encounter cultural resources and human remains during construction. Since the portions of the Manriquez Adobe site within the proposed area of direct impact (ADI) are not expected to contain information-bearing deposits and, therefore, are noncontributing elements to the larger property. There will be no significant impacts to this resource within the project limits due to the establishment of an Environmentally Sensitive Area (ESA) to protect the resource.	Potential to encounter cultural resources and human remains during construction. Since the portions of the Manriquez Adobe site within the proposed area of direct impact (ADI) are not expected to contain information-bearing deposits and, therefore, are noncontributing elements to the larger property. There will be no significant impacts to this resource within the project limits due to the establishment of an Environmentally Sensitive Area (ESA) to protect the resource.	Avoidance and Minimization Measures include: If buried cultural materials are encountered during construction, it is the California Department of Transportation's (Department) policy that construction activities in the immediate vicinity of the find halt until a qualified archaeologist can evaluate the nature and significance of the find. If human remains are discovered during construction activities, State Health and Safety Code Section 7050.5	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
				states that further disturbances and activities shall cease in the area or nearby area suspected to overlie remains, and that the County Coroner be contacted. Pursuant to Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the Coroner will notify the Native American Heritage Commission (NAHC), which will then notify the Most Likely Descendant (MLD). At this time, the person who discovered the remains will contact the Resident Engineer for coordination with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable. Establishment of an Environmentally Sensitive Area (ESA) Action Plan. The ESA Action Plan includes: the ESA fencing along the Direct APE to ensure that no equipment inadvertently impacts information-bearing portions of the Manriquez Adobe Site.	

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
Hydrology and Floodplain (Temporary)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to hydrology and floodplain.	Build Alternative 1 would not include construction involving any water bodies. Therefore, there will be no significant temporary hydrology impacts.	Build Alternative 2 would not include construction involving any water bodies. Therefore, there will be no significant temporary hydrology impacts.	None required.	No impact.
Hydrology and Floodplain (Permanent)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to hydrology and floodplain.	Runoff would increase due to the construction of 2.3 acres (ac) of additional paved area for Alternative 1. As a part of the widening project, Build Alternative 1 proposes to construct additional drainage systems consisting of new inlets with bicycle-proof grates and pipes and to replace an existing trapezoidal channel with a reinforced concrete box culvert. The Build Alternatives would not permanently impact designated 100- or 500-year floodplains.	Runoff would increase due to the construction of 2.4 ac of additional paved area for Alternative 2. As a part of the widening project, Build Alternative 2 proposes to construct additional drainage systems consisting of new inlets with bicycle-proof grates and pipes and to replace an existing trapezoidal channel with a reinforced concrete box culvert. The Build Alternatives would not permanently impact designated 100- or 500-year floodplains.	Minimization measures include: The completed project plans would incorporate all necessary Maintenance Best Management Practices (BMPs) (Category IA), Design Pollution BMPs (Category IB), and Treatment BMPs (Category III) to meet the Maximum Extent Practical (MEP) requirements.	Less than significant.
Water Quality and Storm Water Runoff (Temporary)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to water quality and storm water runoff.	During construction, Alternative 1 would require approximately 4.54 acres (ac) of soil disturbance. Erosion and siltation in the drainage area may temporarily increase during project construction.	During construction, Alternative 2 would require approximately 4.54 acres (ac) of soil disturbance. Erosion and siltation in the drainage area may temporarily increase during project construction.	Minimization measures include: Potential temporary surface and groundwater water quality impacts associated with construction of Build Alternatives 1 and 2 would be avoided or minimized through	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
		Geotechnical soil borings will determine the elevation of groundwater with respect to the elevations of the footings and/or foundations of the sound walls and retaining walls. Dewatering is not anticipated. However, if dewatering is required for the project, it would only be temporary from construction activities.	Geotechnical soil borings will determine the elevation of groundwater with respect to the elevations of the footings and/or foundations of the sound walls and retaining walls. Dewatering is not anticipated. However, if dewatering is required for the project, it would only be temporary from construction activities.	compliance with the existing California Department of Transportation (Department) National Pollutant Discharge Elimination System (NPDES) permit. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared to address construction-related impacts under Build Alternatives 1 and 2. If groundwater dewatering is required during construction, the Contractor shall comply with the *General Waste Discharge Requirements for Groundwater Extraction Waste Discharges from Construction, Remediation, and Permanent Groundwater Extraction Projects to Surface Waters within the San Diego Region except for San Diego Bay* (Order No. 2001-96, NPDES No. CAG919002) or any subsequent permit/order at time of construction. Construction site Best Management Practices (BMPs) will be implemented.	

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
Water Quality and Storm Water Runoff (Permanent)	As traffic increases, the length of time vehicles are stationary or moving slowly grows. This will lead to greater amounts of fluids from vehicles on the roadway. This would lead to a slight increase but is considered a less than significant impact to the amount of pollution in storm water runoff and a minor reduction in water quality.	Alternative 1 would increase the percentage of impervious area in the project limits by 42 percent. The average runoff coefficient for the project limits would increase from 0.87 cubic feet per second (cfs) preconstruction to 0.88 cfs postconstruction, an increase of 1.1 percent. Postconstruction erosion can possibly occur from cut slopes. Less runoff would be allowed to percolate into the local portion of the groundwater basin.	Alternative 2 would increase the percentage of impervious area in the project limits by 42 percent. The average runoff coefficient for the project limits would increase from 0.87 cubic feet per second (cfs) preconstruction to 0.88 cfs postconstruction, an increase of 1.1 percent. Postconstruction erosion can possibly occur from cut slopes. Less runoff would be allowed to percolate into the local portion of the groundwater basin.	Minimization measures include: The completed project plans would incorporate the Department's *Storm Water Management Plan* (SWMP) which outlines all necessary Maintenance Best Management Practices (BMPs) (Category IA), Design Pollution BMPs (Category IB), and Treatment BMPs (Category III) to meet the Maximum Extent Practical (MEP) requirements.	Less than significant.
Geology, Soils, Seismic, and Topography (Temporary)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to geology, soils, seismic shaking, or topography.	Build Alternative 1 would alter existing topography due to construction grading and construction of cut-and-fill slopes. Temporary erosion effects could occur due to project construction. These effects are discussed in Section 2.2.2, Water Quality and Storm Water Runoff.	Build Alternative 2 would alter existing topography due to construction grading and construction of cut-and-fill slopes. Temporary erosion effects could occur due to project construction. These effects are discussed in Section 2.2.2, Water Quality and Storm Water Runoff.	Implementation of erosion control Best Management Practices (BMPs) in the Storm Water Pollution Prevention Plan (SWPPP), as discussed in Section 2.2.2, Water Quality and Storm Water Runoff.	Less than significant.
Geology, Soils, Seismic, and Topography (Permanent)	The No Build Alternative does not involve any construction and would not alter the	As previously discussed, the project is located in a seismically active area where, south of the State Route 74 (SR-74), liquefaction is considered	As previously discussed, the project is located in a seismically active area where, south of the State Route 74 (SR-74), liquefaction is considered	Minimization measures include: During final design, the Department shall prepare a *Final Geotechnical/Structures*	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
	existing landscape. Therefore, there would be no impact to geology, soils, seismic shaking, or topography.	potentially high. The project will be constructed according to seismic design parameters, and impacts are considered less than significant. Areas north of SR-74 within the project limits have been identified as having a potential for earthquake-induced landslides. The proposed project is located in an area that may be subject to liquefaction. However, the Department considers the possibility of seismic activity and includes design standards to minimize and avoid potential significant impacts from seismic events.	potentially high. The project will be constructed according to seismic design parameters, and impacts are considered less than significant. Areas north of SR-74 within the project limits have been identified as having a potential for earthquake-induced landslides. The proposed project is located in an area that may be subject to liquefaction. However, the Department considers the possibility of seismic activity and includes design standards to minimize and avoid potential significant impacts from seismic events.	*Design Report* for the project, refining the existing *Preliminary Design Report*. The *Final Design Report* shall include detailed site testing and design recommendations based on the recommendations in the *Preliminary Design Report*. The recommendations of the *Final Design Report* shall be incorporated into the final design for the project. Since liquefaction is a factor in certain areas within the project limits, the project shall incorporate deepened foundations and/or increased depth of piles as needed.	
Paleontology (Temporary)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to paleontological resources.	There are no temporary impacts to paleontological resources.	There are no temporary impacts to paleontological resources.	None required.	No impact.
Paleontology (Permanent)	No impact.	Under Build Alternative 1, there is a potential to excavate into several geologic units and formations that contain	Under Build Alternative 2, there is a slightly higher potential than Build Alternative 1 to excavate into several geologic units and	Minimization measures include: A Paleontological Mitigation Plan (PMP) will be prepared.	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
		paleontological significant vertebrae fossils.	formations that contain paleontological significant vertebrae fossils.	Additional recommendations include conducting a preconstruction field survey and conducting monitoring for paleontological resources during construction.	
Hazardous Waste and Materials (Temporary)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to hazardous waste and materials.	Power pole-mounted electrical transformers were observed within the project limits and although according to San Diego Gas and Electric (SDG&E), these transformers use non-polychlorinated biphenyls (PCB)-containing oils, the specific contents of these transformers are unknown and are considered a potential for environmental concern. Yellow traffic stripe and pavement marking materials (paint, thermoplastic, permanent tape, and temporary tape) were observed within the project limits during the visual site survey conducted for the Initial Site Assessment (ISA). Yellow paint	Power pole-mounted electrical transformers were observed within the project limits and although according to San Diego Gas and Electric (SDG&E), these transformers use non-polychlorinated biphenyls (PCB)-containing oils, the specific contents of these transformers are unknown and are considered a potential for environmental concern. Yellow traffic stripe and pavement marking materials (paint, thermoplastic, permanent tape, and temporary tape) were observed within the project limits during the visual site survey conducted for the Initial Site Assessment (ISA). Yellow paint	Avoidance measures include: Prior to construction, utility pole-mounted transformers, if any, within the project area will be inspected for leaks. Leaking transformers are considered a potential polychlorinated biphenyl (PCB) hazard unless tested and should be handled appropriately. Transformers that are proposed to be disturbed or removed during construction activities shall be tested for potential PCB hazards during Plans, Specifications, and Estimates (PS&E). Avoidance measures include: Yellow thermoplastic and yellow paint traffic stripes shall be tested during the design phase. The striping will be disposed of according to the California Department of Transportation (Department) SSP XE 15-300	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
		traffic stripes used prior to 1997 may exceed hazardous waste criteria under Title 22 California Code of Regulations (CCR) and require disposal in a Class I disposal site.	traffic stripes used prior to 1997 may exceed hazardous waste criteria under Title 22 California Code of Regulations (CCR) and require disposal in a Class I disposal site.	Notify the Underground Service Alert of Southern California at least two working days prior to subsurface excavation to ensure that utility owners mark the locations of underground transmission lines and facilities Prior to the start of construction, a site-specific Health and Safety Plan shall be prepared for the proposed project that is consistent with California Department of Transportation (Department) requirements. For any previously unknown hazardous waste/material encountered during construction, the procedures outlined in Appendix H (Caltrans Unknown Hazards Procedures) will be followed.	

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
Hazardous Waste and Materials (Permanent)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to hazardous waste and materials.	Permanent impacts (direct or indirect) related to hazardous materials are not anticipated as a result of project implementation.	Permanent impacts (direct or indirect) related to hazardous materials are not anticipated as a result of project implementation.	None required.	No impact.
Air Quality (Temporary)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to air quality.	Project construction has the potential to create temporary air quality impacts from exhaust emissions and fugitive dust emissions.	Project construction has the potential to create temporary air quality impacts from exhaust emissions and fugitive dust emissions.	Minimization Measures include: Compliance with the South Coast Air Quality Management Distrct (SCAQMD) Rule 403 including Best Available Control Measures (BACMs) and the Calfornia Department of Transportation's (Department) Standard Specifications for construction will reduce the temporary impacts. All disturbed areas, including storage piles that are not being actively used for construction purposes, shall be effectively stabilized for dust emissions using water, chemical stabilizers/suppressants, or vegetative ground cover, as appropriate.	Less than significant.
Air Quality (Permanent)	Traffic congestion would continue to increase. Long-term	Build Alternative 1 is not expected to generate any additional traffic compared to the	Build Alternative 2 is not expected to generate any additional traffic compared to the No Build	None required.	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
	mobile emissions generated by vehicle trips would be greater under the No Build Alternative. Since the No Build Alternative would not improve air quality through a reduction in congestion, its air quality impacts are considered potentially significant.	No Build Alternative. Regional traffic trips would remain similar. Therefore, no new long-term regional emissions would result from implementation of Build Alternative 1.	Alternative. Regional traffic trips would remain similar. Therefore, no new long-term regional emissions would result from implementation of Build Alternative 2.		
Noise (Temporary)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to noise.	Project construction has the potential to create temporary noise impacts from the transport of construction crew, equipment and materials, and noise generated during excavation, grading, and roadway construction Construction-related ground-borne vibration could result from construction equipment.	Project construction has the potential to create temporary noise impacts from the transport of construction crew, equipment and materials, and noise generated during excavation, grading, and roadway construction Construction-related ground-borne vibration could result from construction equipment.	Minimization measures include: Compliance with the California Department of Transportation's (Department) Standard Specifications, "Sound Control Requirements" will reduce the temporary impacts.	Less than significant.
Noise (Permanent)	Predicted future noise levels at sensitive receptors exceed existing levels by approximately 1 to 2 A-weighed decibels (dBA). This increase	Predicted future noise levels at sensitive receptors do not result in significant increases except for receptor 31 K5.	Predicted future noise levels at sensitive receptors do not result in significant increases except for receptor 31 K5.	Mitigation measure includes: **N-1** To reduce permanent significant noise impacts to Receptors 31 K5 to below a level of significance, the	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
	is considered less than significant.			Department shall offer interior noise mitigation measures such as installation of double-paned windows and a mechanical heating and cooling system (air conditioning).	
Energy (Temporary)	The No Build Alternative does not involve any construction. Therefore, there would be no energy consumption impacts.	Consumption of fossil fuels and electricity would occur at typical amounts, and excesses in consumption are not expected.	Consumption of fossil fuels and electricity would occur at typical amounts, and excesses in consumption are not expected.	None required.	Less than significant.
Energy (Permanent)	The No Build Alternative does not involve any construction. Therefore, there would be no energy consumption impacts.	Build Alternative 1 would not affect traffic volumes; therefore, it would not affect energy consumption.	Build Alternative 2 would not affect traffic volumes; therefore, it would not affect energy consumption.	None required.	No Impact.
Natural Communities (Temporary)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to natural communities.	Build Alternative 1 would not result in the removal of sensitive plant communities because none are found within or immediately adjacent to the project disturbance limits.	Build Alternative 2 would not result in the removal of sensitive plant communities because none are found within or immediately adjacent to the project disturbance limits.	None required.	No impact.
Natural Communities (Permanent)	The No Build Alternative does not involve any	Build Alternative 1 would not result in the removal of sensitive plant communities because none	Build Alternative 2 would not result in the removal of sensitive plant communities because none are	None required.	No impact.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
	construction. Therefore, there would be no impact to natural communities.	are found within or immediately adjacent to the project disturbance limits.	found within or immediately adjacent to the project disturbance limits.		
Wetlands and Other Waters of the United States (Temporary)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to wetlands or other waters of the United States (U.S.).	The proposed project would result in 0.001 acre (ac) of temporary impacts to nonwetland waters of the United States (U.S.). This 0.001 ac of temporary impacts is also potentially subject to California Department of Fish and Game (CDFG) jurisdiction. An additional 0.001 ac of streambed habitat potentially subject to CDFG jurisdiction will be temporarily impacted. Temporary impacts to CDFG potentially jurisdictional streambed total 0.002 ac.	The proposed project would result in 0.001 acre (ac) of temporary impacts to nonwetland waters of the United States (U.S.). This 0.001 ac of temporary impacts is also potentially subject to California Department of Fish and Game (CDFG) jurisdiction. An additional 0.001 ac of streambed habitat potentially subject to CDFG jurisdiction will be temporarily impacted. Temporary impacts to CDFG potentially jurisdictional streambed total 0.002 ac.	Minimization measures include: All Best Management Practices (BMPs) would be in place during construction according to the Storm Water Pollution Prevention Plan (SWPPP). A qualified biologist shall be designated responsible for overseeing biological monitoring, regulatory compliance, and restoration activities associated with the proposed project in accordance with the adopted measures, applicable regulations and laws, and environmental permit conditions. Biological resources shall be protected during construction. To ensure this protection, a Biological Resources Construction Plan that provides for the protection of the resource and establishes the monitoring requirements will be	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
				completed to be reviewed and approved by the resource agencies prior to ground disturbance.	
Wetlands and Other Waters of the United States (Permanent)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to wetlands or other waters of the United States (U.S.).	Construction of the proposed project will directly and permanently affect 0.056 acre (ac) of potential jurisdictional waters subject to United States Army Corps of Engineers (ACOE) jurisdiction, 0.021 ac of nonwetland water of the United States (U.S.), and approximately 0.035 ac of wetland waters of the U.S. 0.085 ac of streambed potential subject to California Department of Fish and Game (CDFG) jurisdiction will be directly and permanently affected. This area is not considered riparian.	Construction of the proposed project will directly and permanently affect 0.056 acre (ac) of potential jurisdictional waters subject to United States Army Corps of Engineers (ACOE) jurisdiction, 0.021 ac of nonwetland water of the U.S., and approximately 0.035 ac of wetland waters of the U.S. 0.085 ac of streambed potential subject to CDFG jurisdiction will be directly and permanently affected. This area is not considered riparian.	Compensation measures include: The Department shall assume responsibility for compensation of impacts to biological resources. The project would result in permanent impacts to Waters of the United States (waters of the U.S.) requiring a Letter of Permission (LOP) from the United States Army Corps of Engineers (ACOE) to authorize the discharge of dredged and/or fill materials into waters of the U.S., pursuant to Section 404 of the Clean Water Act (CWA). Minimization measures include: The drainage features shall be replaced by drainage pipes that tie into the existing storm drain system. Impacts to wetland waters of the United States shall be offset by compensation consisting of wetland creation at	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
				a minimum 1:1 ratio.	
Plant Species (Temporary)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to plant species.	There are no special-status plant species on the project site. Therefore, Build Alternative 1 would not result in temporary impacts on special-status plant species. However, temporary effects may occur as ground disturbance activities occur within or near the drip line of the oak trees at “The Oaks” property	There are no special-status plant species on the project site. Therefore, Build Alternative 2 would not result in temporary impacts on special-status plant species. However, temporary effects may occur as ground disturbance activities occur within or near the drip line of the oak trees at “The Oaks” property	Avoidance measures include: Protective fencing shall be placed around the dripline of oaks not identified for removal to prevent compaction of the root zone and designated as an environmentally sensitive area (ESA). In addition, trees in containers will be relocated prior to the start of construction. Minimization measures include: If any special-status plants are observed within the Biological Study Area (BSA) during preconstruction surveys, the locations of the populations and an estimation of the population size shall be mapped and shown on construction drawings. This information shall be used for appropriate avoidance during construction. If a species is to be avoided during construction, it shall be shown as an environmentally sensitive area (ESA) on the construction plans. If the population cannot be avoided	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
				during construction, this information shall be used for appropriate seed collection and salvage measures.	
Plant Species (Permanent)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to plant species.	Eight coast live oak trees may be impacted by ground disturbance activities within the dripline of the trees, associated with roadway widening. Two of these coast live oak trees are anticipated to require removal. The proposed project will result in impacts to 111 trees.	Eight coast live oak trees may be impacted by ground disturbance activities within the dripline of the trees, associated with roadway widening. Two of these coast live oak trees are anticipated to require removal. The proposed project will result in impacts to 111 trees.	Compensation measures include: Impacts to coast live oak trees will be compensated at a minimum 1:1 ratio. Impacts to all trees will be compensated in accordance with the City of San Juan Capistrano's Tree Preservation Ordinance.	Less than significant.
Animal Species (Temporary)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to animal species.	Construction activities may result in a temporary noise impact to nesting birds. Temporary impacts to birds nesting within or adjacent to the BSA may occur if construction, particularly vegetation clearing, occurs during the nesting season. Small mammals, reptiles, and amphibians and other animals of slower mobility that live in the BSA may be temporarily affected as habitat is altered or removed. Lighting may be installed during night work that may temporarily disrupt animal behavior (including	Construction activities may result in a temporary noise impact to nesting birds. Temporary impacts to birds nesting within or adjacent to the BSA may occur if construction, particularly vegetation clearing, occurs during the nesting season. Small mammals, reptiles, and amphibians and other animals of slower mobility that live in the BSA may be temporarily affected as habitat is altered or removed. Lighting may be installed during night work that may temporarily disrupt animal behavior (including	Avoidance and minimization measures include: If feasible, vegetation removal will be avoided during the primary nesting season for local birds (February 15 through September 1) and most raptors, which are protected by the Migratory Bird Treaty Act (MBTA) and Section 3503.5 of the California Fish and Game Code. If vegetation removal must occur during this period, then preconstruction surveys shall be conducted surveyed by a qualified biologist in the appropriate habitats no more	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
		foraging and nesting); however, lighting will be shielded away from natural areas. During construction, there may be indirect effects to riparian-dependent species downstream of the BSA, including minimal increases to sediment levels in tributary drainages to San Juan Creek, minimal changes in water temperature, flow velocity, chemistry, or associated terrestrial/aquatic vegetation that would reduce the habitat quality for riparian-dependent species.	foraging and nesting); however, lighting will be shielded away from natural areas. During construction, there may be indirect effects to riparian-dependent species downstream of the BSA, including minimal increases to sediment levels in tributary drainages to San Juan Creek, minimal changes in water temperature, flow velocity, chemistry, or associated terrestrial/aquatic vegetation that would reduce the habitat quality for riparian-dependent species..	than seven days prior to clearing within and up to approximately 50 feet (ft) from the project boundary or an area coordinated with the resource agencies in order to identify nesting birds and/or raptors within or adjacent to the proposed project. In the event of discovery of active nests in the areas to be cleared, protective measures as outlined by the qualified Biologist shall be taken, as coordinated with the resource agencies. Clearing and grubbing limits may be established up to approximately 500 ft in any direction of nests, or other buffer distance coordinated with the resource agencies. In order to avoid and minimize the effects of lighting on wildlife, construction lighting shall be shielded away from natural areas as directed by the project engineer. To reduce impacts to wildlife, all construction-related activities shall be confined to the	

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
				proposed impact boundaries by installing fencing along the boundary in locations where the impact area abuts vegetated areas to prevent any construction activities from encroaching into adjacent habitat areas. In addition, construction access points shall be limited in proximity to the potential habitat for wildlife to the maximum extent feasible as directed by the project engineer.	
Animal Species (Permanent)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to animal species.	Due to the removal of 111 trees, construction of the Build Alternative would result in the removal of habitat that may provide nesting and foraging opportunities for a variety of species.	Due to the removal of 111 trees, construction of the Build Alternative would result in the removal of habitat that may provide nesting and foraging opportunities for a variety of species.	Compensation measures include: Impacts to coast live oak trees will be compensated at a minimum 1:1 ratio through off-site replacement. Impacts to all trees will be mitigated in accordance with the City of San Juan Capistrano's (City) Tree Preservation Ordinance.	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
Threatened and Endangered Species (Temporary)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to threatened and endangered (T/E) species.	There are no State or federal Threatened and Endangered (T/E)-listed species in the Biological Study Area (BSA); therefore, no temporary impacts to T/E species are anticipated as a result of Build Alternative 1.	There are no State or federal Threatened and Endangered (T/E)-listed species in the Biological Study Area (BSA); therefore, no temporary impacts to T/E species are anticipated as a result of Build Alternative 2.	None required.	No impact.
Threatened and Endangered Species (Permanent)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to threatened and endangered (T/E) species.	There are no State or federal Threatened and Endangered (T/E)-listed species in the Biological Study Area (BSA); therefore, no permanent impacts to T/E species are anticipated as a result of Build Alternative 1.	There are no State or federal Threatened and Endangered (T/E)-listed species in the Biological Study Area (BSA); therefore, no permanent impacts to T/E species are anticipated as a result of Build Alternative 2.	None required.	No impact.
Invasive Species (Temporary)	The No Build Alternative does not involve any construction. Therefore, there would be no impact to invasive species.	The project has the potential to spread invasive species by the entering and exiting of construction equipment contaminated by invasives, the inclusion of invasive species in seed mixtures and mulch, and the improper removal and disposal of invasive species so that seed is spread along the highway.	The project has the potential to spread invasive species by the entering and exiting of construction equipment contaminated by invasives, the inclusion of invasive species in seed mixtures and mulch, and the improper removal and disposal of invasive species so that seed is spread along the highway.	Minimization measures include: Bare soil will be landscaped with California Department of Transportation (Department)-recommended seed mix from locally adopted species to preclude the invasion of noxious weeds. In compliance with the Executive Order on Invasive Species, EO 13112, and subsequent guidance from the Federal Highway Administration (FHWA), the	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
				landscaping and erosion control measures included in the project will not use species listed as noxious weeds, and no invasive species will be planted within the state right-of-way or in areas where the species may enter a drainage area. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment, and eradication strategies to be implemented should an invasion occur. Before mobilizing to arrive at the site and before leaving the site, construction equipment will be cleaned of mud or debris that may contain invasive plants and/or seeds, and inspected to reduce the potential of spreading noxious weeds. To ensure implementation of these measures, the project contractor shall provide a weed abatement program to be approved by the Department	

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
				engineer prior to the start of ground disturbance. The Department will use site-specific plant materials (e.g., propagules and seed) adapted to local conditions in order to increase the likelihood that revegetation will be successful and to maintain the genetic integrity of the local ecosystem. Seed purity will be certified by planting seed labeled under the California Food and Agricultural Code or seed tested within a year by a seed laboratory certified by the Association of Official Seed Analysts or by a seed technologist certified by the Society of Commercial Seed Technologists. Trucks with loads carrying vegetation will be covered, and vegetative materials removed from the site will be disposed of, in accordance with all applicable laws and regulations.	
Invasive Species (Permanent)	The No Build Alternative does not involve any	Invasive species have the potential to be imported to the project area by contaminated	Invasive species have the potential to be imported to the project area by contaminated	See minimization measures above.	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
	construction. Therefore, there would be no impact to invasive species.	construction equipment or imported materials such as soils. The dispersal of invasive species propagules in the Biological Study Area (BSA) may be furthered by roadway vehicles, with inadvertent mixing of invasive species in seed mixes applied adjacent to the highway and the spread of invasive species during weed-control programs such as mowing. The increased risk of introduction or spread of invasive species would occur only during construction.	construction equipment or imported materials such as soils. The dispersal of invasive species propagules in the Biological Study Area (BSA) may be furthered by roadway vehicles, with inadvertent mixing of invasive species in seed mixes applied adjacent to the highway and the spread of invasive species during weed-control programs such as mowing. The increased risk of introduction or spread of invasive species would occur only during construction.		
Cumulative	The No Build Alternative does not involve any construction. Therefore, there would be no temporary cumulative impacts. An increase in 2035 traffic is associated with the No Build Alternative, including increased congestion and delays. The No Build Alternative would contribute to cumulative traffic,	The Build Alternatives will contribute to cumulative changes in the natural and built environment, however, these contributions are considered less than significant with implementation of project avoidance, minimization, and/or mitigation measures.	The Build Alternatives will contribute to cumulative changes in the natural and built environment, however, these contributions are considered less than significant with implementation of project avoidance, minimization, and/or mitigation measures.	Measures noted in individual sections as listed above.	Less than significant.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
	noise, and air quality impacts, however, this contribution is considered to be less than significant.				
Climate Change	Traffic volumes would continue to increase under the No Build Alternative resulting in an increase in regional green house gas emissions.	Regional green house gas emissions would remain similar under Build Alternative 1 when compared to the No Build conditions.	Regional green house gas emissions would remain similar under Build Alternative 2 when compared to the No Build conditions.	Minimization Measures: Landscaping will use reclaimed water, where possible. Currently 30 percent of the electricity used in California is used for the treatment and delivery of water. Use of reclaimed water helps conserve this energy, which reduces GHG emissions from electricity production. Landscaping reduces surface warming and through photosynthesis decreases CO_2. During the design phase, the Department will work with the City of San Juan Capistrano and comply with Section 9-2:349 Municipal Code and plant trees above and beyond what the project is impacting. The use of lighter color surfaces such as Portland cement, helps to reduce the albedo effect and	It is too speculative to make a determination regarding the projects direct impact to climate change.

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
				cool the surface; in addition, the Department has been a leader in the effort to add fly ash to Portland cement mixes. Adding fly ash reduces the GHG emissions associated with cement production. Use of this would be in accordance with the Departments specifications and design standards and could be used in areas such as curb/gutter, retaining walls, driveways, and sidewalks. According to Caltrans Standard Specification Provisions, idling time for lane closure during construction is restricted to ten minutes in each direction; in addition, the contractor must comply with Air Quality Management District's rules, ordinances, and regulations in regards to air quality restrictions. Caltrans and the California Highway Patrol are working with regional agencies to implement Intelligent Transportation Systems (ITS) to help manage the efficiency of the existing	

Table S-1 Summary of Potential Impacts by Alternative

Potential Impact	No Build Alternative	Build Alternative 1	Build Alternative 2	Avoidance, Minimization, and Mitigation Measures (Measures that are numbered are considered Mitigation Measures)	Build Alternatives 1 and 2 Level of Significance
				highway system. ITS is commonly referred to as electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.	

S.5 Circulation of the Draft Environmental Document

This Draft EIR for the project is to be circulated and made available for public comment. The public circulation process required by CEQA requires a minimum 45-day comment period. However, for this project the Department has allowed for a 60-day review period to allow adequate time for review and comment due to the holidays. Refer to Chapter 3 for further information regarding the circulation of the Draft Environmental Document.

S.6 Permits and Approvals Needed

As shown in Table S-2, the following permits, reviews, and approvals will be required prior to the construction of the proposed project.

Table S-2 Required Permits, Reviews, and Approvals

Agency	Permit/Approval	Status
ACOE	Section 404 Letter of Permission (LOP) or Nationwide Permit (NWP) 14	Department is to obtain letter or permit.
CDFG	Section 1602 Streambed Alteration Agreement	Department is to obtain Agreement.
RWQCB	401 Water Quality Certification	Department is to obtain certification.
City of San Juan Capistrano	Tree Removal Permit	Department is to obtain permit.

ACOE = United States Army Corps of Engineers
CDFG = California Department of Fish and Game
RWQCB = Regional Water Quality Control Board

Table of Contents

TITLE PAGE i
GENERAL INFORMATION ABOUT THE DOCUMENT iii
SUMMARY vii
S.1 PROJECT DESCRIPTION vii
S.2 PURPOSE AND NEED vii
S.2.1 Project Purpose vii
S.2.2 Project Need viii
S.3 AREAS OF CONTROVERSY AND UNRESOLVED ISSUES xi
S.4 SUMMARY OF POTENTIAL IMPACTS BY ALTERNATIVE xi
S.5 CIRCULATION OF THE DRAFT ENVIRONMENTAL DOCUMENT L
S.6 PERMITS AND APPROVALS NEEDED L
TABLE OF CONTENTS li
LIST OF FIGURES liii
LIST OF TABLES lv
CHAPTER 1 PROPOSED PROJECT 1
1.1 INTRODUCTION 1
1.2 PROJECT BACKGROUND 7
1.2.1 Project Funding 9
1.3 PURPOSE AND NEED 9
1.3.1 Project Purpose 9
1.3.2 Project Need 9
1.4 PROJECT DESCRIPTION 15
1.5 ALTERNATIVES 15
1.5.1 Common Features of the Build Alternatives 15
1.5.2 Unique Features of Build Alternatives 26
1.5.3 Comparison of Alternatives 27
1.5.4 Alternatives Considered but Eliminated 28
1.6 PERMITS AND APPROVALS NEEDED 30
CHAPTER 2 AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES 31
HUMAN ENVIRONMENT 32
2.1.1 Land Use 32
2.1.2 Growth 51
2.1.3 Community Impacts 59
2.1.4 Utility and Emergency Services 78
2.1.5 Traffic & Transportation/Pedestrian and Bicycle Facilities 82
2.1.6 Visual/Aesthetics 93
2.1.7 Cultural Resources 135
PHYSICAL ENVIRONMENT 145
2.2.1 Hydrology and Floodplain 145
2.2.2 Water Quality and Storm Water Runoff 148
2.2.3 Geology, Soils, Seismic, Topography 157
2.2.4 Paleontology 166
2.2.5 Hazardous Wastes and Materials 171
2.2.6 Air Quality 183

2.2.7 Noise and Vibration 194
2.2.8 Energy 216
BIOLOGICAL ENVIRONMENT 221
2.3.1 Natural Communities 223
2.3.2 Wetlands and Other Waters 228
2.3.3 Plant Species 242
2.3.4 Animal Species 247
2.3.5 Threatened and Endangered Species 253
2.3.6 Invasive Species 257
2.4 CUMULATIVE IMPACTS 263
2.4.1 Regulatory Setting 263
2.4.2 Methodology 263
2.4.3 Affected Environment 265
2.4.4 Environmental Consequences 273
2.4.5 Avoidance, Minimization, and/or Mitigation Measures 286
2.4.6 Level of Significance 287
2.5 CLIMATE CHANGE 289
2.5.1 Regulatory Setting 289
2.5.2 Environmental Consequences 292
2.5.3 AB 32 Compliance 298
2.5.4 Avoidance, Minimization, and/or Mitigation Measures 300
CHAPTER 3 COMMENTS AND COORDINATION 303
3.1 CONSULTATION AND COORDINATION WITH AGENCIES 306
3.1.1 Project Team Coordination 306
3.1.2 Native American Consultation 307
3.1.3 Historical Resources Consultation 308
3.1.4 Public Agency Consultation and Coordination 309
3.1.5 Public Participation 311
CHAPTER 4 LIST OF PREPARERS 315
4.1 CONSULTANTS 315
4.2 CALIFORNIA DEPARTMENT OF TRANSPORTATION 318
CHAPTER 5 DISTRIBUTION LIST 323
CHAPTER 6 REFERENCES 325
APPENDIX A NOTICE OF PREPARATION 335
APPENDIX B MINIMIZATION AND MITIGATION SUMMARY 357
APPENDIX C AGENCY CORRESPONDENCE 367
APPENDIX D 2008 REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM 433
APPENDIX E LIST OF ACRONYMS 439
APPENDIX F LIST OF TECHNICAL STUDIES 453
APPENDIX G PRELIMINARY DESIGN LAYOUTS 457
APPENDIX H COMMENTS ON SR-74 INITIAL STUDY WITH PROPOSED MITIGATED NEGATIVE DECLARATION (BOUND SEPARATELY) 481
APPENDIX I NOISE ATTENUATION 483
APPENDIX J CITY OF SAN JUAN CAPISTRANO TREE REMOVAL ORDINANCE 523

List of Figures

Figure 1-1 Regional Location Map ... 3
Figure 1-2 Project Vicinity Map ... 5
Figure 1-3 LOS for a Two-Lane Highway ... 13
Figure 1-4 Project Location Map ... 17
Figure 1-5 Plexiglas® Sound Wall and Sound Fighter® Sound Wall ... 23
Figure 2.1.1-1 Existing Land Uses ... 33
Figure 2.1.3-1 Study Area ... 61
Figure 2.1.6-1 Key View Location Map ... 97
Figure 2.1.6-2 Key View 1 ... 103
Figure 2.1.6-3 Key View 2 ... 105
Figure 2.1.6-4 Key View 3 ... 107
Figure 2.1.6-5 Key View 4 ... 111
Figure 2.1.6-6 Key View 5 ... 113
Figure 2.1.6-7 Key View 1 Proposed Condition ... 117
Figure 2.1.6-8 Key View 2 Proposed Condition ... 121
Figure 2.1.6-9 Key View 3 Proposed Condition ... 123
Figure 2.1.6-10 Key View 4 Proposed Condition ... 127
Figure 2.1.6-11 Key View 5 Proposed Condition ... 129
Figure 2.2.5-1 Hazardous Site Location Map ... 175
Figure 2.3.2-1 Potential CDFG and ACOE Jurisdiction ... 231
Figure 3-3 Cascade of Uncertainties ... 296
Outcome of Strategic Growth Plan ... 299
Figure I-1 - Receptor and Soundwall Locations (With Wrap-Around Wall) ... 485
Figure I-2 - Receptor and Soundwall Locations (Without Wrap-Around Wall) ... 503

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List of Tables

Table S-1 Summary of Potential Impacts by Alternative xiii
Table S-2 Required Permits, Reviews, and Approvals l
Table 1-1 Existing and Future Levels of Service (LOS) 10
Table 1-2 Summary of Project Alternatives 27
Table 1-3 Required Permits, Reviews, and Approvals 30
Table 2.1.1-1 Existing and Future Land Use Development 37
Table 2.1.1-1 Existing and Future Land Use Development (Continued) 38
Table 2.1.1-2 Residential Land Use Designations 39
Table 2.1.3-1 2000 Community Cohesion – Residency Characteristics 63
Table 2.1.3-2 Population Estimates 64
Table 2.1.3-3 Number of Households and Average Number of Persons per Household 65
Table 2.1.3-4 2000 Race/Ethnic Distribution in the Study Area 65
Table 2.1.3-5 2000 Age Distribution in the Study Area 66
Table 2.1.3-6 2000 Mode Choices for the Work Commute in the Study Area 66
Table 2.1.3-7 Summary of Housing in the Study Area 67
Table 2.1.3-8 2000 Household Incomes in the Study Area 68
Table 2.1.5-1 Mainline LOS Summary 86
Table 2.1.5-2 Accident Rate Summary (Accidents Per Million Vehicle Miles) 88
Table 2.1.5-3 Vehicle Miles Traveled (VMT) Summary 91
Table 2.2.5-1 Hazardous Waste Releases within and Adjacent to the Project Limits 173
Table 2.2.5-2 List of Potentially Impacted Transformers 177
Table 2.2.6-1 National and California Air Quality Standards 184
Table 2.2.6-2 Ambient Air Quality Standards at the Mission Viejo and Costa Mesa Air Monitoring Stations 188
Table 2.2.6-3 Change in Regional VMT and VHT 191
Table 2.2.6-4 Change in Regional Vehicle Emissions (lb/day) 191
Table 2.2.7-1 Noise Level of Common Activities 195
Table 2.2.7-2 Measured 24-Hour Noise Level at Receptor R-1 (28361 Via Anzar) 198
Table 2.2.7-3 Measured 24-Hour Noise Level at Receptor R-2 (31071 Via Sonora) 199
Table 2.2.7-4 Measured 24-Hour Noise Level at Receptor R-3 (28271 Ortega Highway) 200
Table 2.2.7-5 Existing Noise Levels (Short-term Measurements) Eastbound Ortega Highway Short-term Noise Measurements (10-minute) for First Row and Second Row 202
Westbound Ortega Highway Short-term Noise Measurements (10-minute) for First Row 202
Table 2.2.7-6 Typical Construction Equipment Noise Levels 207
Table 2.2.7-7 Guideline Vibration Potential Threshold Criteria 209
Table 2.2.7-8 Guideline Vibration Annoyance Potential Criteria 210
Table 2.2.7-9 Vibration Source Amplitudes for Construction Equipment 210
Table 2.2.7-10 Projected Noise Levels, dBA L_{eq} 212
Table 2.2.8-1 Existing and Future (2035) Forecast ADT and VMT – No Build Alternative 218
Table 2.2.8-2 Existing and Future (2035) Forecast ADT and VMT – Build Alternatives 219

Table 2.3.2-1 Impacts to Potential ACOE and CDFG Jurisdictional Areas 238
Table 2.3.3-1 Trees to be Removed 245
Table 2.3.4-1 Raptors Observed in the Biological Study Area 249
Table 2.3.5-1 Project Study Area T/E Species 255
Table 2.4-1 Cumulative Development Projects 270
Table 2.4-1 Cumulative Development Projects (Continued) 271
Table 2.4-2 Cumulative Road Projects 272
Table 2.5.2-1 Change in Regional VMT and VHT 292
Table 2.5.2-2 Change in $CO_{2\,eq}$ Emissions 292
Table 2.5.2-3 Model Year 2015 Required Miles Per Gallon (mpg) by Alternative 294
Table 2.5.2-4 Climate Change Strategies 301
Table 3.1 Summary of Consultation and Coordination Activities 303
Table 3.1 Summary of Consultation and Coordination Activities (continued) 304
Table 3.1 Summary of Consultation and Coordination Activities (continued) 305
Table I-1 Activity Categories and Noise Abatement Criteria (NAC) 483
Table I-2 Summary of Predicted Noise Levels (With Wrap-Around Wall)[1] 511
Table I-3 Summary of Predicted Noise Levels (Without Wrap-Around Wall)[1] 513
Table I-4 Feasible Noise Barriers 515
Table I-5 Total Reasonable Allowance per Noise Barrier 518
Table I-6 Preliminary Reasonable and Feasible Noise Barriers 521

Chapter 1 Proposed Project

1.1 Introduction

The State of California Department of Transportation (Department) proposes to widen State Route 74 (SR-74) from two lanes to four lanes from Calle Entradero (Post mile [PM]1.0) to the City of San Juan Capistrano (City)/County of Orange (County) limits (eastern City limit) PM 1.9. The Department is the Lead Agency for the California Environmental Quality Act (CEQA) and the City is a Responsible Agency under CEQA. The total length of the project is approximately 0.9 mile (mi). Figures 1-1 and 1-2 show the regional location and project vicinity maps.

SR-74, also known as Ortega Highway, is a major east-west arterial in south Orange County extending from Interstate 5 (I-5) in the City northeast to Riverside County where it intersects with Interstate 15 (I-15). SR-74 then extends further northeast toward the City of Palm Desert in Riverside County.

The existing SR-74 alignment consists of four through lanes from I-5, then turns into three through lanes and then at approximately 330 feet (ft) east of Calle Entradero, it transitions to two through lanes. The alignment of the existing roadway imposes driving restrictions such as limited sight distance and difficulties in negotiating sharp curves.

Five roadways intersect with SR-74 from the south, within the project limits as shown in Figure 1-4. They are: Calle Entradero, Via Cordova, Via Cristal, Via Errecarte, and Avenida Siega. North of SR-74, Via Cordova becomes Hunt Club Drive, and Avenida Siega becomes Shade Tree Lane, Via Cristal and Via Errecarte are T-intersections. Additionally, to the north of SR-74, Strawberry Lane, Toyon Drive and Palm Hill Drive provide access to hillside private properties.

Sidewalks exist intermittently throughout the project area on the north and south sides of SR-74. These sidewalks begin outside the western limits of the project.

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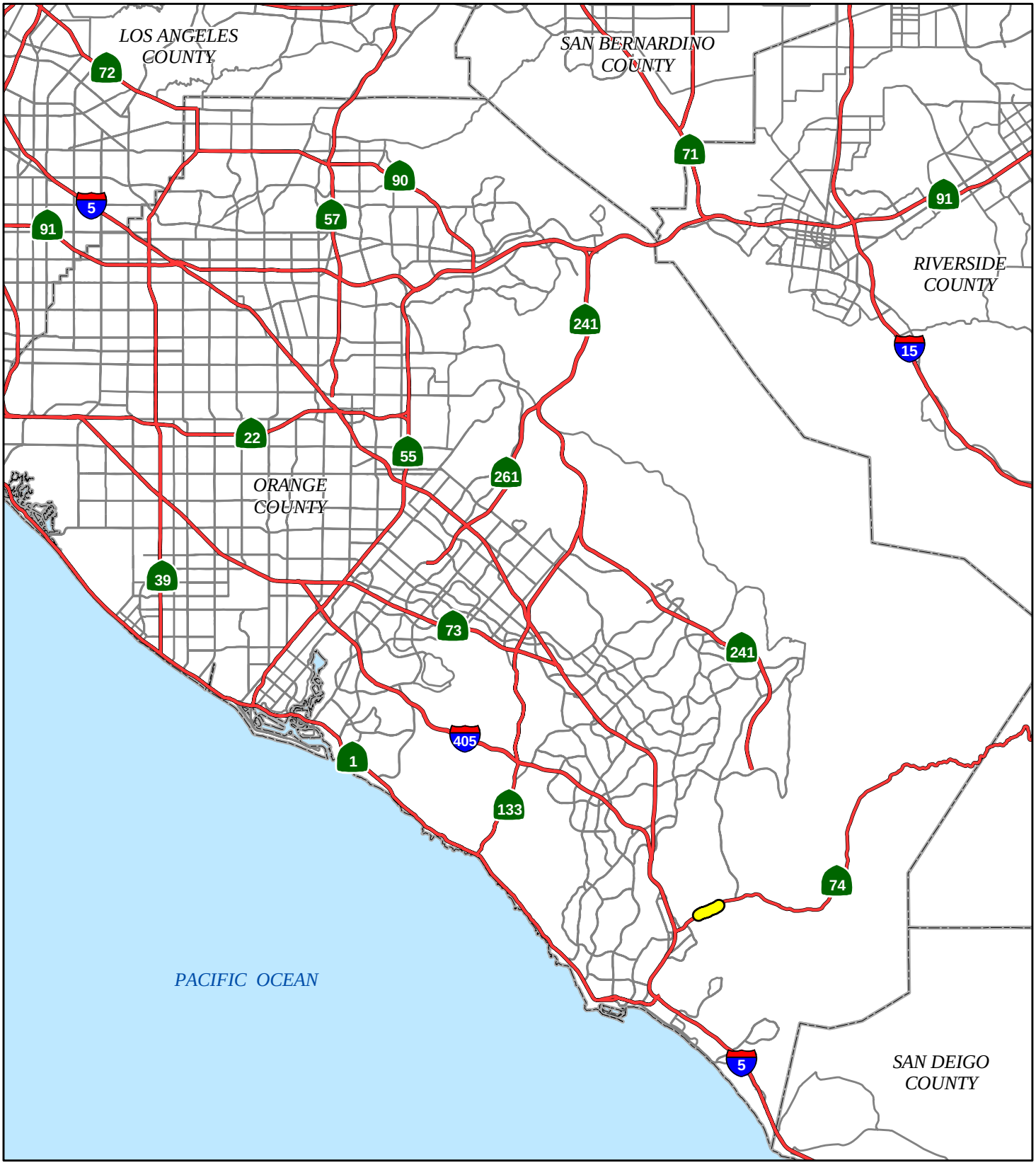

FIGURE 1-1

Project Study Area

0 2.5 5 Miles

Lower SR-74 Widening Project

Regional Location Map

12-ORA-74 PM 1.0/1.9
EA# 086920

SOURCE: Thomas Bros, (2007).

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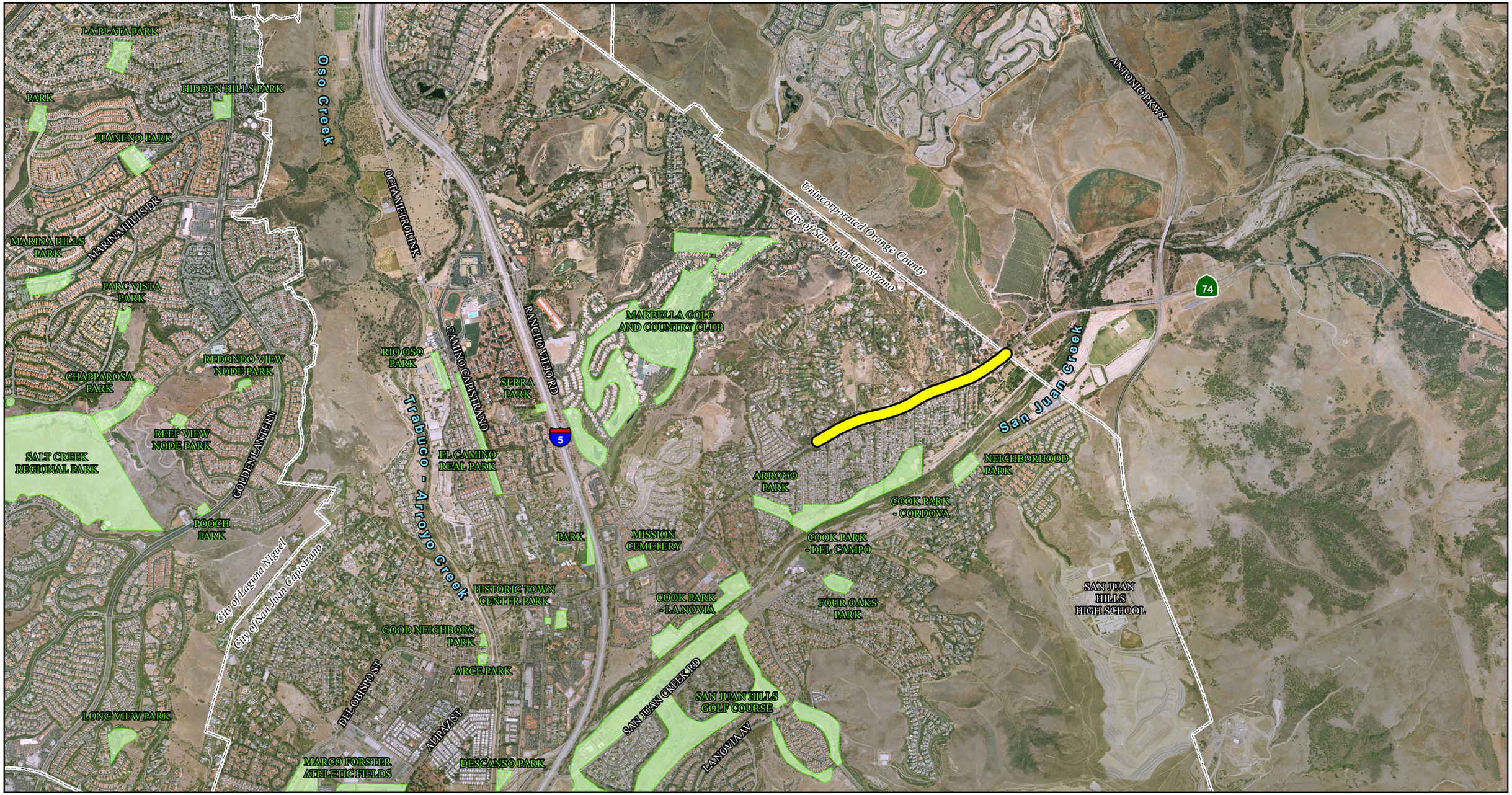

FIGURE 1-2

N

Project Study Area

0 1,000 2,000 Feet

Lower SR-74 Widening Project

Project Vicinity Map

12-ORA-74 PM 1.0/1.9
EA# 086900

SOURCE: Air Photo USA (2007), Thomas Bros (2007).

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1.2 Project Background

SR-74 was constructed circa 1930/32 from plans prepared for Joint Highway District 15. The road was originally designed to be two lanes; each lane being 31 ft wide with a maximum grade of six percent, for vehicle speeds of 25 miles per hour (mph) to 40 mph. In 1959, this route was included within the State Freeway and Expressway System.

Currently, SR-74 in its entirety provides interregional access between south Orange County and Riverside County. This particular section of SR-74 serves commuter traffic from the adjacent residential communities, Riverside County and interregional recreational traffic. The highway alignment follows and crosses San Juan Creek to the north. During weekday morning and afternoon peak operating hours, commuters who travel from Riverside County to southern Orange County commonly use SR-74. Recreational traffic is common during the weekends.

The Project Study Report (PSR) was approved by the Department on December 15, 1997. A scoping document was sent to interested parties and agencies on February 18, 2000. Also, an informal scoping meeting was held on July 19, 2000, from 6:00 p.m. to 8:00 p.m. in the multi-purpose room of Ambuehl Elementary School, at 28001 San Juan Creek Road in the City. Several issues were raised such as increased noise impacts, sound barriers, and traffic noise.

In 2004, the Department provided conceptual design plans to the City for its input. At that time, the design plans proposed to construct approximately 1,500 linear ft of 12- to 15 ft high concrete retaining walls along the north side of SR-74 and about 3,400 linear ft of approximately 16 ft high masonry sound walls along the south side to allow for widening to two lanes on each side. Based on input from the City, the roadway design was modified to provide for views of the San Juan Canyon and the Santa Ana Mountain ridgelines and enhances the rural character of the roadway that is consistent with goals of the City General Plan.

An Initial Study with proposed Mitigated Negative Declaration (IS [Proposed MND]) was circulated in July 2007 that addressed the environmental effects of the proposed widening and a public meeting was conducted the same month. A copy of the IS (Proposed MND) is on file and available for review at the Department District 12.

During the July 2007 public meeting, the Department shared the conclusions of the IS (Proposed MND) with the public to seek comments and ideas regarding the alternatives presented in this document.

As a result of the previous meetings, consultations, and the nature of the public comments received on the IS (Proposed MND), the Department decided that an Environmental Impact Report (EIR) would be prepared to analyze the environmental impacts for the proposed SR-74 widening from Calle Entradero (PM 1.0) to the City/ County limits. A Notice of Preparation (NOP) was circulated for public review for a 30-day period from January 18 to February 19, 2008. Each substantive environmental comment received on the IS (Proposed MND) has been considered and addressed in the Draft EIR. These comments can be found in Appendix H (bound separately). Technical studies completed for the IS (Proposed MND) have been updated with additional analyses to ensure that comments were addressed for the Draft EIR. A list of these studies can be found in Appendix F.

The County prepared the Ranch Plan Final Program EIR (FEIR) 589 (November 2004) and an Addendum to FEIR 589 (July 2006) that included evaluations of the widening of SR-74 from the City/County line to the east of San Antonio/La Pata intersection (County portion). In addition, two other environmental documents have been prepared by the County and resource agencies for subregional planning programs that have incorporated the widening of SR-74 in their assumptions. Since an environmental document was already prepared that analyzed the County portions (which began construction in fall 2008), the Project Development Team (PDT), a group consisting of the Department, City, environmental consultants, and engineering consultants determined that the Department must only prepare an environmental document for the City portions from Calle Entradero to the City/County line. Hence, the Project Limits for this environmental document are from Calle Entradero to the City/County line. The preliminary project plans are included in Appendix G – Preliminary Design Layouts.

The widening of SR-74 is included in the SCAG 2008 Regional Transportation Plan (RTP), as amended, and is listed under State Highway Projects on page 11 (Project ID ORA120535) of the 2006 Regional Transportation Improvement Program (RTIP). It is listed as follows: “SAN JUAN CAPISTRANO- ORTEGA HIGHWAY WIDENING (FROM CALLE ENTRADERO TO ANTONIO PARKWAY; FRM 2 TO 4 LANES DIVIDED)”. The description of the project in the 2006 RTIP is consistent with the portion of the proposed project in the City to the County limits. As

a separate project, SR-74 is being widened, from the City/County limits to Antonio Parkway, by the County. The page from the 2006 RTIP that cites the proposed project is provided in Appendix D.

1.2.1 Project Funding

Projects must be listed in the RTIP in order to acquire funding. The 2006 RTIP lists the project as being funded as part of the 2006 State Transportation Implementation Program (STIP) Augmentation.

1.3 Purpose and Need

1.3.1 Project Purpose

The purpose of the project is to accomplish the following specific objectives:

- Relieve existing and future traffic congestion and improve the flow of traffic on SR-74.
- Accommodate planned growth and development in the surrounding areas.
- Provide improvements consistent with local planning documents.
- Gap closure.

The project is a proposed solution to the deficiency identified in the need statement below.

1.3.2 Project Need

As previously indicated in Section 1.1, SR-74 serves as a key connection route, between Orange and Riverside Counties. The closest other roadways that provide this connection are State Route 91 (SR-91), approximately 26 mi to the north, and State Route 76 (SR-76), approximately 32 mi to the south. Both of these facilities are heavily traveled. As a result of the distance to alternative connectors, SR-74 experiences a consistent amount of regional traffic, despite the rural design of much of the roadway. In addition to serving this regional demand, the subject segment of SR-74 also serves as a primary access to the City. Because of topography, SR-74 is one of the few arterial highways within the City that extends to the east beyond I-5.

The City developed a Circulation Element as part of the General Plan for City planning policies. The plan evaluates the transportation needs of the community within the framework of the planned transportation network of the county, region and state. The County Master Plan of Arterial Highways (MPAH) and the City designate Ortega Highway as a primary arterial highway, a four-lane divided roadway. In Table C-6 of the City's Circulation Element, the widening of the Ortega Highway is planned as a long-range roadway improvement and is to be widened to four lanes, from Calle Entradero to the east City limits.

The City has a 2002 Strategic Transportation Plan (STP) that includes the widening of Ortega Highway. The plan evaluated local and regional transportation issues and land development projects to assess the significant traffic impacts on the City's streets and State highways.

The need for this project is based on an assessment of the existing and future transportation demand, and current and predicted future traffic on SR-74 as measured by level of service (LOS). LOS is based on the ratio of traffic volume to the design capacity of the facility. It is expressed as a range from LOS A (free traffic flow with low volumes and high speeds resulting in low densities) to LOS F (traffic volumes exceed capacity and result in forced flow operations at low speeds resulting in high densities). The following discussion demonstrates existing and forecast traffic demand on SR-74.

1.3.2.1 Deficiencies

Increasing traffic on SR-74 has degraded the highway LOS, particularly during the peak hours. During the a.m. peak hour, the highway experiences between LOS D and LOS E and during the p.m. peak period, LOS D (see Table 1-1).

Table 1-1 Existing and Future Levels of Service (LOS)

Location		Existing LOS	2035 LOS (No Build)	2035 LOS (Build)
SR-74 west of Via Cordova	AM	E	F	C
	PM	D	F	C
SR-74 west of Via Cristal	AM	D	F	C
	PM	D	F	B
SR-74 west of Avenida Siega	AM	D	F	C
	PM	D	F	B
SR-74 east of Avenida Siega	AM	D	F	C
	PM	D	F	B

Source: *Draft State Route 74 Lower Ortega Highway Widening Traffic Study* (Austin-Foust Associates, July 2008)

The existing SR-74 is four through lanes (two travel lanes in each direction) from I-5 to approximately 330 ft east of Calle Entradero, where it transitions to three through lanes and then to two through lanes (one travel lane in each direction). The widening of SR-74 east of the City limits, known as the Lower 74 Widening Project-County Portion, is currently being widened to four through lanes from 2,000 ft east of the Antonio Parkway/La Pata Avenue intersection to City limits. Following construction of the County portions of the SR-74 widening, there will be four through lanes both east and west of the project limits for the City portions. Therefore, the two-lane section of SR-74 proposed to be widened to four lanes under the City portions is an existing choke point that results in traffic congestion as the roadway narrows to two lanes east of Calle Entradero. The City portions would provide a gap closure that would relieve traffic congestion by widening SR-74 to four lanes through the project limits. Construction of the City portions of the SR-74 widening would provide a gap closure that would relieve traffic congestion by widening SR-74 to four lanes through the project limits.

1.3.2.2 Projected Deficiencies

Traffic congestion through the project area is expected to increase with the continued growth in the region. As shown in Table 1-1, by 2035, the LOS on SR-74 is projected to deteriorate to substandard levels. The mainline would operate at LOS F in 2035 in the peak hours if SR-74 is not improved. There would be considerable delays, and the operating speed would be less than 35 mph. Figure 1-3, illustrates the six levels of service for a two-lane highway based on the 2000 Highway Capacity Manual.

1.3.2.3 Social and Economic Demands

A review of the growth projections adopted by SCAG indicates continuing growth in the region that the project serves. The population in Orange County is expected to increase from 2.8 million in 2000 to over 3.7 million in 2035, an increase of nearly 25 percent. Growth in Riverside County is projected to increase from 1.5 million in 2000 (U.S. Census Bureau 2000) to 3.6 million in 2035 (Riverside County Projections 2006), an increase of 140 percent. This regional growth will continue to place a high demand on SR-74.

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LEVELS OF SERVICE

for Two-Lane Highways

Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		55+	Highest quality of service. Free traffic flow with few restrictions on maneuverability or speed. **No delays**
B		50	Stable traffic flow. Speed becoming slightly restricted. Low restriction on maneuverability. **No delays**
C		45	Stable traffic flow, but less freedom to select speed, change lanes or pass. **Minimal delays**
D		40	Traffic flow becoming unstable. Speeds subject to sudden change. Passing is difficult. **Minimal delays**
E		35	Unstable traffic flow. Speeds change quickly and maneuverability is low. **Significant delays**
F			Heavily congested traffic. Demand exceeds capacity and speeds vary greatly. **Considerable delays**

Source: 2000 HCM, Exhibit 20-2, LOS Criteria for Two-Lane Highways in Class 1

FIGURE 1-3

Lower SR-74 Widening Project

LOS for Two-Lane Highways

12-ORA-74 PM1.0/1.9

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1.4 Project Description

This section describes the Proposed Action and the design alternatives that were developed to achieve the project purpose and need while avoiding or minimizing environmental impacts. The proposed project would widen SR-74 by adding one through lane in each direction, east and west bound from Calle Entradero to the City/ County line. This environmental document has evaluated the two Build Alternatives, Alternative 1, Northside widening, eliminating existing sidewalk, north of SR-74; Alternative 2, Northside widening, a straight sidewalk replacement, north of SR-74; and the No Build Alternative.

1.5 Alternatives

1.5.1 Common Features of the Build Alternatives

The following project features are common design elements for both of the Build Alternatives:

1.5.1.1 Reconstructed Sidewalk

Currently, there are two 12 ft general purpose lanes in each direction and no median throughout the project area. Both Build Alternatives would widen SR-74, primarily on the north side, to minimize removal of mature trees and to avoid removal of the existing sidewalk on the south side of SR-74. These alternatives would result in the roadbed changing from the current varying width of 62.3 ft at Calle Entradero and 24.6 ft at the City/County Line to a width varying from 78 ft to 79 ft, including lanes, shoulders, and median. Both Build Alternatives would provide one additional 12 ft wide general purpose lane in each direction as well as a 12 ft wide painted median. A paved 5 ft wide shoulder would be provided on each side of the roadway to accommodate Class II (striped on-road) bicycle facilities, except from Avenida Siega to the City/County limits where the shoulder would transition to an 8 ft-wide shoulder to merge with the County portion of the project. The edge of the pavement would have concrete curbs on each side of the roadway. The proposed additional lanes, shoulders, median, drainages, driveways, and sidewalk have been developed consistent with the standards in the Department's Highway Design Manual.

1.5.1.2 Intersection Improvements

There are five roadways that intersect with SR-74 from the south within the Project Limits: Calle Entradero, Via Cordova, Via Cristal, Via Errecarte, and Avenida Siega as shown in Figure 1-4, Project Location Map. North of SR-74, Via Cordova becomes Hunt Club Drive, and Avenida Siega becomes Shade Tree Lane. Additionally, to the north, Palm Hill Drive and Toyon Drive provide access to private property. Each intersection would be modified/widened to accommodate the additional lanes, median, and shoulders. At intersections where there are existing right-turn pockets (Via Cordova and Via Cristal), the right-turn pocket would remain (Appendix G – Preliminary Design Layouts). No new intersections are proposed.

1.5.1.3 Driveways

On the north side of SR-74 within the Project Limits, there are 11 existing driveways. Each of the 11 driveways would be modified to meet the grade of the widened roadway and to include reconstruction of the curb return. These driveways would be designed in order to maintain sight distance and to avoid safety issues. Along the south side east of the Project Limits, there are currently two paved driveways. These would be paved and modified to be compliant with the Americans with Disabilities Act (ADA). No new driveways are proposed.

Alternatives 1 and 2 would construct a retaining wall that would prevent access to SR-74 from an existing unpaved driveway located east of Shade Tree Lane and approximately 300 ft west of the City/County limits. When this parcel was subdivided, the vehicular access rights were relinquished with City approval. Additionally, this driveway is nonoperational for residential use due to its steep slope and unpaved condition.

1.5.1.4 Pedestrian and Bicycle Facilities

The existing sidewalk on the south side of SR-74 would be maintained in its current location with the exception of a portion of sidewalk at the intersection of Via Cordova, where the sidewalk would be shifted to the south and reconstructed to provide for the right-turn pocket at this intersection. A new sidewalk would be constructed to the east beyond Avenida Siega and would connect to the planned County sidewalk system to provide continuity (Appendix G – Preliminary Design Layouts).

Class II bicycle facilities are planned and would be provided on each side of the roadway as part of the 5 ft-wide paved shoulders throughout the Project Limits. These facilities would be in conformance with the Orange County Transportation Authority (OCTA) Commuters Bikeways Strategic Plan (CBSP). The City's General Plan states

STEEPLECHASE DR
HUNT CLUB DR
ASCOT LN
PALM HILL DR
Begin Proposed Sidewalk Alternative 2
Begin Removal of Existing Sidewalk Alternatives 1 and 2
End Proposed Sidewalk Alternative 2
End Removal of Existing Sidewalk Alternatives 1 and 2
Project Limits
VIA SONORA
VIA CORDOVA
VIA MADERA
GL ENTRADERO
PAS ALBA
VIA SOLANA
VIA RUBI
VIA CRISTAL
VIA PERLA
PAS VALENCIA
VIA ESTENAGA

LEGEND

- Project Improvements
- TCE (Chain Link Fence)
- Drainage
- Proposed Retaining Wall
- Proposed Sound Wall
- Proposed Retaining Wall (Only represented in Alternative 2)
- Proposed Right-of-Way
- Existing Right-of-Way
- City Boundary

Land Use

- Very Low-Density Residential
- Medium Low-Density Residential
- Medium-Density Residential

0 75 150 Feet

Map Index

1

2

74

FIGURE 1-4

Sheet 1 of 2

Lower SR-74 Widening Project

Project Location Map

12-ORA-74 PM 1.0/1.9

EA# 086920

SOURCE: Air Photo USA (2007), HDR Engineering (2007), City of San Juan Capistrano (2008), Thomas Bros (2007).

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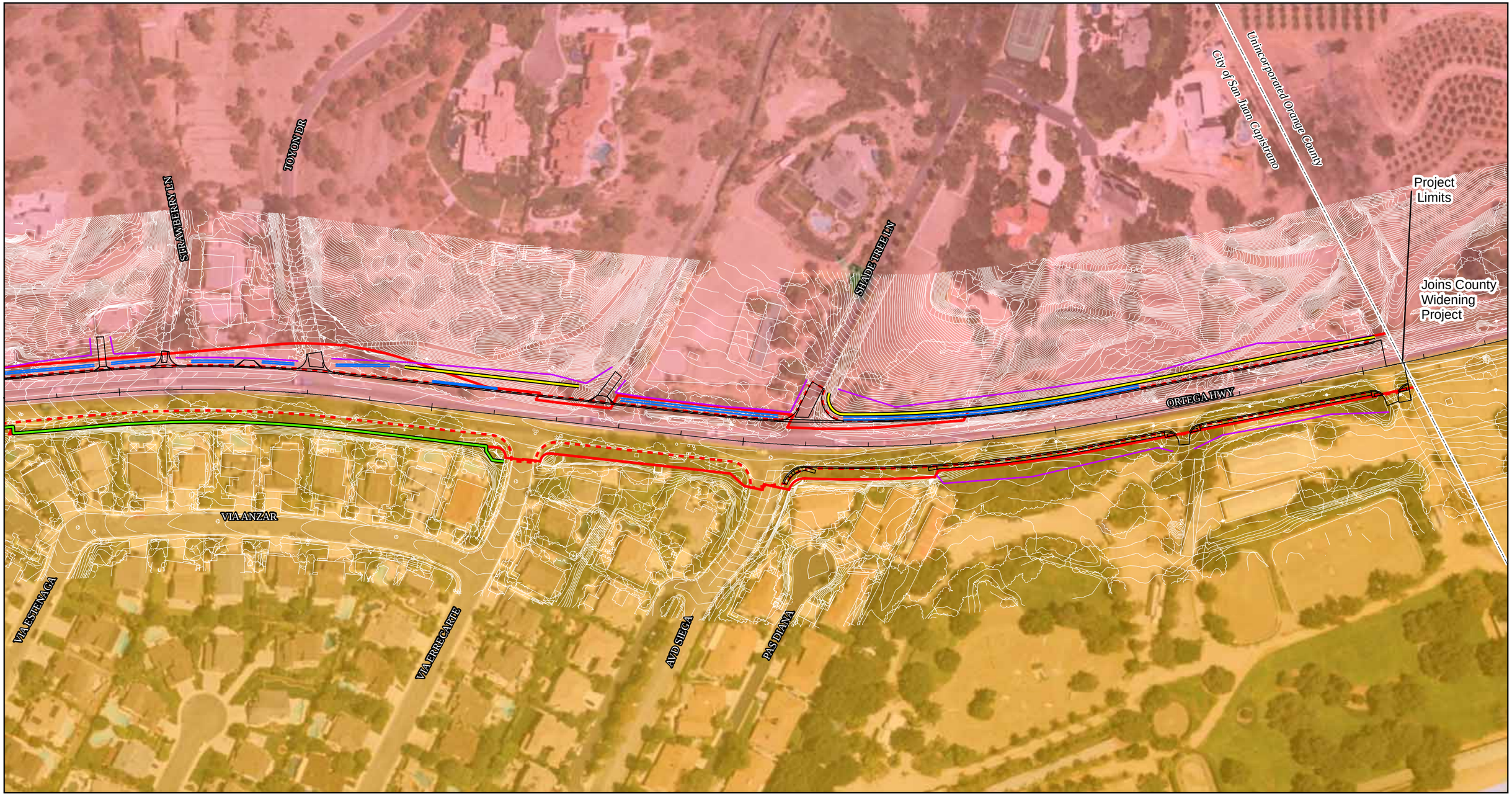

LEGEND

- Project Improvements
- TCE (Chain Link Fence)
- Drainage
- Proposed Retaining Wall
- Proposed Sound Wall
- Proposed Retaining Wall (Only represented in Alternative 2)
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- Existing Right-of-Way
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- Medium-Density Residential

0 75 150 Feet

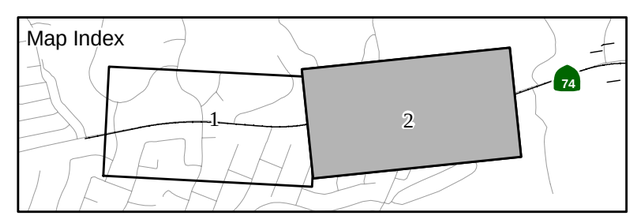

FIGURE 1-4

Sheet 2 of 2

Lower SR-74 Widening Project

Project Location Map

12-ORA-74 PM 1.0/1.9

EA# 086920

SOURCE: Air Photo USA (2007), HDR Engineering (2007), City of San Juan Capistrano (2008), Thomas Bros (2007).

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in its Circulation Element that there is the need to promote an extensive public bicycle, pedestrian, and equestrian trails network. These bicycle facilities would comply with the City's goals.

1.5.1.5 Right-of-way Acquisitions

The project would require sliver acquisitions from approximately 10 parcels adjacent to SR-74. No displacements or relocations would be required. Further discussion of the acquisitions is provided in Section 2.1.3, Community Impacts**.**

1.5.1.6 Cut and Fill

The roadway widening within the project limits would require cut slopes approximately 20 ft deep on the south side of SR-74 east of Via Cordova and between Via Cristal and Via Errecarte and a 700 ft long fill slope east of Avenida Siega up to 8 ft high. The designed cut slopes on the north side of SR-74 would require buttress keyways approximately three to five ft deep by 15 ft wide.

1.5.1.7 Drainage Improvements

Since most of the widening would occur on the north side of SR-74, all existing drainage facilities would be modified and extended to intercept flows at the proposed edge of pavement. An additional seven drainage culverts would be added on the north side of SR-74 throughout the project limits. There would be no drainage systems added to the south side. However, existing drainage on the south side from Avenida Siega, where widening would occur to the City/County line, would be modified to intercept flows at the proposed edge of pavement.

1.5.1.8 Retaining Walls

There are five retaining walls on the north side of SR-74 under consideration as shown in Figure 1-4, all of which will be designed to meet Department Division of Structures requirements. They are:

- A 160 ft long, 2 to 16 ft high retaining wall on the north side of Palm Hill Drive.
- A 560 ft long, 2 to 20 ft high retaining wall from Palm Hill Drive to an access road.
- A 100 ft long, 2 to 10 ft high retaining wall just east of the above mentioned access road.
- A 280 ft long, 2 to 14 ft high retaining wall between Toyon Drive and an access road.
- A 960 ft long, 8 to 24 ft high retaining wall between Shade Tree Lane to the City/ County limits.

The wall type will be finalized during the design phase.

1.5.1.9 Noise Attenuation

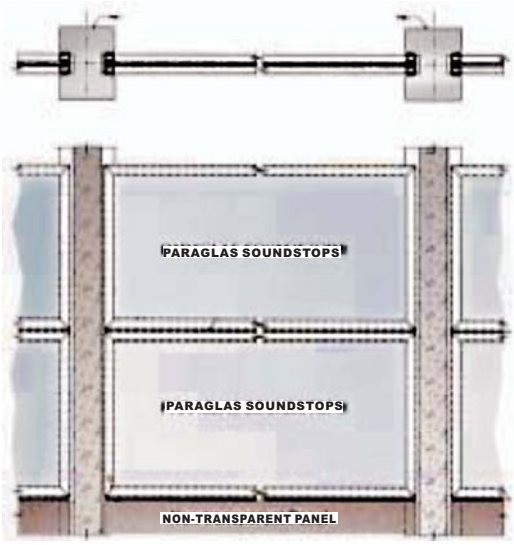
As a project feature, two noise barriers are recommended for this project as a community enhancement to protect residences south of SR-74. They are:

- A 747 ft long, maximum of 16 ft high noise barrier on the south side of SR-74 from Via Cordova to Via Cristal.
- A 1,228 ft long, maximum of 16 ft high noise barrier on the south side of SR-74 from Via Cristal to Via Errecarte.

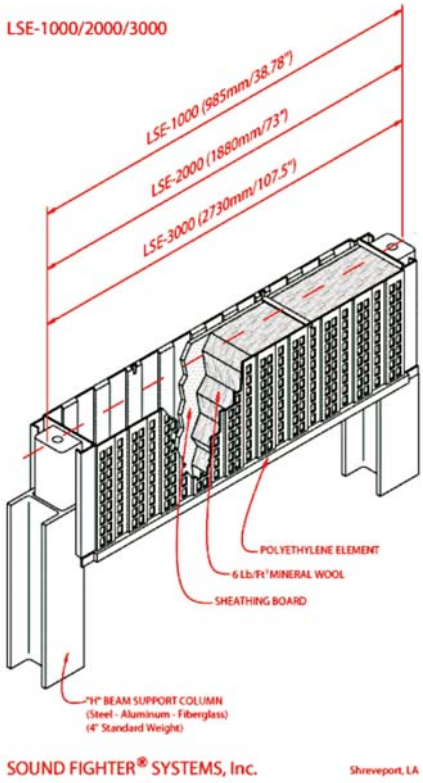
Both noise barriers would follow the alignment of the existing garden wall and construction would occur from the highway side thereby requiring minimal removal of existing vegetation. The height of the noise barrier (NB) No. 2 would be a maximum of 16 ft and NB No. 3 would be a maximum of 14 ft. from station number (STA) 27+06 to STA 28+43 and 16 ft. from STA 28+43 to STA 30+76.5.[1](see Appendix I, Noise Attenuation). In a letter dated August 24, 2004, the City assured the Department that the City would fund the construction and maintenance of the noise barriers where the cost exceeded Department standard cost allocations. This letter can be found in Appendix C, Agency Correspondence.

There are two design variations for the noise barrier: Plexiglas® sound walls and Sound Fighter® sound walls. The use of Plexiglas® panels would maintain the existing views of the southerly hills and San Juan Creek Valley and would provide light and transparency for the adjacent properties. The Plexiglas® walls would be built on steel beams immediately in front of the existing garden walls and would have precast panels at the bottom of the Plexiglas® wall; the existing garden walls would not be exposed. The Sound Fighter® walls would eliminate potential reflective noise to the residents on the north side from the implementation of the noise barriers on the south side of SR-74. These walls would be constructed similar to the Plexiglas® walls but would be opaque. This environmental document evaluates both options. Figure 1-5 shows an illustration of a Plexiglas® sound wall and an illustration of a Sound Fighter® sound wall.

[1] Station numbers are based on the Department station designation numbering in metric units as shown in Figure I-1 located in Appendix I of this document.



PLEXIGLAS® SOUND WALL



SOUND FIGHTER® SOUND WALL

FIGURE 1-5

Lower SR-74 Widening Project
Glass Sound Wall and Sound Fighter® Sound Wall
12-ORA-74 PM1.0/1.9
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1.5.1.10 Signals and Lighting

Currently, there are no traffic signals within the project limits. This project does not warrant any signals at the existing intersections. However, in the future should there be a need for a signal/pedestrian crossing, the current design does not preclude the opportunity to install a signal. All streetlights affected by the widening of SR-74 would be relocated and replaced in kind.

1.5.1.11 Utilities

All utilities such as power, gas, sewer, and telephone lines impacted by this project would be relocated or replaced in-kind within the Project Limits.

1.5.1.12 Pavement Rehabilitation

The project would also rehabilitate the existing pavement. The remaining existing pavement would be ground and overlaid with new Asphalt Concrete (AC) pavement to provide adequate strength to accommodate the projected 2035 traffic demand.

1.5.1.13 Construction

Construction for this project is expected to start fall of 2011 and be completed in the fall of 2013. No area is available within the Project Limits for exclusive use by the contractor (for staging). The highway right-of-way shall be used only for the purposes that are necessary to perform the required work.

A Traffic Management Plan (TMP), a standard condition placed on all construction projects, is designed to minimize construction activity-related motorist delays, queuing, and accidents by the effective application of traditional traffic-handling practices and innovative approaches. The TMP aims to relieve congestion and maintain traffic flow throughout the alternative routing and surrounding area within Riverside and Orange Counties. The preliminary TMP includes proposed Lane Closure Charts and Detour Plans. The TMP will be finalized by the time final designs are prepared. However, it is certain that one lane in each direction would be kept open at all times.

The TMP evaluates traffic mitigation strategies for the duration of construction, addresses lane closure requirements, and seeks to inform the public and motorists. The TMP strategies include: project phasing, a detour plan, provision of temporary lanes/shoulders, and reversible lanes. Traffic management strategies will also include a public awareness campaign, traffic systems and signage, and traffic support and safety elements. The public awareness element usually involves brochures, mailers, and/or media releases to educate and inform the public of the construction activities.

The motorist information strategies include message signage and a highway advisory radio to alert the motorists of road closures and/or detours. Construction Alerts, detailing the project information, alternative routes, and the Transportation Helpline Telephone number, would be made available to residents, businesses, local officials, City Halls, and the Chambers of Commerce throughout local communities.

The traffic support and safety elements involve incident management. The Transportation Management Center (TMC) aids in facilitating communication between construction personnel, the traffic management team, traffic-control officers, and the TMP Coordinator. The TMP would include provisions to minimize delays and give access to emergency personnel such as police and fire departments. Serving as a communications center, the TMC would help expedite the removal of minor and major incidents, help make decisions concerning the closing and opening of lanes, and manage traffic by providing traffic information to the media.

1.5.2 Unique Features of Build Alternatives

1.5.2.1 Build Alternative 1

Build Alternative 1 would remove the existing meandering sidewalk on the north side of SR-74, east of Calle Entradero. This alternative would widen SR-74 on the north side to avoid reconstructing the south side sidewalk.

1.5.2.2 Build Alternative 2

Reconstructed Sidewalk

The existing sidewalk on the north side of SR-74 between Calle Entradero and Via Cordova would be reconstructed to the north. The existing meandering sidewalk would be reconstructed as a straight sidewalk (not curvilinear) within the existing public right-of-way.

1.5.2.3 Retaining Walls

In addition to the five retaining walls discussed in Section 1.5.1.8, two additional short retaining walls would be constructed north of the new reconstructed sidewalk along the south edge of the existing equestrian trail.

1.5.2.4 No Build Alternative

The No Build Alternative would not include any improvements to the project and would result in LOS F operating conditions for the mainline, as shown in Table 1-2.

Table 1-2 Summary of Project Alternatives

Alternative	Width of Project	Partial Acquisitions	Trees to be Removed	Retaining walls	Sound walls	Consistent with Plans	LOS (2035)	Cost
1	Varies from 78-79 ft	10 parcels	111	5	2	Yes	B and C	$26,100,000
2	Varies from 78-79 ft	10 parcels	111	7	2	Yes	B and C	$26,200,000
No Build	No change	None	None	None	None	No	F	

Source: *Draft State Route 74 Lower Ortega Highway Widening Traffic Study,* Austin-Foust Associates, July 2008

SR-74 traffic would flow at less than 35 mph and result in significant delays. SR-74 would be maintained in its existing two-lane condition and would continue to be used by commuters, recreation traffic, and commercial trucks. The No Build Alternative is not consistent with regional and local transportation plans, would not alleviate existing and projected congestion in the study area, and would not meet the project purpose and need. The No Build Alternative provides a baseline for comparing the effects associated with the Build Alternatives since the environmental document must consider the effects of not implementing the project.

1.5.3 Comparison of Alternatives

As shown in Table 1-2, Build Alternatives 1 and 2 are the same with the exception of the removal of the sidewalk along the north side of SR-74 between Calle Entradero and Via Cordova and the number of retaining walls. Alternative 1 would require five retaining walls whereas Alternative 2 would require seven retaining walls due to the reconstruction of the sidewalk on the north side of SR-74 between Calle Entradero and Via Cordova. The No Build Alternative would not be consistent with City and regional plans and would result in LOS F on SR-74 within the project limits. Therefore, the No Build Alternative would not meet the project purpose and need.

1.5.3.1 Environmental Decision Process

After the public circulation period, all comments will be considered, and the Department will select a preferred alternative and make the final determination of the project's effect on the environment. In accordance with CEQA, the Department will certify that the project complies with CEQA, prepare findings for all significant impacts identified, prepare a Statement of Overriding Considerations for impacts that

will not be mitigated below a level of significance, and certify that the findings and Statement of Overriding Considerations have been considered prior to project approval. The Department will then file a Notice of Determination (NOD) with the State Clearinghouse that will identify whether the project will have significant impacts, mitigation measures were included as conditions of project approval, findings were made, and a Statement of Overriding Considerations was adopted.

1.5.4 Alternatives Considered but Eliminated

Four alternatives were considered but eliminated from further study and are discussed below. These decisions were based on the current roadway configurations. SR-74 from I-5 to Calle Entradero is a four-lane facility. The County is widening SR-74 from the City/County limits to east of La Pata Avenue. This project to widen SR-74 from Calle Entradero to the City/County limits is considered a gap closure and there are no other alternatives to redirect traffic within this segment of SR-74 without having significant impacts to the adjacent residential community.

1.5.4.1 Non-standard Roadway Widening (widening on both sides)

Rehabilitate and widen the existing roadway, from Calle Entradero at PM 1.0 to the City limit at PM 1.86, to match the existing cross section width west of Calle Entradero. The roadway cross section consists of four 12 ft lanes, a 12 ft painted median, two 2 ft curbs and gutter, and two 5 ft sidewalks. Right turn lanes would be provided for Via Cristal, Via Errecarte, and Avenida Siega.

Under this Alternative, the roadway would be widened on both sides; therefore, it would impact the mature trees and existing meandering sidewalks. The roadway would not provide standard shoulders and bike lanes and would be a safety issue.

1.5.4.2 Standard Roadway Widening (widening on both sides)

Rehabilitate and widen the existing roadway, from Calle Entradero at PM 1.0 to City limit at PM 1.86, with standard geometric cross section that includes four 12 ft lanes, a 12 ft painted median, and 8 ft shoulders. Right turn lanes would be provided for Via Cristal, Via Errecarte, and Avenida Siega.

Under this Alternative, the roadway would be widened on both sides which would require more right-of-way than Alternative 1. In addition, this Alternative would also affect the historical resource on the south, the existing equestrian trail, the existing driveways and the environmentally-sensitive areas on the north.

1.5.4.3 Multi-modal Alternative

There is a need for a multi-modal transportation corridor to connect Riverside County to SR-241 and I-5. No infrastructure for multi-modal transportation presently exists. Construction of new infrastructure could have substantial impacts to environmental resources and would require large amounts of property acquisition. New routes to circumnavigate SR-74 would increase travel time for east and westbound travelers.

Among the widening of SR-74, other facilities are being improved to accommodate traffic generated by the Ranch Plan and other development in the area. The area immediately served by SR-74 within the City is generally built out. However, land to the east in unincorporated Orange County is primarily undeveloped. The Ranch Plan EIR identifies traffic improvements to the areas surrounding the City to alleviate anticipated growth from the development within unincorporated Orange County. This alternative did not contain elements to enhance the capacity of SR-74 to better accommodate the current and future traffic demands.

1.5.4.4 Non-standard Roadway Widening (widening to the north)

Rehabilitate and widen the existing roadway from Calle Entradero at PM 1.06 to the City limit at PM 1.86. Most of the road widening would be to the north. However, the portion from Avenida Siega to the City limits will require widening to the north and south. The roadway cross section consists of four 12 ft lanes, a 12 ft painted median, two 2 ft shoulders. Right turn lanes would be provided for Via Cristal, Via Errecarte, and Avenida Siega.

Under this Alternative, the roadway would not provide standard shoulders and bike lanes. The Department Project Development Coordinator did not approve the proposed 2 ft non-standard shoulders.

1.6 Permits and Approvals Needed

As shown in Table 1-3, the following permits, reviews, and approvals will be required prior to the construction of the proposed project.

Table 1-3 Required Permits, Reviews, and Approvals

Agency	Permit/Approval	Status
ACOE	Section 404 Letter of Permission (LOP) or Nationwide Permit (NWP) 14	Department is to obtain letter or permit.
CDFG	Section 1602 Streambed Alteration Agreement	Department is to obtain Agreement.
RWQCB	401 Water Quality Certification	Department is to obtain certification.
City of San Juan Capistrano	Tree Removal Permit	Department is to obtain permit.

ACOE = United States Army Corps of Engineers
CDFG = California Department of Fish and Game
RWQCB = Regional Water Quality Control Board

Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

This chapter describes the current environmental setting in the study area and identifies the potential impacts of implementing the proposed project. The discussion for each environmental topic discussed below will describe the present conditions, discuss the potential impacts of building the proposed project, and indicate which measures would be taken to avoid, minimize, and/or mitigate those impacts. Only mitigation measures within this document have been identified by number. Therefore, the remaining measures, consisting of avoidance and/or minimization measures have not been numbered. To achieve the project purpose and need and avoid or minimize environmental impacts, two Build Alternatives (Alternatives 1 and 2) and the No Build Alternative are being evaluated.

The environmental analysis contained within the following chapter considers the potential environmental consequences associated with implementation of the proposed project. The environmental impact analysis discusses potential impacts in four general categories: human environment, physical environment, biological environment, and cumulative impacts. As part of the scoping and environmental analysis conducted for the project, the following environmental issues were considered, but no adverse impacts were identified: coastal zone, wild and scenic river areas, and farmlands/timberlands. There is no further discussion regarding these issues in this document. Because the project is not located within the Coastal Zone, no discussion of this topic is included. Furthermore, discussion regarding the topics of wild and scenic rivers and farmland/timberlands was not included within this document due to the absence of these resources in the project area.

The Department has not adopted thresholds of significance pursuant to CEQA. As a statewide agency covering diverse geographic areas, the Department has, as a matter of policy, left the determination of significance to District PDT. As such, the District 12 PDT has made the significance determination as shown at the end of each topical section under the heading “Level of Significance.” The use of the term “thresholds of significance” is not used for projects on the State Highway System (SHS).

HUMAN ENVIRONMENT

2.1.1 Land Use

2.1.1.1 Affected Environment

The following describes the existing land uses and the general plan designated land uses in the project area. This section will also assess potential impacts caused by the proposed project on existing and proposed land uses within the project area. The City and County General Plans, as they apply to the project area, were reviewed to identify designated land uses and planning policies and goals. Aerial photographs were examined and site visits were conducted to identify existing land uses, and the SCAG Draft 2008 Regional Comprehensive Plan was reviewed to identify foreseeable and recent development projects within the project area (Figure 2.1.1-1).

2.1.1.2 Existing and Future Land Uses

The study area is located entirely within the City of San Juan Capistrano city limits. County unincorporated property is located east of and outside the project limits. In the project vicinity, land uses are designated by the City General Plan to the north, south, and west, and the County General Plan to the east of the project limits.

The project site includes the segment of SR-74 that consists of four (4) lanes, with two lanes in each direction from Calle Entradero to within approximately 663 ft of the Via Cordova and SR-74 intersection. The road then tapers to two (2) lanes, with one lane in each. Land uses surrounding the project site consist of mostly residential land uses between areas utilized for farming or ranching purposes and vacant, undeveloped parcels. Areas on the south side of SR-74 predominately comprise high-density single-family residential land uses. Areas located immediately north and south of the project limits along SR-74 are under the jurisdiction of the City. The City has designated SR-74 as a scenic corridor. The project limits have not been officially designated as a California State Scenic Highway, but SR-74 through the project site is eligible for the designation. The significance of a State Scenic Highway designation is further discussed in Section 2.1.6, Visual and Aesthetics.

The City is primarily a residential community. Any nonresidential land use within the existing community would require compatibility or open space land uses to serve as a buffer between any residential and nonresidential developments. Please refer to

STEEPLECHASE DR
HUNT CLUB DR
ASCOT LN
PALM HILL DR
Begin Proposed Sidewalk Alternative 2
Begin Removal of Existing Sidewalk Alternatives 1 and 2
End Proposed Sidewalk Alternative 2
End Removal of Existing Sidewalk Alternatives 1 and 2
Project Limits
VIA SONORA
VIA CORDOVA
VIA MADERA
GL ENTRADERO
PAS ALBA
VIA SOLANA
VIA RUBI
VIA CRISTAL
VIA PERLA
PAS VALENCIA
VIA ESTENAGA

LEGEND

- Project Improvements
- TCE (Chain Link Fence)
- Drainage
- Proposed Retaining Wall
- Proposed Sound Wall
- Proposed Retaining Wall (Only represented in Alternative 2)
- Proposed Right-of-Way
- Existing Right-of-Way
- City Boundary

Land Use

- Very Low-Density Residential
- Medium Low-Density Residential
- Medium-Density Residential

0 75 150 Feet

Map Index

1
2
74

FIGURE 2.1.1-1

Sheet 1 of 2

Lower SR-74 Widening Project

Existing Land Uses

12-ORA-74 PM 1.0/1.9

EA# 086920

SOURCE: Air Photo USA (2007), HDR Engineering (2007), City of San Juan Capistrano (2008), Thomas Bros (2007).

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TOYON DR
STRAWBERRY LN
SHADE TREE LN
City of San Juan Capistrano
Unincorporated Orange County
Project Limits
Joins County Widening Project
ORTEGA HWY
VIA ANZAR
VIA ESTEVAGA
VIA FERREGARTE
AVD SIEGA
PAS DI AVA

LEGEND

- Project Improvements
- TCE (Chain Link Fence)
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- Proposed Sound Wall
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Land Use

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- Medium Low-Density Residential
- Medium-Density Residential

0 75 150 Feet

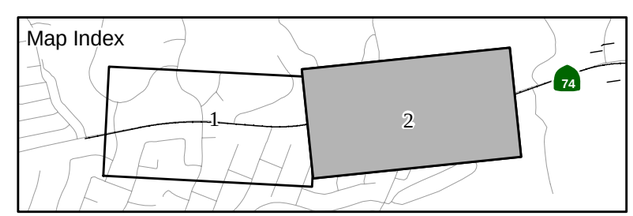

FIGURE 2.1.1-1

Sheet 2 of 2

Lower SR-74 Widening Project

Existing Land Uses

12-ORA-74 PM 1.0/1.9

EA# 086920

SOURCE: Air Photo USA (2007), HDR Engineering (2007), City of San Juan Capistrano (2008), Thomas Bros (2007).

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Section 2.1.2, Growth, for a more detailed description of the potential growth within the project area.

The project area is characterized primarily by residential land uses. Areas of nonresidential land uses are dispersed throughout and buffered by areas of open space. Throughout the project area, projected future developments are mainly residential and business-related. General Plan land use designations in the project vicinity are shown in Figure 2.1.1-1. Table 2.1.1-1 identifies planned developments in the project vicinity that are currently under construction or have not yet been constructed.

Table 2.1.1-1 Existing and Future Land Use Development

Project Title	Project Description	Lead Agency	Project Status
CUSD Offices	Construction of government offices (125,000 gross square feet) at the southerly terminus of Valle Road from San Juan Creek Road.	CUSD	Complete
Pacifica San Juan-(SunCal)	Surrounding McCracken Hill and extending south to Camino Las Ramblas. Residential. 411 single-family and multifamily units.	San Juan Capistrano	Under construction
San Juan Meadows	La Novia Avenue. Residential. 196 single-family detached units, 79 single-family attached units, and 165 multifamily units.	San Juan Capistrano	Approved; not constructed
Serra Plaza	Del Obispo Street at Paseo Adelanto. Offices. 45,500 gross square feet.	San Juan Capistrano	Complete
Whispering Hills Estates Planned Community	Single-family dwelling units on the eastern edge of the City by La Pata Avenue.	San Juan Capistrano	Under construction
San Juan Hills High School	West of La Pata Road (Antonio Parkway) and north of San Juan Creek Road. Public high school. 2,000 students.	CUSD	Complete
Villa Montana Apartment Homes	10 ac of the Whispering Hills Estates site. 163-unit apartment development.	San Juan Capistrano	Under review
Junipero Serra Catholic High School	Junipero Serra Road and Camino Capistrano. Private high school. 2,200 students.	San Juan Capistrano	Complete
Honeyman Ranch: Rancho Madrina	Rancho Viejo Road. Residential estate homes. 119 single-family detached units.	San Juan Capistrano	Under construction
Ortega Ranch Offices	Rancho Viejo Road and Ortega Highway. 11-building office complex. 1512,72 gross square feet.	San Juan Capistrano	Complete
Mammoth Offices	Rancho Viejo Road at Via Escolar. 2-building office complex. 103,832 gross square feet.	San Juan Capistrano	Complete
Ortega Animal Hospital	Ortega Highway between Rancho Viejo Road and La Novia Avenue. Veterinary clinic and animal boarding. 7,767 gross square feet.	San Juan Capistrano	Complete
Reising Law Offices	Ortega Highway between Rancho Viejo Road and La Novia Avenue. Law offices. 5,963 gross square feet.	San Juan Capistrano	Complete

Table 2.1.1-1 Existing and Future Land Use Development (Continued)

Rancho Viejo Office Park	Rancho Viejo Road north of Spotted Bull Lane (east side). 47 percent medical office, 53 percent commercial office. 67,720 gross square feet.	San Juan Capistrano	Under review
Valle Ranch	South terminus of Valle Road. Offices. 44,400 gross square feet.	San Juan Capistrano	Complete
Belladonna Estates	Del Obispo Street. Residential custom lots (31).	San Juan Capistrano	Approved; not constructed
St. Margaret's Episcopal School Master Plan	Ortega Highway and La Novia Avenue. Church: 18,455 gross square feet. Performing arts center: 450 seats. Private school: 151 students.	San Juan Capistrano	Under review
M&M Petroleum	Ortega Highway and I-5 northbound on-ramp. Service station: 9 pumps. Convenience store: 5,940 gross square feet. Auto wash.	San Juan Capistrano	Under construction.
Rancho Mission Viejo Plan	RMV Planning Area (The Ranch Plan project) is a 22,815 ac property immediately east of the Cities of Mission Viejo and San Juan Capistrano in unincorporated Orange County. 14,000 dwelling units and 5.2 million square feet of retail and business uses on 5,842 gross acres; golf course uses on 25 gross acres, and open space on 16,942 ac Widening SR-74 from 2 lanes to 4 lanes within Planning Area 1.	County of Orange	Approved project; not constructed
Prima Deshecha Landfill Expansion	Increase disturbance area from 800 to 1,078 ac for landslide remediation features; redesign desilting system; supplement water supply in the Prima Deshecha Cañada stream channel; modify excavation-phasing limits for landslide remediation.	County of Orange	Approved June 2007 by County
San Juan Capistrano Ortega Highway Pipeline Project	Construction of approximately 5,287 linear feet of 12-inch diameter potable water main pipeline within the Ortega Highway right-of-way.	City of San Juan Capistrano	Initial Study/ Negative Declaration approved 12/24/07

Sources: City of San Juan Capistrano, 2008; County of Orange, 2008
ac = acre
CUSD = Capistrano Unified School District
I-5 = Interstate 5
RMV = Rancho Mission Viejo
SR-74 = State Route 74

2.1.1.3 Consistency with State, Regional, and Local Plans and Programs

City of San Juan Capistrano General Plan

In the immediate project area, the City General Plan designates the majority of land uses along SR-74 as residential. Within the limits of the project, residences on the north side of SR-74 are designated Very Low Density; residences on the south side of SR-74 are designated Medium, Medium Low Density, and Low Density. The City General Plan residential designations are described in Table 2.1.1-2.

Table 2.1.1-2 Residential Land Use Designations

Designation	Expected Dwelling Units per Acre[1]	Development Types
Very Low Density	0–1	Detached single-family dwellings, mobile and modular homes, second single-family units, guest-houses, and public facilities. Generally, Very Low Density residential developments occur in the hillside areas of the City.
Low Density	Up to 2	Detached single-family dwellings, mobile and modular homes, second single-family units, guest-houses, and public facilities.
Medium Low Density	Up to 3.5	Single-family dwellings, mobile and modular homes, second single-family units, guest-houses, churches, schools, family day care homes, and public facilities.
Medium Density	Up to 5	Single-family dwellings; mobile home parks; duplexes; multifamily dwellings including condominiums and townhomes; second single-family units; guest-houses; churches; schools; family day care homes; and public facilities.

Source: City of San Juan Capistrano Land Use Element.

1. Maximum densities of land use designation may be exceeded to complement the General Plan Housing Element policy in accordance with the density bonus provision of Section 65915 of the California Government Code.

The Land Use Element of the San Juan Capistrano General Plan includes several related local plans and programs as listed below:

City of San Juan Capistrano Zoning Ordinance

The current Zoning Ordinance and associated zoning map were adopted in 1975. The ordinance has been continually updated to include changes to the General Plan. The Zoning Ordinance is the primary tool used to implement the Land Use Element. This Ordinance, along with the Zoning Map, identifies land uses within the City.

Historic Town Center Master Plan

Developed by the City in 1995, this Plan sets forth goals and policies about how the General Plan should be implemented in the historic downtown area. The project site is not within the Historic Town Center.

Los Rios Precise Plan

This Plan was adopted in 1978 and outlines the specific planning needs of the historic Los Rios District. The project site is not located within the Los Rios District.

City of San Juan Capistrano Redevelopment Plan

The Redevelopment Plan was prepared in 1994 and updated in 1997 and is one of the many tools used to implement the policies within the Land Use Element of the General Plan. The project is not located within a redevelopment area.

Land Use Element

There are five major issues addressed in the goals, policies, and implementation actions of the City General Plan Land Use Element. The major issues are: (1) balancing land uses; (2) controlling and directing growth to maintain community character; (3) protecting open space; (4) promoting economic development; and (5) enhancing and preserving the character of existing neighborhoods. Each of these issues has one or more associated policies. Not all of the policies have the potential to be affected by the implementation of this project. Those that are applicable to the proposed project are listed below:

Land Use Goal 2: **Control and direct growth so that community character is preserved.**

Policy 2.2: Assure that new development is consistent and compatible with the existing character of the City.

Policy 2.3: Ensure that development corresponds to the provision of public facilities and services.

Land Use Goal 7: **Enhance and maintain the character of neighborhoods.**

Policy 7.1: Preserve and enhance the quality of San Juan Capistrano neighborhoods by avoiding or abating the intrusion of non-conforming buildings and uses.

Policy 7.2: Ensure that new development is compatible with the physical characteristics of its site, surrounding land uses, and available public infrastructure.

Policy 7.3: Utilize programs for rehabilitation of physical development, infrastructure and undergrounding of utilities within the City to improve community neighborhoods.

Circulation Element

The City Circulation Element guides the continued development and improvement of the circulation system to support existing and planned development. The development of additional land in the future will increase the demand for local and regional roadway improvements and construction. The Circulation Element establishes acceptable roadway service levels and identifies improvements required to maintain the service levels. The use of other modes of transportation such as transit, walking, bicycling, and riding is promoted to reduce the demand for transportation system improvements and to improve air quality. The purpose of the Circulation Element is to provide a safe, efficient, and adequate circulation system for the City. The City designates SR-74 (within the study area) as a Primary arterial highway (defined as a four-lane roadway with two lanes in each direction divided by a 14-inch raised median). A Primary arterial highway is a roadway "typically constructed within a right-of-way of 100 ft with a curb-to-curb pavement width of 70 ft. Primary arterial highways have a maximum capacity of 33,800 average daily trips and a peak hour capacity of 3,380 trips."

Applicable goals and policies are as follows:

Circulation Goal 1: Provide a system of roadways that meets the needs of the community.

Policy 1.1: Provide and maintain a City circulation system that is in balance with the land uses in San Juan Capistrano.

Policy 1.2: Implement the City's Master Plan of Streets and Highways.

Policy 1.3: Coordinate improvements to the City circulation system with other major transportation improvement programs.

Policy 1.4: Improve the San Juan Capistrano circulation system roadways in concert with land development to ensure sufficient levels of service.

Policy 1.5: Improve existing arterial system that serves regional circulation patterns in order to reduce local congestion (Ortega Highway at I-5).

Circulation Goal 3: Provide an extensive public bicycle, pedestrian, and equestrian trails network.

Policy 3.1: Provide and maintain an extensive trails network that supports bicycles, pedestrians, and horses and is coordinated with those networks of adjacent jurisdictions.

Circulation Goal 4: Minimize the conflict between the automobile, commercial vehicles, pedestrians, horses, and bicycles.

Policy 4.1: Provide sufficient right-of-way widths along roadways to incorporate features that buffer pedestrians, horses, and bicycles from vehicular traffic.

Policy 4.2: Provide traffic management improvements within areas where through traffic creates public safety problems.

Policy 4.3: Install additional street improvements within areas where necessary to improve vehicular and non-vehicular safety.

County of Orange General Plan

East of the project limits, the County General Plan designates land uses along SR-74 as Suburban Residential, Open Space, and Urban Activity Center, as described below:

Suburban Residential

The land use designation of Suburban Residential is characterized by a wide range of housing types, from estates on large lots to attached dwelling units such as townhomes, condominiums, and clustered arrangements. The building intensity for Suburban Residential ranges from 0.5 to 18 dwelling units per acre.

Open Space

The land use designation of Open Space indicates the current and near-term use of the land. It is not necessarily an indication of a long-term commitment to open-space uses. Certain properties within the Open Space Category are committed, through public or private ownership, to remain as open space, but other properties, due to market pressures to serve a growing County population, may ultimately be developed in other ways.

Urban Activity Center

The land use designation of Urban Activity Center identifies locations intended for high-intensity mixed-use development. Appropriate land uses include but are not limited to residential, commercial, and office uses; industrial parks and materials

recovery/recycling facilities; civic, cultural, and educational uses; and childcare facilities.

Transportation Element

Transportation Element Goal 1: Provide a circulation plan that supports land use policies of the County.

Objective 1.1: Establish a circulation plan that accommodates the General Plan Land Use Element of the County

Objective 1.3: Develop a program to monitor highway conditions at intersections within the unincorporated areas to ensure that an acceptable Level of Service (LOS) is maintained

Policy 1.1: Implement the circulation plan in a manner that supports the implementation of adopted overall land use policies and which is consistent with financing capabilities

Policy 1.2: Apply conditions to the land use development projects to ensure that the direct and cumulative impacts of these projects are mitigated consistent with established level of service policies

Transportation Element Goal 2: Provide a circulation (arterial highway) plan that is integrated with that of adjacent jurisdictions

Policy 2.1: Coordinate with the following transportation planning agencies: the Department (State), Orange County Transportation Authority (OCTA), the Transportation Corridor Agencies (County corridor planning and construction) and Orange County cities on various studies relating to freeway, tollway and transportation corridor planning, construction and improvement in order to facilitate the planning and implementation of an integrated circulation system

Transportation Element Goal 3: Provide a circulation plan that facilitates the safe, convenient, and efficient movement of people and goods throughout unincorporated areas of the County

Policy 3.1: Maintain acceptable levels of service on arterial highways pursuant to the Growth Management Element of the General Plan

Policy 3.2: Ensure that all intersections within the unincorporated portion of Orange County maintain a peak hour level of service "D" according to the County Growth Management Plan Transportation Implementation Manual

Natural Community Conservation Plan

The California Department of Fish and Game (CDFG) and United States Fish and Wildlife Service (USFWS) created the Natural Community Conservation Planning (NCCP) program, a cooperative effort with numerous private and public partners to protect habitats and species. The program began in 1991 under the State's Natural Community Conservation Planning Act of 1991 (NCCP Act). The NCCP is broader in its orientation and objectives than both the California Endangered Species Act (CESA) and the Federal Endangered Species Act (FESA). The NCCP takes an ecosystem approach to planning for the protection and perpetuation of biological diversity. The NCCP identifies and provides regional or areawide protection of plants, animals, and their habitats while allowing compatible and appropriate economic activity.

The proposed Southern Subregion NCCP/Master Streambed Alteration Agreement (MSAA)/Habitat Conservation Plan (HCP) and its associated EIR/Environmental Impact Statement (EIS) have been prepared by the County in cooperation with the CDFG and USFWS in accordance with the provisions of the NCCP Act, CESA, FESA, and Section 1600 et seq. of the California Fish and Game Code. The proposed Southern Subregion NCCP/MSAA/HCP would provide for the conservation of designated State- and federally listed and unlisted species and the associated habitats that are currently found within the 132,000-acre (ac) NCCP/MSAA/HCP study area (Southern Subregion) that encompasses the project study area.

On October 24, 2006, the County Board of Supervisors certified the FEIR for the NCCP/MSAA/HCP project. The USFWS distributed the Final EIS for public review on November 13, 2006. The Implementation Agreement (IA) was signed by the Participating Landowners (the County, Rancho Mission Viejo [RMV], and the Santa Margarita Water District [SMWD]) in December 2006. The USFWS signed the IA, approved the HCP, and issued Incidental Take Permits (ITPs) to each of the participating landowners on January 10, 2007. The Southern HCP assumes the Ranch Plan development. Coordination with CDFG on the NCCP/MSAA is ongoing.

SCAG Regional Plans

The SCAG is the Metropolitan Planning Organization (MPO) for six counties: Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The region encompasses a population exceeding 15 million persons in an area of more than 38,000 square miles. As the designated MPO, SCAG is mandated by the federal government to research and draw up plans for transportation, growth management, hazardous waste management, and air quality. The leading activities SCAG undertakes that are applicable to this project include:

- Maintenance of a *continuous, comprehensive*, and *coordinated planning* process resulting in an RTP and an RTIP.
- Development of *demographic projections* plus the integrated land use, housing, employment, transportation programs, measures, and strategies portions of the South Coast Air Quality Management Plan (AQMP), as well as serving as co-lead agency for *air quality planning* for the Central Coast and Southeast Desert air basin districts.
- Responsibility (under the Federal Clean Air Act) for determining conformity to the Air Plan of projects, plans, and programs.

SCAG has developed a number of plans to achieve its regional transportation and growth objectives. The most applicable of these regional objectives is the Regional Comprehensive Plan and Guide (RCPG) that includes a Growth Management Chapter, the RTP, and the RTIP.

South Coast Air Quality Management Plan

The SCAQMD and SCAG are responsible for formulating and implementing the AQMP for the Basin. Every three years, the SCAQMD prepares a new AQMP, updating the previous plan and having a 20-year horizon. The SCAQMD adopted the 2003 AQMP in August 2003 and forwarded it to the California Air Resources Board (CARB) for review and approval. CARB approved a modified version of the 2003 AQMP and forwarded it to the United States Environmental Protection Agency (EPA) in October 2003 for review and approval.

The 2003 AQMP updates the attainment demonstration for the federal standards for ozone (O_3) and particulate matter (PM_{10}); replaces the 1997 attainment demonstration for the federal carbon monoxide (CO) standard and provides a basis for a maintenance plan for CO for the future; and updates the maintenance plan for the federal nitrogen dioxide (NO_2) standard that the Basin has met since 1992.

The 2003 AQMP proposes policies and measures to achieve federal and State standards for healthful air quality in the Basin.

This revision to the AQMP also addresses several State and federal planning requirements and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. This AQMP is consistent with and builds upon the approaches taken in the 1997 AQMP and the 1999 Amendments to the O_3 State Implementation Plan (SIP) for the Basin for the attainment of the federal O_3 air quality standard. However, this revision points to the urgent need for additional emission reductions (beyond those incorporated in the 1997/1999 Plan) to offset increased emission estimates from mobile sources and meet all federal criteria pollutant standards within the time frames allowed under the federal Clean Air Act (CAA).

The SCAQMD is developing the 2007 AQMP, which is described as a regional and multiagency effort (SCAQMD Governing Board, CARB, SCAG, and the EPA). State and federal planning requirements will include developing control strategies, attainment demonstration, reasonable further progress, and maintenance plans. The 2007 AQMP also incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. The 2007 AQMP includes a request to have the Basin's federal 8-hour O_3 attainment status changed from severe to extreme. This change would extend the attainment deadline from 2021 to 2023. CARB approved the 2007 AQMP on September 27, 2007, and adopted it as part of the 2007 SIP. CARB has forwarded the 2007 SIP, which included the 2007 AQMP, to the EPA for its review and approval.

Parks and Recreation Facilities

The parks and recreational facilities within the project vicinity consist of neighborhood parks, community parks, joint-use parks, private parks and recreational facilities, community services and facilities, and a trail system.

The closest park to the SR-74 widening project area is Arroyo Park, a 3.6 ac park, which is located approximately 0.3 mi west of the project's westerly limit. The park is located at 31300 Sundance Drive. Due to the distance of the park from the closest project improvements, it would not be impacted by the proposed project either directly or indirectly.

The City has an extensive hiking, biking, and equestrian trail network. There are no existing bicycle facilities within the project limits. Outside of, but parallel to, the Project Limits are private equestrian trails identified as the East and West Hunt Club Trails located on the north side of SR-74. The existing East and West Hunt Club Trails, as well as the associated Hunt Club feeder trails located on the north side of SR-74 between the Hunt Club entrances, would be maintained. An additional recreational trail on the south side of SR-74 is identified as the Siega Trail and is located along Avenida Siega. The Siega Trail would also be maintained during the proposed project.

The purpose of the proposed project is to widen SR-74 to four lanes to relieve congestion and accommodate planned growth and development consistent with the County MPAH, the City's General Plan Circulation Element, and the STP. The existing trail system, which accommodates biking, hiking, and equestrian uses in the area, would be preserved. No modifications are proposed to the existing multi-use trails as part of the proposed project. There are no existing pedestrian or equestrian crosswalks within the project limits. However, there is an equestrian crosswalk located approximately 0.4 mi west of the western project limits at the intersection of Belford Drive and Ortega Highway. None of the intersections within the project limits meet signal warrants. Therefore, no pedestrian or equestrian crosswalks are proposed as part of this project. However, no existing equestrian crosswalks will be removed as part of the proposed project. If the newly constructed sidewalk occurs, it will be located on the north side of SR-74 east of Calle Entradero, and it will comply with the local plans and San Juan Capistrano General Plan.

2.1.1.4 Environmental Consequences

Existing land use impacts are discussed in Section 2.1.3, Community Impacts–Environmental Consequences.

Temporary Impacts

No Build Alternative

The No Build Alternative does not include any construction components. Since there are no anticipated changes to the existing land use, no temporary land use planning impacts to existing or future land uses would occur as a result of the No Build Alternative.

Build Alternatives 1 and 2

The Build Alternatives are not anticipated to impact land use designations and are consistent with General Plan and RTP goals and policies. Therefore, no temporary impacts would occur as a result of Build Alternatives 1 and 2.

Permanent Impacts

No Build Alternative

The No Build Alternative does not include any construction components, and thus is not anticipated to impact or change existing and/or future land use designations, policies, or conflict with the NCCP/MSAA/HCP program. It would not affect the regional growth projections adopted by SCAG. However, the project would not implement the improvements provided for in the RTP and RTIP, which in turn are part of the assumptions in the AQMP.

Long-term mobile emissions generated by vehicle trips would be greater under the No Build Alternative due to traffic congestion and reduced traffic flow in the project area. The AQMP would need to be modified to address the loss of this planned improvement.

The No Build Alternative would be inconsistent with the City General Plan and the OCTA MPAH, which identify SR-74 as a four-lane roadway through the project limits. The General Plan considers the approved land uses and regional traffic when designating the roadway classification to ensure compatibility between the Land Use Element and the Circulation Element.

The No Build Alternative would be inconsistent with the City's General Plan and the OCTA MPAH.

Build Alternatives 1 and 2

The proposed project is not anticipated to impact existing and/or future land use designations; be inconsistent with General Plan goals and policies; or conflict with the NCCP program, SCAG regional planning documents, or the AQMP. All of these planning programs assume the widening of SR-74 to four lanes to accommodate the existing and future development in the region. The proposed project occurs within the Southern HCP. However, the project does not traverse an area identified for preservation in the Southern HCP.

The project is consistent with the City's Long-Range Roadway Improvement goals, as included in the General Plan Circulation Element. The project is capacity

enhancing and would reduce existing traffic congestion and accommodate traffic associated with planned future development. Implementation of the proposed project would increase accessibility to properties adjacent to the project site due to a decrease in congestion and improved traffic flow on SR-74.

Within the study area, the proposed project is consistent with local regional comprehensive plans and is in compliance with standards and/or guidelines for resource protection. Design features such as Plexiglas noise barriers and retaining wall design options would help maintain the community's aesthetic elements. The design of the noise barriers and retaining walls would be based on input from the Department, the City, and the affected residents so that the walls comply with City policies and address the concerns of the community.

Throughout most of the proposed project length, a 5 ft paved shoulder will be provided on each side of the roadway to accommodate Class II (striped on-road) bicycle facilities. From Avenida Siega to the City/County limits, the shoulder/bike lane will transition to an 8 ft wide shoulder to merge with the County portion of the widening project.

The proposed minor partial property acquisitions would not result in significant impacts to the existing on-site uses. Sliver acquisitions from 10 parcels would be required. Given the small percentage of the overall parcel being affected, the continuation of the existing uses would not be adversely impacted. Alternative 2 would require slightly larger sliver acquisitions in some areas to accommodate the relocation of the existing sidewalk to the north. Regulations require fair market value be given for land and easements that are acquired by the Department for implementation of the project.

Given that the Build Alternatives are consistent with the General Plan and the OCTA MPAH and they would require minimal property acquisition, the land use effects of Build Alternatives 1 and 2 are considered less than significant.

2.1.1.5 Avoidance, Minimization, and/or Mitigation Measures

The Build Alternatives proposed for the lower SR-74 Widening Project are not expected to result in permanent or temporary impacts to existing and future planned land uses within the project limits. Therefore, no avoidance, minimization, or mitigation measures are required.

2.1.1.6 Level of Significance

The No Build Alternative would be inconsistent with the City's General Plan and the OCTA MPAH; however, it would not affect use of land. The Build Alternatives are not expected to result in permanent indirect or direct impacts to existing and planned land uses. The land use impacts of the Build Alternatives are considered less than significant.

2.1.2 Growth

2.1.2.1 Regulatory Setting

CEQA requires the analysis of a project's potential to induce growth. CEQA guidelines § 15126.2(d) requires 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…."

Methodology

Growth inducement can be defined as the relationship between the proposed project and growth within the surrounding area. This relationship is often difficult to establish with any degree of precision and cannot be measured on a numerical scale because there are many social, economic, and political factors associated with the rate and location of development. To assess the growth-inducing impacts of the SR-74 widening project, the project's influence on facilitating planned growth and inducing unplanned growth has been evaluated.

Typically, growth-inducing impacts result from the provision of urban services and extension of infrastructure (including roadways) into an undeveloped area. Growth-inducing impacts can also result from a substantial population increase if the new population may impose new burdens on existing community service facilities (such as increasing the demand for service and utilities infrastructure and creating the need to expand or extend services), which may induce further growth. On the other hand, a project can remove infrastructure constraints, provide access, or eliminate other constraints on development and thereby encourage growth that has already been approved and anticipated through the General Plan process. This planned growth would be reflected in land use plans that have been developed and approved with the underlying assumption that an adequate supporting infrastructure would be ultimately constructed. This can be described as accommodating or facilitating growth. For this document, the term "inducing" will be used for both types of growth.

Growth-inducing impacts may be categorized as either direct or indirect. Direct growth-inducing impacts occur when a project directly fosters growth. This may occur in a variety of ways including, but not limited to, the construction of new homes and businesses and the extension of urban services to previously undeveloped areas. Growth can also be induced directly due to the economic effect of a project whereby economic growth multiplier effects can cause related growth in areas near

the new project. Indirect growth is induced by the demand for housing, goods, and services associated with a project.

To assess the project's influence on growth in the region, the Department reviewed historical and projected growth trends within and surrounding the project study area. Though outside the immediate project study area, growth trends in Riverside County were also considered since SR-74 extends eastwardly into Riverside County. This information on growth trends provides an understanding of historic growth in the region and the planned growth that local and regional planning agencies are anticipating for the project study area. Information in this section is generally based on data from the *County of Orange General Plan* (2004); the *County of Riverside General Plan* (2003); and Orange County Facts and Figures (OCP Facts and Figures) developed by the Center for Demographic Research (CDR) at California State University, Fullerton (CSUF) (March 2008).

2.1.2.2 Affected Environment

SCAG is a Joint Powers Agency established under California Government Code §6502 et seq. SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO) for the six counties in Southern California, including Orange, Los Angeles, Ventura, San Bernardino, Riverside, and Imperial Counties. The region encompasses a population exceeding 15 million persons in an area of more than 38,000 square miles.

SCAG obtains its census data and projections from the CDR. CDR is governed and supported by the following sponsor agencies: the County, League of Cities, Orange County Sanitation District, OCTA, Transportation Corridor Agencies, Municipal Water District of Orange County, Orange County Water District, and CSUF. The goal of the CDR is to provide accurate and timely information regarding population, housing, and employment characteristics for the County that will be used for local and regional planning efforts.

The OCP Facts and Figures population projections are a summary of the County Projections 2006 and were developed by using a multistage process that combined several procedures and methodologies into a "top down" and "bottom up" process. Generally, total population, housing, and employment were projected and then allocated to smaller geographic areas based on an analysis of local policy, land use capacity, demographic changes, and assumed market focus. Small area projections

were developed, and these were reviewed by local jurisdictions; adjustments were then made based on local jurisdictions' input where warranted.

Historic and Projected Growth Trends

Orange County

Orange County has experienced significant growth in population over the past 55 years. Population in the County has increased from 216,200 in 1950 to almost 3,098,121 in 2007. Concurrent with these substantial population increases, the economic character of the County has dramatically changed over the past 50 years. The predominantly rural/agricultural and residential economy of the 1950s has changed to include a well-diversified commercial/industrial economy. Aviation/aerospace and other technology industries, biomedical facilities, retail commercial, light manufacturing, administrative and financial services, and tourism have become major components of the economy.

In 1965, the employment-to-population ratio was 22 percent in the County. By 1980, the ratio increased to 40 percent. This has subsequently increased to approximately 53 percent in 2000. Not only has the proportion of jobs to residents increased, but it is also based on a dramatically larger population. Future population is projected from assumptions regarding three major events: births, deaths, and migration. Historically, the growth in the County was predominantly due to migration; however, now births represent a substantial portion of the population growth. This trend is expected to continue.

The proposed project is located within the City. Based on the *2006 Orange County Progress Report* (CDR 2006), the City has experienced a substantial increase in population over the past three decades; however, there has only been a gradual increase since 1995. The population has increased almost tenfold since 1970, but has only increased 2 percent annually (at most) since 1995. The Orange County Facts and Figures anticipate this lower growth rate through 2035. These numbers reflect the fact that much of the City is developed.

The area immediately served by SR-74 within the City is generally built out. However, land to the east in unincorporated Orange County is primarily undeveloped. This area, known as the Ranch Plan area, was approved in November 2004 for 14,000 residential units and 5.2 million square feet of employment uses (OCP 2006). Development is expected to occur over the next 20 years. With the exception of the

Ranch Plan area, the majority of the land within the Regional Statistical Area (RSA)[1] is presently developed or designated for recreation or open space. This remaining land is generally vacant undevelopable land. Undevelopable lands are not available for development for physical, public policy, or environmental reasons.

Riverside County

According to SCAG, Southern California has been growing eastward and is projected to continue to grow toward fringe areas (SCAG 2001). Riverside County has been a main recipient of this growth trend. The population in Riverside County increased from 660,000 in 1980 to 1.5 million in 2000, according to the United States Census Bureau (2000). By 2035, Riverside County's population is expected to be 3.6 million (Riverside County Projections 2006 [RCP 2006]). With the increase in residential real estate prices in Orange County, Riverside County has become more attractive for many new homebuyers. Many people have moved from Los Angeles and Orange Counties to Riverside County for its lower housing costs. The new residential real estate business has been booming in Riverside County due to the demand for new housing, and the previous growth trend is projected to continue. Total employment in Riverside County is projected to increase from 526,000 jobs in 2000 to over 1.41 million jobs in 2035, a 154.34 average percent increase annually (RCP 2006). This compares to the 5 percent annual growth rate that occurred in the Riverside-San Bernardino Standard Metropolitan Statistical Area (SMSA) during the 1972–1999 period.

For land use and policy analysis, Riverside County is divided into 19 area plans. The easterly extension of SR-74 traverses the Elsinore Area Plan, which includes the cities of Lake Elsinore and Canyon Lake, as well as the unincorporated areas of El Cariso, Alberhill, Sedeco Hills, Wildomar, Gavilan Hills, and Meadowbrook. The City of Riverside's Sphere of Influence extends into the Elsinore Area Plan. The Cleveland National Forest forms the western boundary of the area. The *Riverside*

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[1] For regional planning efforts, Orange County has been divided into 10 RSAs, which are combinations of census tracts designated by SCAG. The project site is located in RSA C-43, which includes portions or all of the Cities of Lake Forest, Mission Viejo, Rancho Santa Margarita, San Juan Capistrano, and San Clemente, as well as the unincorporated communities of Ladera Ranch, Las Flores, Coto de Caza, and the Ranch Plan.

County Population and Employment Forecasts[1] (Hoffman 2000), prepared for the *Riverside County General Plan Update* (County of Riverside 2002) provides population, household,[2] and employment projections through 2020. The Elsinore Area Plan is projected to increase from 34,455 in 1994 to 72,067 in 2020, a 109.2 percent increase in population. The Elsinore Area Plan has large amounts of vacant land within both incorporated and unincorporated areas. Of the 126,307 ac within the Elsinore Area Plan, almost 67 percent, or 84,412 ac, is designated by the *Riverside County General Plan* for open space or rural uses. Approximately 11 percent (13,672 ac) is designated for community development.

2.1.2.3 Environmental Consequences

Temporary Impacts

No Build Alternative

The No Build Alternative does not require construction; therefore, there would be no temporary impacts on growth-inducing factors.

Build Alternatives 1 and 2

The Build Alternatives would not have any temporary impacts on growth-inducing factors since temporary construction does not induce growth.

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1 The *Riverside County Population and Employment Forecasts* presents three sets of countywide projections in order to test alternative scenarios for the Riverside County General Plan update. These projects are based in whole or in part on SCAG projections (1998), Western Riverside Council of Governments (WRCOG), and Coachella Valley Association of Governments (CVAG) projections and employment trend analysis. The projections presented in this section are for Scenario 1, which uses SCAG population and employment projections (1998). No update has been performed for the *Riverside County Population & Employment Forecasts*.

2 The *Riverside County Population and Employment Forecasts* do not provide projections of the number of housing units; rather, projections of the number of households are provided. According to the United States Census Bureau, “a household includes all of the people who occupy a housing unit” and a housing unit is “a house, an apartment, a mobile home, a group of rooms, or a single room…occupied as separate living quarters.”

Permanent Impacts

No Build Alternative

The No Build Alternative does not require construction; therefore, there will be no impact on growth-inducing factors.

Build Alternatives 1 and 2

Population and economic growth in the study area is directed by the General Plans for the County and adjacent cities in the study area. The County and City General Plans, as well as the Orange County Transit Authority (OCTA) MPAH indicate that SR-74 is a four-lane divided highway from I-5 east to the Orange/Riverside County border. In addition, the South County Roadway Improvement Program (SCRIP) fee program, adopted by the County, identifies traffic-calming measures and the proposed widening of SR-74 as part of the long-term transportation improvements for the area. The proposed project will provide improvements consistent with local planning documents, meeting the purpose and need outlined in Chapter 1. Therefore, the project is consistent with the previously adopted MPAH and SCRIP.

To assess potential growth-inducing impacts of the SR-74 widening, the development status of surrounding land was evaluated. The area was divided into three major categories: (1) existing land uses; (2) planned land uses; and (3) unplanned lands. Existing land uses are those areas that are developed or dedicated as urban open space/recreational, public facilities, or transportation uses. Planned land uses are undeveloped areas that are designated for urban development in general plans and have a zoning designation for specific urban uses. These areas may also have entitlement through either an approved specific plan or tentative tract map. Unplanned land areas are those lands that are not designated for urban uses or permanent open space, but are designated with land uses that could be considered transitional or holding designations (e.g., agricultural). Overall, the potential for growth-inducing impacts would be greatest on the unplanned land uses.

The proposed SR-74 widening from Calle Entradero east to the City/County border would not have any growth-inducing effect in the immediate area because the adjacent land is built out with and/or entitled for suburban, mostly single-family, residential uses. The nature of this development, as well as the limited improvements proposed on SR-74, would limit the feasibility of large-scale redevelopment of the area adjacent to the roadway.

The existing residential uses along the south side of SR-74 are predominantly "back-on" or side-facing to the roadway, whereas the front of the residential uses immediately adjacent to the north side are facing SR-74.However, the proposed project would not affect the viability or cohesiveness of any residential neighborhoods since SR-74 already exists between these two neighborhoods. Given the existing neighborhoods are well established, the roadway improvements would not result in a pressure to transition the neighborhood to nonresidential or intensified residential uses.

Immediately east of the City/County border, development in unincorporated Orange County is approved as part of the Ranch Plan. Widening the SR-74 would serve this planned growth. However, the proposed SR-74 roadway improvements would not be considered growth-inducing for the following reasons:

- The Ranch Plan is included in the County Projections and as shown above, the proposed Build Alternatives improve the LOS along the SR-74 mainline. Therefore, the proposed SR-74 improvements would not provide capacity beyond what is needed to serve the existing and approved development; therefore, it would not encourage intensification of existing and planned land uses. The proposed project would accommodate planned growth and development in the surrounding areas, meeting a project purpose outlined in Chapter 1.
- Growth on the Ranch Plan property would not be able to exceed the level already approved by the County because restrictions associated with the Ranch Plan approvals limit the amount of overall development. This has been established through provisions of the General Plan and zoning. Infrastructure to serve the Ranch Plan development will be provided as part of the land development project, and the impacts of the required infrastructure improvements have been addressed as part the environmental documentation for the Ranch Plan.
- The actions taken by the Ranch Plan landowner and the County to approve development adjacent to the proposed SR-74 improvements were independent of the proposed project. The Ranch Plan is an approved project that will be developed with or without the proposed project.

Beyond the Ranch Plan boundaries, the County is comprised of either developed land or land in public ownership that would not be available for development. Public lands include the Caspers Wilderness Park (owned by the County) and the Cleveland National Forest. There are only limited opportunities for other infill development elsewhere in the City and the surrounding area. Not only would the infill

opportunities not result in substantial development, the proposed improvements to SR-74 under either Build Alternative would not measurably influence the decision to develop these areas. Other factors, such as economic and social demands, would have greater influence on development.

The proposed SR-74 improvements would also not influence development in western Riverside County. SR-74 is currently used for commuting to and from southern Orange and Riverside Counties. SR-74 is near capacity during commute hours and will not generate more commuting to Orange County, as the job projections for Riverside County show an approximately 763,000 job increase by 2035. The proposed project would relieve traffic congestion and improve the flow of traffic on SR-74, meeting the project purpose outlined in Chapter 1. The proposed improvements would also provide continuity of four lanes, as the road to the west currently has four lanes and the road to the east will have four lanes upon completion of the County's SR-74 Widening project.

Considering that (1) the Build Alternatives are consistent with the City's General Plan and the MPAH, (2) there is limited land available outside the Ranch Plan area for new development, (3) the Ranch Plan was not conditioned to construct improvements within the study area, and (4) any changes to the amount of development in the Ranch Plan would require additional environmental review and would not influence development in western Riverside County, the growth impacts of the Build Alternatives are considered less than significant

2.1.2.4 Avoidance, Minimization, and/or Mitigation Measures

Build Alternatives 1 and 2 are not expected to result in permanent or temporary growth-inducing impacts and permanent impacts are considered less than significant. Therefore, no avoidance, minimization, or mitigation measures are required.

2.1.2.5 Level of Significance

The No Build Alternative will have no impact on growth. The Build Alternatives are not expected to result in significant temporary direct or indirect impacts to growth. Permanent direct or indirect growth impacts of the Build Alternatives are considered less than significant.

2.1.3 Community Impacts

2.1.3.1 Community Character and Cohesion

2.1.3.1.1 Regulatory Setting

Under the California Environmental Quality Act (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.

2.1.3.1.2 Affected Environment

An area extending roughly 0.5 mi on either side of SR-74 project area was used for the community impacts analysis. The study area includes Census Tracts (CTs) 320.23 and 320.52 (see Figure 2.1.3-1).

Community Character

The proposed project site is located in the City of San Juan Capistrano, a unique community grounded in a history of Native American culture and the San Juan Capistrano Mission, established by Franciscan missionaries in 1776. In addition to the Mission, the City has a rural, village-like character that, together with its historical features, draws many tourists.

Although primarily a residential community, the City has a variety of land uses, providing open space, recreation, retail, and other commercial opportunities. Small retail complexes exist approximately one mile west of the project limits. The City has maintained an open space character by acquiring land to preserve its defining ridgelines, hillsides, and trails. Nearly 40 percent of the City is open space and/or parkland. A large recreational trail network provides many recreational opportunities for biking, hiking, and horseback riding within the City. The City is well known as an equestrian destination, with a large concentration of stables and boarding facilities.

The City is characterized by many distinct residential neighborhoods that are defined by both human-made and natural physical features, including but not limited to I-5, the Union Pacific Railroad (UPRR), steep hillsides, and three major creeks that cross the City: San Juan Creek, Oso Creek, and Trabuco Creek. The City

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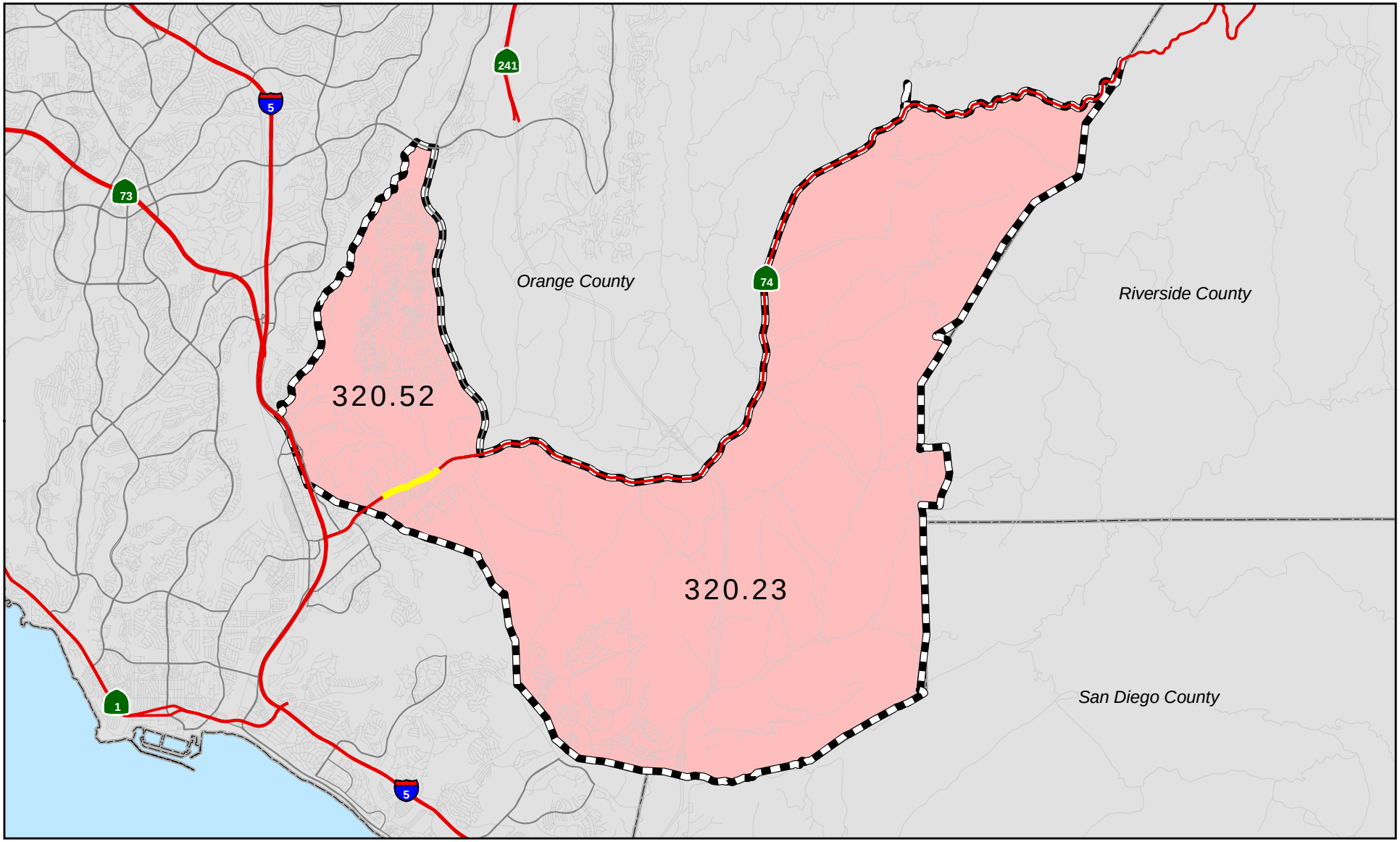

FIGURE 2.1.3-1

LEGEND

- Project Study Area
- Project Area Census Tracts
- Individual Census Tracts

N

0 1 2 Miles

Lower SR-91 Widening Project

Study Area Census Tracts

12-ORA-74 PM 1.0/1.9

EA# O86920

SOURCE: U.S. CENSUS BUREAU, 2000.

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has experienced substantial residential growth over the last 25 years, resulting in distinctive older and more recent neighborhoods.

Land uses within and immediately adjacent to the study area include residential, open space, and agriculture and can be described as semirural. Property values and growth patterns contribute considerably to the character of a community. With respect to property values, most properties within the study area have experienced substantial value increases over the past decade.

Community Cohesion

Community cohesion is the degree to which residents have a sense of belonging to their neighborhood; their level of commitment to the community; or a strong attachment to neighbors, groups, and institutions, usually as a result of continued association over time (*Community Impact Assessment Handbook*, California Department of Transportation [Department], June 1997). One measure of community cohesion is to determine the length of time that a certain population has resided in its homes. Theoretically, the longer people live in a community, the more committed they are to it and the more cohesive the community becomes. Data on demographics, current and forecast population, ethnic distribution, and housing in the study area were obtained from the City of San Juan Capistrano Web site, the San Juan Capistrano Chamber of Commerce, the 2000 United States Census, and the 2006 Orange County Projections (OCP-2006).

As shown in Table 2.1.3-1, 2000 United States Census data reports that 60 percent of residents in CT 320.23 and approximately half (49 percent) of residents in CT 320. 52 resided in the same house in 1995. Similarly, Census data found that 50 percent of the City's population resided in the same house in 1995. This medium-level percentage of long-term residents in the project area suggests that the community cohesion is present but is not at the high end of the scale, but the study area is similar in terms of residency characteristics to the City and County.

Table 2.1.3-1 2000 Community Cohesion – Residency Characteristics

Residency	CT 320.23		CT 320.52		City of San Juan Capistrano		Orange County	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Same house in 1995	1,520	60	1,525	49	15,664	50	1,262,786	48
Different House in 1995	1,028	40	1,619	51	15,938	50	1,369,622	52
Total	2,548	100	3,144	100	31,602	100	2,632,408	100

Source: United States Census, 2000.

Another measure of community cohesion is if residents, either individually or through their representatives, express particular concern for their neighborhood at public meetings or other forums. Based upon the level of participation of community members at previous community meetings for this project, it is evident that the connectedness and cohesion within the community is high.

Population and Housing

As shown in Table 2.1.3-2, between 1990 and 2000, San Juan Capistrano shows nearly a 30 percent (roughly 30 percent per year) increase in population growth. OCP-2006 population estimates (through the year 2035) for Orange County and San Juan Capistrano show that projected populations are expected to progressively increase through 2035, although at approximately the same rate. However, for the two census tracts within the project study area for population and housing, population is expected to minimally increase by approximately 5 percent between 2000 and 2035.

Table 2.1.3-2 Population Estimates

Area	1990	2000	2035	Percent Change per year (1990–2000)	Projected Percent Change per year (2000–2035)
Orange County	2,410,556	2,846,289	3,653,990	18.1%	28.4%
City of San Juan Capistrano	26,183	33,826	41,154	29.2%	21.7%
Study Area	**	6,086	6,407	**	5.3%
CT 320.23	**	2,738	42,818	**	2.9%
CT 320.52	**	3,348	43,589	**	7.2%

Source: 1990 & 2000 U.S. Census of Population and Housing; OCP 2006.
CT: Census Tract
** The delineation and numbering of Census Tracts (CTs) changed from the 1990 to the 2000 Census. No comparable 1990 population numbers for CTs 320.23 and 320.52 were available, and therefore, percent change between 1990 and 2000 for the study area could not be calculated.

Table 2.1.3-3 shows that the study area (CTs 320.23 and 320.52) has 1,994 households. The average number of persons per household is approximately three for Orange County, San Juan Capistrano, and the study area. In the 1990 Census, San Juan Capistrano had increased to about 2.89 persons per household. In San Juan Capistrano, the average household size as of 2000 was 3.06. The City shows an increase in household size that parallels the increase in population.

Table 2.1.3-3 Number of Households and Average Number of Persons per Household

Area	Number of Households	Average Number of Persons per Household
Orange County	935,287	3.00
San Juan Capistrano	10,930	3.06
Study Area	1,994	3.09
CT 320.23	816	3.35
CT 320.52	1,178	2.82

Source: 2000 Census.
CT: Census Tract

As shown in Table 2.1.3-4, the City is predominantly of Caucasian (78.5 percent) and Hispanic origin (33 percent). For the study area (a subset of the City), the population was predominantly of non- Hispanic white (92.3 percent) and Hispanic origin (9.05 percent). The total minority population in the study area is 14.4 percent.

Table 2.1.3-4 2000 Race/Ethnic Distribution in the Study Area

Jurisdiction	% NH White	% NH Black	% NH American Indian	% NH Asian	% NaH and OPI	% NH Other	% Hispanic Origin of Any Race
Orange County	64.8	1.7	0.7	13.6	0.3	14.8	30.8
City of San Juan Capistrano	78.5	0.8	1.1	1.9	0.1	14.2	33.1
Study Area	**92.3**	**0.3**	**0.35**	**2.9**	**0.1**	**1.9**	**9.05**
CT 320.23	91.8	0.3	0.5	2.1	0.1	2.9	11.6
CT 320.52	92.7	0.3	0.2	3.6	0.2	1.1	6.9

Source: 2000 U.S. Census of Population and Housing.
Note: Percentages do not add to 100 because the White, Black, American Indian, and Alaskan Native, Hawaiian, and Pacific Islander, and other categories involve persons identified with one race. Percentages only overlap within the Hispanic category.
CT: Census Tract; NH: Non-Hispanic; NaH: Native Hawaiian; OPI: Other Pacific Islander

As shown in Table 2.1.3-5, according to the 2000 Census, nearly 60 percent of the population within the study area was between 20 and 64 years of age, about 31 percent was less than 19 years of age, and less than 10 percent was over 65 years old.

Table 2.1.3-5 2000 Age Distribution in the Study Area

Area	*Median Age*	Less than 19 years old		20–45 years old		45–64 years old		Greater than 65 years old	
		Number	%	Number	%	Number	%	Number	%
Study Area	***41***	1,898	31.3	1,593	26.3	2,009	33.1	9	9.32
CT 320.23	37	985	36.0	776	28.4	816	29.8	158	5.78
CT 320.52	44	913	15.1	817	13.5	1,193	19.7	407	6.71

Source: 2000 Census.
CT: Census Tract

SR-74 and I-5 are the two major transportation corridors serving the project area. The average commute time for people living in San Juan Capistrano is roughly 25 minutes. As shown in Table 2.1.3-6, approximately 93 percent either traveled alone or carpooled by car, truck, or van; about 1 percent indicated use of public transit; and less than 1 percent either walked or used other means of transportation.

Table 2.1.3-6 2000 Mode Choices for the Work Commute in the Study Area

Area	Car, Truck, or Van – Alone		Carpool		Public Transportation		Walk		Other Transportation	
	Number	%	Number	%	Number	%	Number	%	Number	%
Study Area	2,248	85.2	214	8.11	30	1.14	18	0.68	15	0.57
CT 320.23	1,054	84.9	111	8.9	10	0.8	8	0.6	15	1.2
CT 320.52	1,194	85.5	103	7.4	20	1.4	10	0.7	0	0

Source: 2000 Census.
CT: Census Tract

Table 2.1.3-7 shows that 88 percent of households in the study area live in either attached or detached single-family homes, while nearly 3 percent live in multifamily homes. Approximately 10 percent live in mobile homes or another type of housing. However, no mobile homes are directly adjacent to the project site.

Table 2.1.3-7 Summary of Housing in the Study Area

Area	Single-family Residences[1]		Multifamily Residences		Mobile Homes		Other (Boats, RVs, etc.)	
	Number	%	Number	%	Number	%	Number	%
Study Area	1,869	88.0	44	2.7	208	9.8	2	0.09
CT 320.23	846	98.3	0	0.0	13	1.5	2	0.20
CT 320.52	1,023	81.1	44	3.5	195	15.5	0	0.00

Source: 2000 Census.
[1] Single-family Residences may be attached or detached homes.
CT: Census Tract

There are no existing or future planned developments within the study area. However, several developments are planned adjacent to the study area Section 2.1.1, Land Use Table 2.1.1-1). The projects shown in Table 2.1.1-1 are projects that were planned from the issuance date of the Notice of Preparation (January 16, 2008).

Economics

Orange County has a wide range of economic generators, including industry, agriculture, tourism, and commercial operations. According to the San Juan Capistrano Chamber of Commerce, the City has approximately 2,000 businesses that employ 8,800 people. The top five employers for the City are: Costco Wholesale; Fluid Master, Inc.; Endevco; 24 Hour Fitness; and St. Margaret's of Scotland School (City of San Juan Capistrano, November 2007).

According to the California Employment Development Department's (CEDD) *Labor Force Data for Sub-County Areas (April 2004)*, the 2004 civilian labor force for Orange County was 1,581,300. The CEDD indicates that over the next 10 years Orange County's employment is projected to grow by 23 percent. Based on the 2000 Census, with a labor force of 16,140 people, San Juan Capistrano has a lower unemployment rate (2.5 percent) than the County as a whole (3.3 percent). The study area has an unemployment rate of 2.06, which is slightly less than the City. Per the 2000 Census data, nearly three-fourths of employed individuals in Census Tracts 320.23 and 320.52 hold managerial, professional, sales, or office occupations.

As shown in Table 2.1.3-8, the 2000 Census indicates that the median household income for San Juan Capistrano is $62,392. At $108,395, the median income for the study area is substantially higher than that of San Juan Capistrano and Orange County. About 5 percent of the households in the study area are at or below the

Table 2.1.3-8 2000 Household Incomes in the Study Area

Area	Median Household Income	% Households <$14,999[1] Income	% Households $14,999 to $34,999	% Households $35,000 to $74,999	% Households >$75,000 Income
Orange County	$58,820	8.7%	18.5%	35.3%	37.4%
San Juan Capistrano	$62,392	7.2%	17.7%	34.5%	40.6%
Study Area	$108,395	4.7%	4.75%	15.3%	66.3%
CT 320.23	$102,068	1.96%	6.61%	22.3%	62.4%
CT 320.52	$114,721	6.63%	3.45%	10.3%	69.0%

Source: 2000 Census.
[1] Income below $14,999 were used to represent the percent of households below the poverty line.
CT: Census Tract

poverty line ($14,999 to represent the poverty line). As compared to the County or the City, the study area contains a lower percentage of households at or below the poverty line.

Community Facilities and Services

Community facilities and services (i.e., schools, libraries, community centers, and community corridors) are discussed in this section as they pertain to community character and cohesion.

The project site is within the service boundaries of the Capistrano Unified School District. There are no adult education centers or public intermediate or high schools within approximately 0.5 mi of the study area. However, San Juan Hills High School, located near the end of San Juan Creek Road off La Pata Avenue, opened in September 2007. Harold J. Ambuehl Elementary School for kindergarten through fifth grade (28001 San Juan Creek Road, San Juan Capistrano, CA 92675) is the closest public school to the project area. St. Margaret's Episcopal School (31641 La Novia Avenue, San Juan Capistrano, CA 92675) is the closest private school to the project area. However, neither is within a 0.5 mi radius of the limits of the study area.

There are no public libraries, community centers, police departments, fire stations, or post offices located within 0.5 mi of the project site. Utilities such as gas, water, sewer, telephone, and electric are present within the project limits, and some may be relocated within the project limits (see Section 2.1.4, Utilities and Emergency Services).

2.1.3.1.3 Environmental Consequences

This section examines the potential for impacts to community cohesion. Impacts to community cohesion relate to changes in land use, neighborhoods, visual quality, the economy, or community facilities and services. Changes in the visual impacts and noise are discussed in Sections 2.1.6 and 2.2.7, respectively.

There are two Build Alternatives being considered under the proposed project. Alternative 1 would remove the sidewalk on the north side of SR-74 from Calle Entradero to Via Cordova to accommodate the widening of the facility from two to four lanes. A new sidewalk on the south side would be constructed just east of Avenida Siega and would connect to the County sidewalk system to provide continuity. Alternative 2 replaces the existing meandering sidewalk on the north side with a straight sidewalk. The new straight sidewalk would be constructed slightly to the north of the existing sidewalk to accommodate the widened roadway. Alternative 2 would also construct a small retaining wall between the new sidewalk and the existing horse trail.

Temporary Impacts to Population and Housing

No Build Alternative

The No Build Alternative would not impact population and housing because it does not increase or decrease population or housing, change its distribution, affect the household types found in the area, or affect travel mode choices made by the population.

Build Alternatives 1 and 2

Construction of the Build Alternatives would temporarily affect local communities. Temporary construction impacts would include disruption of local traffic patterns and access to residences and businesses; increased traffic congestion; and increased noise, vibration, and dust. As described in Section 1.5.1.13, a TMP would be implemented for the project in a cost-efficient and timely manner with minimal interference to the traveling public. The TMP, when implemented, would result in minimized project-related traffic delay and accidents by the effective application of traditional traffic mitigation strategies and innovative combinations of public and motorist information, demand management, incident management, system management, and alternative route and construction strategies. With implementation of the TMP.

Permanent Impacts to Population and Housing

No Build Alternative

The No Build Alternative would not impact population and housing, as it does not increase or decrease population or housing, change its distribution, or affect the household types found in the area. Other developments previously approved and not associated with the SR-74 Widening project (including the Ranch Plan) may be built and may have an effect on population and housing.

Build Alternatives 1 and 2

Neither of the Build Alternatives would increase or decrease population nor housing figures for the area in relation to growth, composition, or demographic since no full property acquisitions are required. As described in Section 2.1.2, the Build Alternatives would not allow for increased development beyond what is already planned or approved, nor would they affect the type of housing built in the area. Both of the Build Alternatives would improve the traffic conditions in the area to accommodate for the planned and approved growth and development, meeting the purpose and need outlined in Chapter 1. Implementation of either of the Build Alternatives would have no impact on population and housing given that there are no full property acquisitions and they would not affect the level of development in the vicinity of the study area.

Temporary Impacts to Economics

No Build Alternative

The No Build Alternative would not result in temporary economic impacts since it does not result in construction.

Build Alternatives 1 and 2

Since the Build Alternatives do not displace any businesses; no loss of employment, loss of tax revenue, or reduction in income level is expected. The Build Alternatives would have a short-term beneficial effect on employment by generating direct and indirect employment opportunities. Direct temporary employment involves jobs directly created by highway construction activity. These jobs include all on-site laborers, specialists, engineers, and managers involved with the highway improvement project. Indirect jobs are workers in industries, which supply highway construction manufacturers with materials and off-site construction industry workers such as administrative, clerical, and managerial workers. Expenditures by these workers on various goods and services stimulate demand for additional employees in many industries, resulting in employment being supported throughout the general

economy. Construction activities associated with the Build Alternatives would potentially have a net benefit on the local economy through the increase in temporary employment and additional goods and services purchased by construction workers in the City, and temporary economic impacts associated with the Build Alternatives are considered less than significant.

Permanent Impacts to Economics

No Build Alternative

The No Build Alternative does not include any residential or nonresidential displacements or capital improvements. SR-74 west of the project limits is currently four lanes and upon completion of the County portion, the highway east of the project limits will be four lanes, resulting in a bottleneck under the No Build Alternative. Therefore, the No Build Alternative would result in a significant increase in traffic delays. The purpose of the project is to accommodate traffic associated with existing and future planned development. Employment and tax revenue could be adversely affected due to such delays for commuters and consumers. The delay in the movement of goods and services can result in increased costs to businesses, which are often passed on to the consumer. Therefore, the No Build Alternative would have a substantial impact on economics within the local community.

Build Alternatives 1 and 2

Since the Build Alternatives do not displace any businesses and no loss of employment, loss of tax revenue, or reduction in income level is expected, the Build Alternatives would not have an impact on tax revenue. Improvement in traffic conditions is not expected to result in a decrease in property values within the adjacent community or the City, since there would be no change in the remaining land uses within the study area and its surroundings. Additionally, because the Build Alternatives would result in sliver acquisitions rather than full residential or nonresidential acquisitions, the amount of tax revenue lost from the small number of partial acquisitions would not substantially alter the tax base. As discussed in Section 2.3.1.2, property owners would be compensated with fair market value for property acquisitions consistent with the Department's Right of Way Manual. Therefore, potential permanent economic effects associated with the Build Alternatives are considered less than significant.

The Build Alternatives would not increase City taxes, since certain features of the project, such as noise barriers, retaining walls, and sidewalks, would be part of the City's existing maintenance program.

Therefore, the permanent economic effects associated with the Build Alternatives are considered less than significant.

Temporary Impacts to Community Facilities and Services

No Build Alternative

There are no community facilities (such as schools, libraries, community centers, or law enforcement/fire department stations located within 0.5 mi of the project site. The No Build Alternative would not result in any temporary impacts to community facilities or services. It would not result in any removal or change of access to facilities or services, nor would it create new demand for community services since no capital improvements are included with this alternative.

Common Effects of Build Alternatives 1 and 2

As there are no community facilities within 0.5 mi of the project site, the Build Alternatives would not impact any community facilities during construction. During construction (short-term), response times for the California Highway Patrol, Orange County Sheriff's Department, and Fire Department may be slightly increased as part of temporary traffic control and traffic delays. These impacts are discussed in Section 2.1.4 (Utilities and Emergency Services).

Modifications to the pedestrian system under both Build Alternatives 1 and 2 would include the realignment of the south sidewalk at the intersection of Via Cordova. In this location, the sidewalk would be shifted to the south and reconstructed to provide for the right-turn pocket at this intersection. This would be a short-term inconvenience; however, these short-term impacts are considered less than significant.. A new sidewalk would be constructed east of Avenida Siega and would connect to the County sidewalk system to provide continuity. This would be a beneficial effect of the project. With implementation of a TMP (as outlined in 2.1.5.4), impacts to pedestrian circulation are less than significant. The two Build Alternatives would modify the pedestrian system (as described below).

Unique Effects of Alternative 1

Alternative 1 would necessitate the removal of 1,056 ft of sidewalk on the north side of SR-74 from Calle Entradero to east of Hunt Club Drive. Temporary impacts associated with this removal would be limited. With implementation of a TMP temporary construction impacts to pedestrian circulation are considered less than significant.

Unique Effects of Alternative 2

Alternative 2 would straighten the existing sidewalk on the north side of SR-74 from Calle Entradero and Via Cordova. This would result in temporary impacts only on community cohesion from a pedestrian movement perspective during construction of the realigned sidewalk. These temporary impacts would be limited, and with implementation of a TMP, temporary construction impacts to pedestrian circulation are considered less than significant.

Permanent Impacts Community Facilities and Services

No Build Alternative

The No Build Alternative would not result in any removal or change of access to facilities or services, nor create new demand for community services since no capital improvements are included with this alternative. However, SR-74 west of the project limits is currently four lanes and upon completion of the County portion, the highway east of the project limits will be four lanes; if not built a bottleneck results under the No Build Alternative. Therefore, the proposed project would affect access to community facilities and services, since traffic demand will exceed capacity and speeds will vary greatly, which will result in significant delays. The No Build Alternative would have a significant impact on community facilities and services.

Build Alternative 1

Build Alternative 1 would necessitate the removal of 1,056 ft of sidewalk on the north side of SR-74 from Calle Entradero and Via Cordova. A new sidewalk would be constructed east of Avenida Siega and would connect to the County sidewalk system to provide continuity. This would be a beneficial effect of the project

Additionally, in the future, should the need for a signal/pedestrian crossing arise, the current design would not preclude the opportunity to install such a facility. Please refer to Section 2.1.5, Traffic and Transportation, for more information about this topic.

There would be no impact to the existing equestrian trail or to any future signal/pedestrian crossing under Build Alternative 1.

Build Alternative 2

Similar to Build Alternative 1, the existing sidewalk from Calle Entradero and Via Cordova would be removed; however, it would be constructed as part of this alternative. The existing meandering sidewalk would be reconstructed slightly to the north as a straight sidewalk (not curvilinear) within the existing public right-of-way.

There would be approximately 12 ft of public land remaining on the north side behind the proposed back of curb. However, a short retaining wall would be required along the existing limit of the public right-of-way, which is delineated by the southern edge of the existing equestrian trail. With this variation, most, if not all, trees within this section along the north side of the roadway would be removed as a part of construction. With replacement of the sidewalk, potential impacts associated with removal of the existing sidewalk are considered less than significant.

There would be no significant impact to the existing equestrian trail or any future signal/pedestrian crossing under Build Alternative 2. Therefore, Build Alternative 2 would have a less than significant permanent impact on community facilities and services.

Temporary Impacts to Community Character and Cohesion

No Build Alternative

The No Build Alternative would have no temporary impact on community character and cohesion.

Build Alternatives 1 and 2

With implementation of the TMP, Build Alternatives 1 and 2 would have a less than significant impact on community character and cohesion.

Permanent Impacts to Community Character and Cohesion

No Build Alternative

The No Build Alternative will have a direct permanent on community character and cohesion, as there will be a bottleneck created since SR-74 within the project limits will be two lanes and the highway on either side of the project limits will be four lanes. Therefore, an increase in forecasted congestion for the study area under the No Build Alternative would result in substantial impacts to community character and cohesion by increasing noise, air pollution, and traffic congestion.

Build Alternatives 1 and 2

Build Alternatives 1 and 2 would not have an impact on community cohesion, since SR-74 is an existing highway traversing the study area. However, Build Alternatives 1 and 2 propose to widen the existing SR-74, moving the road closer to residences adjacent to the highway and removing existing vegetation (including trees) and constructing noise barriers. Therefore, based on the subjective human perception of community character, the widening of SR-74 in this area is a potentially significant impact on community character. The existing setting is more rural, and with the

project it would change to a more suburban setting. With implementation of Mitigation Measures V-1, V-2, V-3, and V-4, as discussed in Section 2.1.6, Visual/ Aesthetics, potential visual impacts associated with vegetation removal and wall construction would reduce the permanent impacts to community character to less than significant. However, Key Views 1, 4 and 5 would remain a significant impact. Please refer to Section 2.1.6, Visual/Aesthetics.

2.1.3.1.4 Avoidance, Minimization, and/or Mitigation Measures

Implementation of a TMP during construction would reduce temporary construction-related impacts to local communities. Please refer to Section 1.5.1.13, Construction, and Section 2.1.5, Traffic and Transportation, for more detail on the TMP.

Implementation of Mitigation Measure V-1, V-2,V-3, and V-4, as discussed in Section 2.1.6, Visual/Aesthetics, would reduce impacts (for Key Views 2 and 3) due to vegetation/tree removal and construction of walls as a result of both Build Alternatives.

2.1.3.1.5 Level of Significance

Community character impacts would result with implementation of the No Build Alternative due to increased and air quality effects and traffic congestion.

Effects under the Build Alternatives would remain significant (direct or indirect) for community character due to the visual effects at Key Views 1, 4, and 5. Permanent direct or indirect community character and cohesion impacts to Key Views 2 and 3 would be less than significant for community character and community cohesion.

2.1.3.2 Relocations

2.1.3.2.1 Regulatory Setting

The Department's Relocation Assistance Program (RAP) is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 Code of Federal Regulations (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.

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 U.S.C. 2000d, et seq.).

2.1.3.2.2 Affected Environment

Residential characteristics in the project area are described in Section 2.1.3.1, Community Character and Cohesion.

2.1.3.2.3 Environmental Consequences

Temporary Impacts

No Build Alternative

No temporary residential or business relocations necessitating relocation would be required under the No Build Alternative, and this alternative would have no temporary relocation impacts.

Build Alternatives 1 and 2

No temporary residential or business relocations necessitating relocation would be required under either Build Alternative. Therefore, Build Alternatives 1 and 2 would have no temporary relocation impacts.

Permanent Impacts

No Build Alternative

No residential or business relocations necessitating relocation would be required under the No Build Alternative. Therefore, the No Build Alternative would have no permanent relocation impacts.

Build Alternatives 1 and 2

Ten small "sliver" acquisitions of right-of-way would be required in various locations throughout the project limits for both Build Alternatives. However, after

compliance with the Department's Right of Way Manual, no permanent impacts are anticipated.

2.1.3.2.4 Avoidance, Minimization, and/or Mitigation Measures

Compliance with the Department's Right of Way Manual, which requires compensation at fair market value for property acquisitions, minimizes project impacts as a result of sliver acquisitions. Additionally, coordination with property owners regarding the construction schedule and phasing will be included in the TMP.

2.1.3.2.5 Level of Significance

The No Build Alternative would have no relocation impacts.

The Build Alternatives do not result in permanent, temporary, direct or indirect residential or business relocation.

2.1.4 Utility and Emergency Services

2.1.4.1 Affected Environment

Utilities within the SR-74 Widening project limits include:

Overhead electrical transmission, telephone and cable lines; and
Underground gas, sewer, water, electric, telephone, and cable lines.

Within the project limits, Southern California Gas (SCG) provides gas, San Diego Gas and Electric (SDG&E) provides electricity, the City of San Juan Capistrano (CSJC) provides sewer, the Capistrano Valley Water District (CVWD) provides water, AT&T provides telephone, and Cox Communications provides cable services. The majority of the utilities are parallel to SR-74 or are located under the existing road. Additionally, utility lines are located parallel or under the arterial roads within the project limits. SDG&E, AT&T, and Cox Communications overhead utility lines diagonally cross SR-74 at Avenida Siega/Shade Tree Lane. (For details regarding utility lines, please refer to design plans sheet nos. 151 to 159.)

Fire protection services for the City are provided through a fire services district that is administered and staffed by the Orange County Fire Authority (OCFA). Fire Station #7, located approximately 0.5 mi from the project area at 31865 Del Obispo, San Juan Capistrano, currently serves the project area. The OCFA provides emergency vehicles to the project area. The City contracts with the Orange County Sheriff's Department to provide on-site and localized police services. The closest police station, located at 25925 Camino Del Avion, approximately three miles from the project site, currently serves the project area.

2.1.4.2 Environmental Consequences

Temporary Impacts

No Build Alternative

The No Build Alternative does not require construction; therefore, there will be no temporary impacts to utilities and emergency services.

Build Alternatives 1 and 2

The majority of the utilities within the project limits parallel SR-74 or are located under the existing road and do not present conflicts with the improvements identified for the Build Alternatives. The relocation of the following utilities would be required as part of both Build Alternatives:

- SDG&E pedestal and SDG&E transformer.
- SDG&E overhead electric line.
- SDG&E overhead line relocated underground.
- CSJC water line east.
- SDG&E line.
- Four AT&T overhead lines.
- Five COX Communication overhead lines.

In addition to the utilities requiring relocation, two new CVWD water lines are proposed. The addition of the utilities is needed by the City, separate from the proposed project. This project is discussed further in Section 2.4, Cumulative Impacts. There would be a less than significant temporary impact to utilities.

The utilities listed below may require protection in place during construction of either Build Alternative:

- One CSJC water line.
- 10 CSJC sewer lines.
- 12 CVWD water lines.
- One Riverside Water Department water line.
- Six SDG&E underground electric lines.
- Three SDG&E overhead electric lines.
- One SDG&E conduit.
- Two AT&T phone lines.
- One Cox Communications overhead cable line.

Details on exactly which utilities will require protection will be determined during final design. The potential exists for construction activities to encounter unexpected utilities within the project limits. In addition, utility relocations may require short-term, limited interruptions of service.

With protection in place during construction for these utilities, Build Alternatives 1 and 2 would have a less than significant impact on utilities.

Some temporary impacts to emergency response time may occur as part of traffic control and traffic delays during construction Implementation of a TMP (outlined in Section 2.1.5.4) would be implemented to minimize impacts to all utilities such as power, gas, and sewer, and telephone lines impacted by this project would be

relocated or replaced in kind within the project limits. Therefore, temporary impacts to utilities and emergency services as a result of Build Alternatives 1 and 2 would be considered less than significant.

Permanent Impacts

No Build Alternative

The No Build Alternative does not require construction; therefore, there will be no impacts to utilities.

SR-74 west of the project limits is currently four lanes and upon completion of the County portion, the highway east of the project limits will be four lanes, resulting in a bottleneck under the No Build Alternative. Therefore, emergency services (police, fire, and emergency vehicle services) may be delayed as traffic congestion worsens and the LOS in the project area declines, resulting in significant impacts to emergency services.

Build Alternatives 1 and 2

Utilities would be relocated, replaced, or protected in place during construction of either Build Alternative as described above. There will be no long-term disruptions in service as a result of utilities within the study area being relocated or replaced, and there are no permanent impacts to utilities.

Implementation of either Build Alternative is anticipated to result in a positive impact to emergency services by improving the LOS within the project limits and reducing emergency response times. Any sliver takes that include portions of driveways will be reconstructed to meet the new grade of the edge of roadway pavement to allow full and adequate access for emergency services vehicles.

2.1.4.3 Avoidance, Minimization and/or Mitigation Measures

The following minimization measures should be implemented:

Design, construction, and inspection of utilities that would need to be relocated for the project would be done in accordance with Department requirements. The Department would coordinate with the affected service provider in each instance to ensure that work is during times of low demand and in accordance with the appropriate requirements and criteria.

Coordination with the utility providers would be initiated during the preliminary engineering phase of the project and would continue through final design and construction, consistent with Department requirements.

Coordination efforts would include planning utility rerouting, identifying potential conflicts, ensuring that construction of the proposed project minimizes disruption to utility operations, and formulating strategies for any unanticipated problems that may arise during construction.

The Department would also coordinate with emergency service providers to avoid emergency service delays by ensuring that all providers are aware well in advance of temporary road closures and detours. Please see Chapter 1, Section 1.5.1.13–Construction for details on the TMP.

2.1.4.4 Level of Significance

The No Build Alternative would have no temporary impacts on utilities. Significant permanent impacts to emergency services would occur due to delays associated with existing and forecast congestion on this portion of SR-74, particularly during the peak hours.

With implementation of the measures outlined above, potential temporary direct or indirect impacts to utilities under the Build Alternatives would be less than significant. There are no permanent direct or indirect impacts to utilities, and the Build Alternative would provide a benefit to emergency services due to the improvement in congestion afforded by the roadway improvements.

2.1.5 Traffic & Transportation/Pedestrian and Bicycle Facilities

This section discusses the impacts of the proposed SR-74 Widening project on traffic and circulation, both during construction (temporary impacts) and after completion of the project (long-term impacts) within the City, including the six unsignalized intersections within the project limits. This analysis is based on the Draft State Route 74 Lower Ortega Highway Widening Traffic Study prepared in July 2008 (2008 Draft Traffic Study), the SR-74 (Ortega Highway) Supplemental Traffic Study prepared in June 2007 (2007 Supplemental Traffic Study), and the SR-74 (Ortega Highway) Widening Project Traffic Study prepared in November 2006 (2006 Traffic Study).

The entire length of SR-74 that would be widened is currently a two-lane section with left-turn lanes and right-turn lanes at intersections and a painted median at various locations within the City portion (see Figure 1-2 in Chapter 1). The widening of SR-74 from the City/County (City/County) limits to east of the La Pata Avenue/ Antonio Parkway intersection, which is within unincorporated Orange County, has already been evaluated and approved in three environmental documents prepared by the County for the Ranch Plan (see Section 1.2, Project Background). Therefore, this section of the Draft EIR discusses traffic impacts within the City limits only, which is the proposed project from Calle Entradero to the City/County line.

The improvements would provide one additional 12 ft wide lane in each direction, as well as a 12 ft wide painted median. The widening will occur primarily on the north side to minimize removal of mature trees and to retain the existing sidewalk on the south side of SR-74. Throughout most of the proposed project length, a 5 ft paved shoulder will be provided on each side of the roadway to accommodate Class II (striped on-road) bicycle facilities. From Avenida Siega to the City/County limits, the shoulder/bike lane will transition to an 8 ft wide shoulder to merge with the County portion of the widening project.

Six roadways intersect with SR-74, from the south, within the project limits. They are: Calle Entradero, Via Cordova/Hunt Club Drive, Via Cristal, Strawberry Lane, Via Errecarte, and Avenida Siega. North of SR-74, Via Cordova becomes Hunt Club Drive, and Avenida Siega becomes Shade Tree Lane with Via Cristal and Via Errecarte as T-intersections. To the north of SR-74, Strawberry Lane, Toyon Drive and Palm Hill Drive provide access to hillside private properties. Each intersection will be modified/widened to accommodate the additional lanes, median, and shoulders. Where there are existing right-turn pockets (Via Cordova and Via Cristal),

the right-turn pockets will remain. No new intersections are proposed, and no existing intersections are proposed to be signalized (no intersections meet a signal warrant).

Sidewalks exist intermittently throughout the project area on the north and south sides of SR-74. These sidewalks begin outside the western limits of the project. Build Alternative 1 proposes eliminating the sidewalk on the north side of SR-74 to accommodate the widening. The south sidewalk will be maintained in its current location with the exception of a portion of sidewalk at the intersection of Via Cordova, where the sidewalk will be shifted to the south and reconstructed to provide for the right-turn pocket at this intersection. A new sidewalk will be constructed on the south side to just east of Avenida Siega, where it will connect to the County sidewalk system being constructed with the County portion of the SR-74 Widening project.

Under Build Alternative 2, the sidewalk on the north side of SR-74 between Calle Entradero and Via Cordova would be reconstructed. Under this alternative, the existing meandering sidewalk would be reconstructed as a straight sidewalk (not curvilinear) within the existing public right-of-way. A short retaining wall would be required along the existing limit of the public right-of-way, which is delineated by the south side edge of the existing equestrian trail.

The Build Alternatives differ only with respect to impacts on landscape features and the provision of a sidewalk on the north side. There is no difference as far as traffic characteristics are concerned, and the variations are simply addressed here as the Build Alternatives.

The 2008 Draft Traffic Study evaluated the project in a 2035 time frame, comparing the No Build Alternative with the Build Alternatives. The traffic forecast data used for the analysis was prepared using the South County Sub-Area Model (SCSAM) which, in turn, was derived from the Orange County Transportation Analysis Model (OCTAM) Version 3.1. The SCSAM has undergone certification by the OCTA and thereby is consistent with the subarea modeling guidelines established by that agency. Consistency requirements ensure that traffic model data are derived in a regional context, in this case with OCP-2004 demographic projections for Orange County and General Plan land use build out for the cities of Mission Viejo, San Juan Capistrano, Laguna Niguel, and the communities of Las Flores and Ladera Ranch. For the Rancho Mission Viejo area east of the City, the land use plan as approved in 2004

and modified under a subsequent Settlement Agreement was used in the traffic forecast assumptions.

Other considerations used in the traffic forecast database included future roadways in south Orange County, including MPAH additions such as La Pata Avenue and a southward extension of State Route 241 (SR-241) along the recently adopted alignment. A more detailed discussion of the assumptions used in the analysis is inicluded in the *Draft State Route 74 Lower Ortega Highway Widening Traffic Study, July 2008.*

2.1.5.1 Regulatory Setting

The Department directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of highway projects. It further directs that the special needs of the elderly and the disabled must be considered in all 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.

The Department is committed to carrying out the 1990 ADA by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public will be provided to persons with disabilities.

2.1.5.2 Affected Environment

Roadway System

The existing roadway configuration and traffic conditions of the portion of SR-74 within the project limits are described in detail in Chapter 1 of this Draft EIR and are summarized in this subsection. SR-74 extends from I-5 in San Juan Capistrano northeast to Riverside County, where it intersects I-15. It then extends further northeast towards Palm Desert in Riverside County. The existing SR-74 consists of four through lanes from I-5 to approximately 330 ft east of Calle Entradero. It transitions to two through lanes east of Via Cordova to west of Avenida Siega.

SR-74 is part of the State Freeway and Expressway system. It provides interregional access between the employment centers of south Orange County and the residential centers of Riverside County. The highway also carries a high traffic volume of trucks with two axles or more during the weekdays and recreational travelers on the weekends.

There are no high occupancy vehicle (HOV) lanes, on-street parking spaces, or bicycle facilities within project limits. Class II (striped on-road) bicycle facilities would be provided as part of the Build Alternatives. In addition, SR-74 is not being used for regular transit services by OCTA or the Riverside Transit Agency (RTA).

Traffic volume is usually discussed in terms of average daily traffic (ADT) and/or intersection capacity utilization (ICU). The ability of a highway to accommodate traffic is typically measured in terms of LOS. LOS is based on the ratio of traffic volume to the design capacity of the facility. LOS is expressed as a range from LOS A (free traffic flow with low volumes and high speeds resulting in low densities) to LOS F (traffic volumes exceed capacity and result in forced flow operations at low speeds resulting in high densities). Pictorial representations of the six levels of service are provided in Chapter 1 (see Figure 1-3).

Traffic Conditions at Mainline and Intersections

The existing ADT and peak-hour volumes within the project limits on the SR-74 (both directions) are approximately 27,000 and 2,530 vehicles per hour (vph) respectively for the year 2008. According to the 2008 Draft Traffic Study, truck traffic is estimated to be 19.6 percent of the total traffic within the project limits. Existing (2008) mainline and intersection analyses are discussed in detail in the Traffic Study prepared in May 2008. The report includes synchro and ICU worksheets for LOS and Measure of Effectiveness (MOE) calculations.

The volume-to-capacity (v/c) ratios for mainline segments along SR-74 within the project limits were calculated based on peak-hour traffic volumes for existing (2008), 2035 No Build, and 2035 Build conditions. As can be seen from Table 2.1.5-1 (Mainline LOS Summary), in the existing conditions for both AM and PM peak hours, all roadway segments within the project limits operate at LOS D (which meets the desired LOS threshold for this location) except at the Via Cordova intersection during the AM peak hours where it operates at LOS E.

For a two-lane highway operating at LOS D, the v/c ratio ranges from 0.69–0.88 (2008 Draft Traffic Study), which means that the traffic along the roadway segment is approximately 70–90 percent of the available capacity. In year 2035 with the No Build Alternative, the traffic will be operating at LOS F. At LOS F, the v/c ratio is greater than 1.0 (2008 Draft Traffic Study), which means that the traffic along the roadway segment is more than the available capacity. Therefore, the SR-74 roadway segment within the project limits will be over capacity and heavily

Table 2.1.5-1 Mainline LOS Summary

Location	Lane Design Capacity	Existing					2035 No Build					2035 Build				
		No. of Lanes	Peak-Hour Facility Capacity	Peak-Hour Volume[a]	V/C	LOS	No. of Lanes	Peak-Hour Facility Capacity	Peak-Hour Volume[a]	V/C	LOS	No. of Lanes	Peak-Hour Facility Capacity	Peak-Hour Volume	V/C	LOS
SR-74 w/o Via Cordova																
AM	2,100	1	1,785	1,617	0.94	E	1	1,785	2,188	1.23	F	2	4,200	2,188	0.52	C
PM	2,100	1	1,785	1,360	0.76	D	1	1,785	2,007	1.12	F	2	4,200	2,007	0.48	C
SR-74 w/o Via Cristal																
AM	2,100	1	1,785	1,577	0.88	D	1	1,785	2,148	1.20	F	2	4,200	2,148	0.51	C
PM	2,100	1	1,785	1,303	0.73	D	1	1,785	1,950	1.09	F	2	4,200	1,950	0.46	B
SR-74 w/o Avenida Siega																
AM	2,100	1	1,785	1,553	0.87	D	1	1,785	2,124	1.19	F	2	4,200	2,124	0.51	C
PM	2,100	1	1,785	1,267	0.71	D	1	1,785	1,914	1.07	F	2	4,200	1,914	0.46	B
SR-74 e/o Avenida Siega																
AM	2,100	1	1,785	1,552	0.87	D	1	1,785	2,123	1.19	F	2	4,200	2,123	0.51	C
PM	2,100	1	1,785	1,263	0.71	D	1	1,785	1,910	1.07	F	2	4,200	1,910	0.45	B

Source: Austin-Foust Associates, Inc., *State Route 74 – Lower Ortega Highway Widening Traffic Study* (July 2008)
[a] Highest one-way volume
Level of service (LOS) values as follows:

A V/C < 0.30
B V/C 0.30 – 0.47
C V/C 0.48 – 0.68
D V/C 0.69 – 0.88
E V/C 0.88 – 1.00
F V/C > 1.00

e/o = east of
V/C = volume to capacity (ratio)
w/o = west of

congested, resulting in significant delays in the 2035 No Build conditions. The traffic in the 2035 Build Alternatives is projected to operate at LOS C or better. At LOS C, the v/c ratio is less than 0.68, which means that the traffic along the roadway segment is less than 70 percent of the available capacity. Therefore, the SR-74 roadway segment within the project limits will result in minimal delays in the 2035 Build conditions.

A Highway Capacity Manual (HCM) delay analysis was carried out for turning movements to and from SR-74 to six side streets (unsignalized intersections) along the proposed project area: Calle Entradero at SR-74, Via Cordova/Hunt Club Drive at SR-74, Via Cristal at SR-74, Strawberry Lane at SR-74, Via Errecarte at SR-74, and Avenida Siega at SR-74. The side street delay analysis assumed certain gap acceptance parameters and may not be representative of actual conditions or driver behavior at individual locations. The HCM values are accepted practice for comparative purposes when intersection LOS (delay of less than 50 seconds per vehicle [sec/veh]) is being evaluated. The 2008 Draft Traffic Study reveals that the delay experienced by a turning vehicle to and from SR-74 in the existing condition is greater than 50 sec/veh at four (out of six) locations. Only at two of the six locations would turning vehicles experience a delay less than 50 sec/veh (i.e., Via Cordova at SR-74 and Via Cristal at SR-74). In the 2035 No Build conditions, due to the increase in through traffic along SR-74, the delay experienced by a turning vehicle to and from SR-74 is greater than 200 sec/veh at all six study locations. Therefore, in the 2035 No Build conditions, vehicles getting on and off (turning vehicles) SR-74 within the project limits will experience significant delays.

In 2035 Build conditions, to avoid longer traffic delays, the project is providing eastbound left-turn lanes at the unsignalized intersections to allow vehicles exiting minor streets to turn right to eastbound SR-74 and complete a U-turn at the next available intersection. In the 2035 Build conditions, the delay experienced by turning vehicles is considerably lower than the No Build conditions.

Accident Rates

During the 3-year period from September 1, 2004, through August 31, 2007, there were 12 accidents within the project limits. As shown in Table 2.1.5-2, the actual accident rate within the project limits is lower than the average accident rate occurring on highways of similar traffic volumes and road conditions.

Table 2.1.5-2 Accident Rate Summary (Accidents Per Million Vehicle Miles)

	Fatal	Fatal + Injury	Total
Actual	0.00	0.19	0.44
Average	0.018	0.84	1.99

Source: Department District 12, "Traffic Accident Surveillance and Analysis System (TASAS) Table B," (June 2008)

Pedestrian and Bicycle Facilities

Sidewalks exist intermittently throughout the project area on the north and south sides of SR-74. These sidewalks begin outside the western limits of the project.

Currently, there are no bike lanes within the project limits.

2.1.5.3 Environmental Consequences

Temporary Impacts

No Build Alternative

The No Build Alternative does not contain a construction component and therefore would not result in temporary impacts within the project limits.

Build Alternatives

During the construction phase of the project, traffic in the vicinity of SR-74 interchanges and the mainline within the project limits could be disrupted by construction equipment and vehicles. Traffic on SR-74 may also be disrupted by trucks hauling construction materials and debris. Under Alternative 2, pedestrian traffic will be temporarily disrupted as the existing sidewalk on the north side of SR-74 between Calle Entradero and Via Cordova is reconstructed. This is considered a less than significant temporary impact. However, with implementation of a TMP (described in Section 1.5.1.13, Construction), temporary impacts to traffic and pedestrians during construction would be reduced to less than significant.

Permanent Impacts

No Build Alternative

The No Build Alternative does not contain a construction component and would retain the existing roadway with one lane in each direction and shoulders in some sections of the highway.

Based on the information contained in the traffic studies and as shown in Table 2.1.5-1, the No Build Alternative would not meet the purpose and need to

enhance capacity in the long term. Table 2.1.5-1 (Mainline LOS Summary) shows that for the mainline, the peak-hour traffic volume in one traffic direction increases from 1,550 vph in 2008 to 2,123 vph in 2035. The table also shows that the mainline would operate at LOS F. LOS F implies that the traffic will be heavily congested and speeds will be less than 35 mph. The higher through traffic volumes along SR-74 would result in increased delays for vehicles exiting the minor streets and intending to turn left due to the lack of gaps in the through traffic that would allow these vehicles to complete the left turn.

Traffic demand will exceed capacity and speeds will vary greatly, which will result in significant delays. Traffic congestion through the project limits is expected to worsen in the 2035 future conditions, increasing from 27,000 ADT in 2008 to 39,000 ADT in 2035.

For the 2035 No Build condition, the results are hypothetical since there is inadequate capacity for the demand, and ever-increasing queues would form during the peak hours. Therefore, while the 2035 demand is the same as for the project conditions with the Build Alternative, the number of vehicles served during each of the peak hours is considerably less. As such, the results shown here only partially account for the actual conditions that might prevail.

Based on the discussion above, the No Build Alternative would not address existing and forecast traffic conditions and would have significant impacts to traffic and transportation.

Build Alternatives 1 and 2

The Build Alternatives contain a construction component and would involve widening the existing roadway from one lane in each direction to two 12 ft wide lanes in each direction, adding 5 ft paved shoulders and a 12 ft painted median. The Build Alternatives would result in temporary and long-term changes to traffic volumes and circulation as a result of construction.

As shown in Table 2.1.5-1 and in the 2008 Draft Traffic Study, the Build Alternatives would meet the purpose and need to enhance capacity in the long term. Table 2.1.5-1 shows that for the mainline, the LOS would be at LOS B and C. There would be no delays or minimal delays. Traffic congestion through the project limits is expected to decrease with the implementation of this project in 2035 (i.e., LOS will improve from LOS D and E in the existing conditions to LOS C in the 2035 Build conditions during

AM peak hours, and from LOS D in the existing conditions and LOS C and LOS B in the 2035 Build conditions during PM peak hours).

In the year 2035, for the Build Alternatives, the projected LOS for the various intersections within the project limit ranges from LOS B for the SR-74 through traffic to LOS F for the local streets' left-turn movements. There would be delays, and the operating speeds would be between 35 and 38 mph during AM hours and range from 38 to 41 mph during PM hours. Traffic conditions on intersections within the project limits are expected to improve in 2035 with the Build Alternatives. At intersections within the project limits, the mainline traffic will operate at an acceptable LOS. Due to growth in traffic between 2008 and 2035, there is a projected increase in traffic along SR-74. Traffic exiting local streets and attempting to turn left onto westbound SR-74 would incur extended delays due to a lack of gaps in the through traffic. In order to avoid extended traffic delays, the project is providing eastbound left-turn lanes at the unsignalized intersections to allow vehicles to turn right onto eastbound SR-74 and complete a U-turn at the next available intersection.

Based on the discussion above, Build Alternatives 1 and 2 would improve the LOS in the project area and would have a beneficial impact on traffic and transportation. Traffic and transportation impacts are considered less than significant.

Pedestrian and Bicycle Facilities

In early 2000, the Department conducted a survey in the vicinity of the Via Cordova/Hunt Club Drive intersection to identify the need for a signal. A subsequent survey was conducted September 2008. In both surveys, the pedestrian count and field observation indicated an extremely low demand to warrant a signal light as a means for providing a safe crossing. The project design does not preclude the potential construction of a non-signalized painted crosswalk with a minimum 4 ft wide raised median to reduce the crossing distance of SR-74, nor the construction of a full signal light for pedestrian crossing if such a signal is warranted in the future.

Build Alternative 2 will retain the sidewalk but it would be reconstructed as a straight sidewalk (not curvilinear) within the existing public right-of-way. In addition, it was agreed by the PDT to provide a continuous sidewalk between the City and County area. It required the provision of a new sidewalk on the south side. The project also proposes to utilize shoulders on both sides of the roadway for a Class II bicycle facility. This would enhance multimodalism and student access to the high school. It is compatible with the City Circulation Element of the General Plan, and the

Bikeways Plan included in the Transportation Element of the Orange County General Plan.

The impacts to pedestrian and bicycle facilities associated with the Build Alternatives are considered less than significant.

Comparative Analysis: No Build and Build Alternatives

The primary MOE used to compare No Build to Build conditions is the average vehicle speed for the section of highway being improved. A comparison between the No Build Alternative in 2035 and the Build Alternatives in 2035 indicates a significant increase in the average travel speed during peak periods. Under the No Build Alternative in 2035, delays would be even greater than that shown here due to queuing effects at the merge points.

A vehicle miles traveled (VMT) summary for the project is shown in Table 2.1.5-3. The peak period derivations and the speed distribution are estimated from typical flow relationships for facilities that are congested (as in the No Build Alternative) and for facilities with adequate LOS and that flow at speeds close to the speed limit during peak hours (as in the Build Alternatives).

Table 2.1.5-3 Vehicle Miles Traveled (VMT) Summary

	2035 No Build			2035 Build		
	Peak	Off-Peak	ADT	Peak	Off-Peak	ADT
VMT Derivation						
Length (miles)	0.9	0.9	0.9	0.9	0.9	0.9
Volume	17,000	12,000	39,000	13,000	16,000	39,000
VMT	15,300	10,800	35,100	11,700	14,400	35,100
Hours	6	18	24	4	20	24
VMT Distribution						
<10 mph	0%	0%	0%	0%	0%	0%
10 – 20 mph	5%	0%	5%	0%	0%	0%
20 – 30 mph	60%	5%	35%	5%	5%	5%
30 – 40 mph	30%	90%	55%	90%	90%	90%
>40 mph	5%	5%	5%	5%	5%	5%
TOTAL	100%	100%	100%	100%	100%	100%

Source: Austin-Foust Associates, Inc., *State Route 74 Lower Ortega Highway Widening Traffic Study* (July 2008).
ADT = average daily traffic mph = miles per hour

2.1.5.4 Avoidance, Minimization, and/or Mitigation Measures

The following project component will ensure that impacts to traffic and transportation as a result of the proposed project will be less than significant.

The project shall provide eastbound left-turn lanes at the unsignalized intersections and allow U-turns at these locations to alleviate side street delays. This would facilitate the movement of minor street traffic onto the SR-74 via a right turn and then a U-turn at the next available intersection.

Additionally, a TMP will be implemented to minimize temporary traffic impacts during construction.

2.1.5.5 Level of Significance

The No Build Alternative would not result in temporary impacts to traffic and transportation but would result in significant permanent impacts.

With implementation of the TMP, potential temporary direct or indirect traffic and transportation impacts are considered less than significant. The Build Alternatives would have a beneficial permanent direct or indirect impact on traffic and transportation within the project area; however, traffic exiting minor streets and making a left turn on SR-74 may experience some extended delays, but with the addition of the project feature as explained above in Section 2.1.5.4, these impacts would be considered less than significant.

2.1.6 Visual/Aesthetics

This section describes the aesthetic and visual resource conditions of the proposed SR-74 Widening Project within the limits of the City. The section also discusses potential aesthetic impacts that could result from implementation of the proposed project. A program for avoidance, minimization, and mitigation measures is also provided. This analysis is based on the Visual Impact Assessment dated September 2008.

2.1.6.1 Regulatory Setting

The California Environmental Quality Act (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." [CA Public Resources Code Section 21001(b)]

2.1.6.2 Affected Environment

Visual Environment

The proposed project is located in south Orange County, California, specifically in the City of San Juan Capistrano. The regional landscape is characterized by coastal communities, rolling hills, and canyons. The City is situated in a coastal valley (1 mi from the Pacific Ocean) at the foothills of southern Orange County, near the southern tip of the Santa Ana Mountains and south of the San Joaquin Hills.

The terrain is predominantly composed of gently to steeply rolling hills containing deep-cut canyons and gullies. The project site consists of SR-74 (to the east of I-5 between Calle Entradero and the City/County line), which traverses the City in a southwest/northeast direction. The project site is located along a canyon formed by San Juan Creek and ranges in elevation from approximately 135 to 175 ft above mean sea level (amsl). SR-74, within the project limits, passes through developed low-density residential, rural residential and rural/agricultural land uses (from southwest to northeast).

Landscape Units

Landscape Unit 1 (LU1): Developed Low-Density Residential Landscape is located within the southwestern portion of the project limits. This urban landscape is characterized by low-density residential land uses. SR-74, in LU1, includes a meandering sidewalk and an equestrian trail to the north, and a sidewalk to the south. Currently, no bike lanes are present within the project limits. Ornamental vegetation

located within LU1 consists of grass and trees, with minimal shrubbery. Tree species that dominate this view include the California sycamore and London plane tree to the north and the Lemon scented gum, Evergreen elm, Eucalyptus, Sweetgum, and London plane tree to the south, with trunk diameters ranging from approximately eight to 30 inches. Although the project is located within the San Juan Creek Watershed, no water features are visible within LU1. Sources of light and glare consist of street lighting along the north and south sides of SR-74. Also, headlights from travelers are visible.

Landscape Unit 2 (LU2): Rural Residential Landscape is located within the central portion of the project limits. This rural landscape is characterized by low-density rural residential land uses. SR-74, in LU2, includes a meandering sidewalk and associated ornamental landscaping to the south. Rural residential units and sloping vacant land is located to the north of SR-74. Disturbed native and nonnative vegetation are located within the sloping vacant areas within the project limits. Tree species that dominate this view include the California pepper tree, Canary Island palm, Eucalyptus, Olive tree, Myoporum insulare, and Mexican fan palm to the north and the Eucalyptus, Sweetgum, and Evergreen elm to the south, with trunk diameters ranging from approximately six to 35 inches. Although the project is located within the San Juan Creek Watershed, no water features are visible within LU2. Sources of light and glare within LU2 consist of street lighting along the south side of SR-74 and headlights from travelers on SR-74.

Landscape Unit 3 (LU3): Rural/Agricultural Landscape is located within the northeastern portion of the project limits. This rural/agricultural landscape is characterized by low-density rural residential and agricultural land uses. SR-74, in LU3, adjoins rural residential units and sloping vacant land. Landscaping within LU3 consists of disturbed ornamental landscaping within private property and native and nonnative vegetation within sloping vacant areas. Tree species that dominate this view include the Brazilian pepper tree and California pepper tree to the north and the California pepper tree, Coast live oak, Spanish dagger, and Evergreen elm to the south, with trunk diameters ranging from approximately eight to 48 inches. Although the project is located within the San Juan Creek Watershed, no water features are visible within LU3. Sources of light and glare within LU3 consist of headlights from travelers on SR-74. No street lighting is present along SR-74 in LU3.

Project Viewshed

A project viewshed is a subset of a landscape unit and comprises all the surface areas visible from an observer's viewpoint. The limits of a viewpoint 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 project features.

The majority of views of the project limits include those from the westbound and eastbound travel lanes of SR-74 as well as limited views from hillside residential units (on the north side of SR-74) that are located within the canyon (refer to Figure 2.1.6-1 – Key View Location Map). Views from the adjoining urban, rural, and agricultural development within the project limits exist. Based upon a site visit conducted on March 24, 2008, the majority of views to the project limits are from adjoining land uses to the north and south of the project limits. Existing topography, structures, and landscaping/vegetation screen views from other uses located further away from the project limits.

Existing Visual Quality

The average existing visual quality within the project limits is considered to be moderately high to high. The project limits contain moderate to high vividness, and many views that are considered memorable. Although views of existing overhead power lines are present in LU2 and LU3, intactness remains moderate to moderately high. There are limited background views and no distant views along SR-74 within the project limits due to large trees. Color varies throughout the project limits as a result of the ornamental landscaping and vegetation present in views.

Existing Viewer Sensitivity

Multiple sensitive viewers adjoin SR-74 within the project limits, the majority of which consist of the residential uses located north and south of SR-74. Additionally, many driveways utilize SR-74 through the project limits, and thus have a high sensitivity to alteration of views. The City has designated SR-74 as a scenic corridor. The project limits have not been officially designated as a California State Scenic Highway, but SR-74 through the project site is eligible for the designation. However, the County MPAH and the City designate Ortega Highway as a primary arterial highway, a four-lane divided roadway. In Table C-6 of the City's Circulation Element, the widening of the Ortega Highway is planned as a long-range roadway improvement and is to be widened to four lanes, from Calle Entradero to the east City/County limits.

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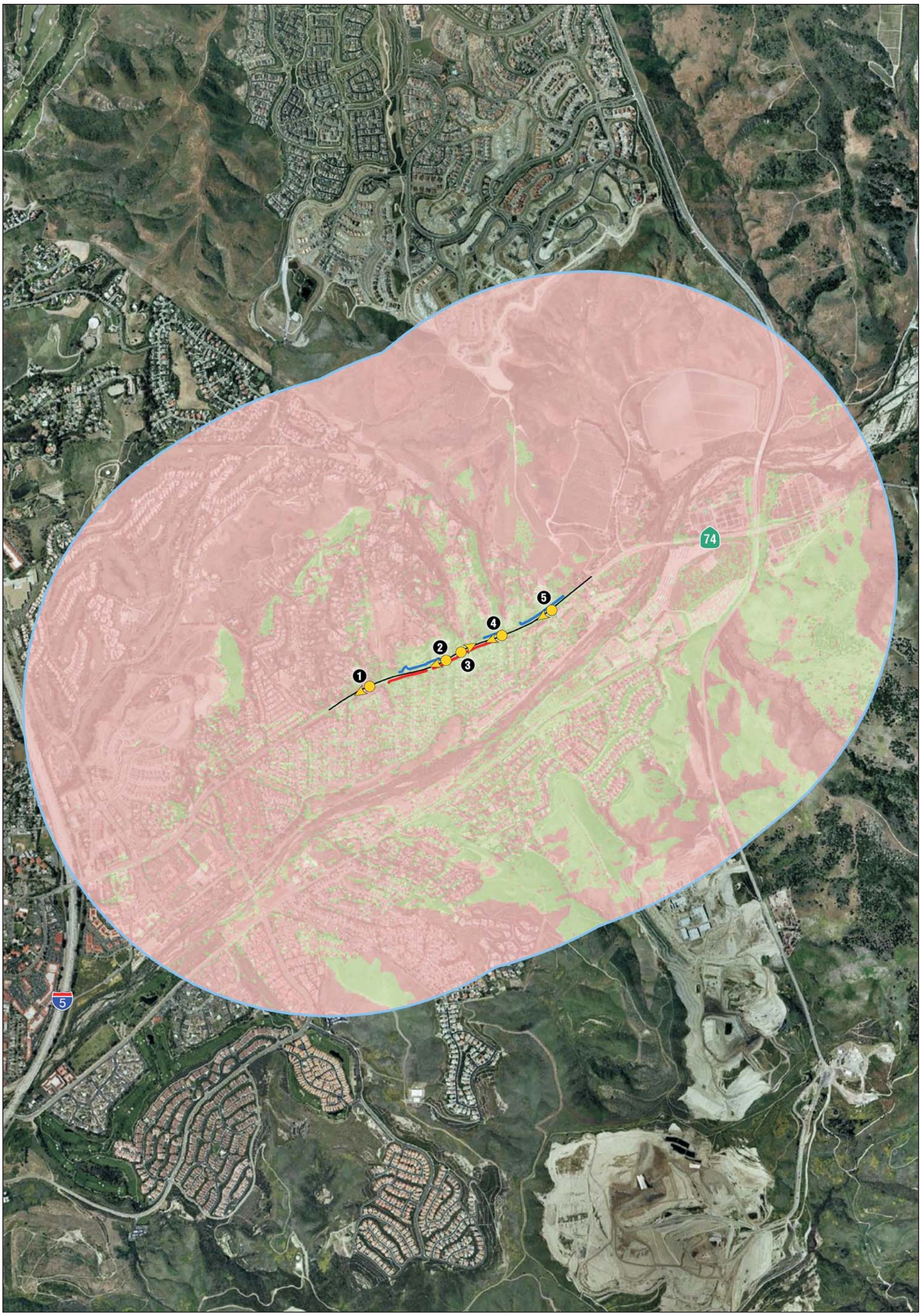

Direction of Photo
View Point Location
View Point Number

Project Centerline
Retaining Wall

Sound Wall
One-Mile Project Vicinity

Project Site Not Visible
Project Site Visible

0 1,500' 3,000'
APPROXIMATE

FIGURE 2.1.6-1

Lower SR-74 Widening Project

Key View Location Map
Alternatives 1 and 2

12-ORA-74 PM 1.0/1.9
EA No. 086920

SOURCE: RBF

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2.1.6.3 *Methodology*

This section summarizes the methodology and terminology used to assess visual effects of the project Build Alternatives. More details on the methodology are available in the Visual Impact Assessment (September 2008). The visual impact analysis followed the methodology prescribed in the publication *Visual Impact Assessment for Highway Projects* (Federal Highway Administration [FHWA], March 1981), which is a Department approved methodology and complies with CEQA. The following six principal steps were carried out to assess the visual effects of the proposed Lower SR-74 Build Alternatives:

1. Define the existing visual environment.
2. Identify key views for visual assessment.
3. Analyze existing visual resources (visual quality and visual character) and viewer groups.
4. Depict the visual appearance of project alternatives and viewer response.
5. Assess the visual effects of project alternatives.
6. Propose methods to avoid, minimize, and/or mitigate adverse visual effects.

The visual effects of the Build Alternatives were determined by assessing the existing visual resources and the visual resource change due to the project, and predicting viewer response to that change. The degree of visual quality in a view was evaluated using the following FHWA descriptive terms:

> **Vividness:** The visual power or memorability of landscape components as they combine in distinctive visual patterns.
>
> **Intactness:** The visual integrity of the natural and man-built landscape and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes, as well as in natural settings.
>
> **Unity:** The visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual man-made components in the landscape.

The levels of visual impact are described as follows:

> **Low:** Minor adverse change to the existing visual resource, with low viewer response to change in the visual environment. May or may not require mitigation.

Moderate: Moderate adverse change to the visual resource with moderate viewer response. Impact can be mitigated within five years using conventional practices.

Moderately High: Moderate adverse visual resource change with high viewer response, or high adverse visual resource change with moderate viewer response. Extraordinary mitigation practices may be required. Landscape treatment required will generally take longer than five years to mitigate.

High: A high level of adverse change to the resource or a high level of viewer response to visual change such that architectural design and landscape treatment cannot mitigate the impacts. Viewer response level is high. An alternative project design may be required to avoid highly adverse impacts.

2.1.6.4 Key Views

To evaluate the visual effects of the Build Alternatives, specific views were selected that represent the various landscape units throughout the study area, the visual resources, and a number of sensitive viewer perspectives. Selection of the views was based on the following criteria:

1. Areas that would have the most substantial changes from project implementation, such as noise barriers or retaining walls and areas with large cut-and-fill slopes
2. Areas where there are existing visual aesthetic resources, such as:
   - Existing visual resources according to the General Plans.
   - Scenic vistas.
   - Scenic roads.
3. Populated areas with consideration of residential land uses in particular
4. Representative views from each proposed Build Alternative

A key view is a photograph representation of a typical existing viewshed within the project visual study area that incorporates the best range of visual resources as seen by viewer groups. Five key views were selected that most clearly display the areas where visual effects of the proposed project are anticipated. The key views represent the primary viewer groups (commuters, pedestrians, recreational users, and residents) that would potentially be affected by the project. Key views selected for the project site and locations are shown on Figure 2.1.6-1.

Key View 1

Key View 1 is representative of LU1 and looks to the west, along the westbound travel lane of SR-74 (see Figure 2.1.6-2). Although surrounding residential units would not have direct views, the pedestrians and recreational users along the sidewalks and equestrian trail would have long-duration views of the Build Alternative features. Sensitivity to visual change would be high for those viewer groups. Also, many travelers/commuters along SR-74 would be exposed to moderate-duration views of the project. Due to the moderate number of viewers affected, the overall viewer response to change would be high.

Key View 2

Key View 2 is representative of LU2 and looks to the west along SR-74 (see Figure 2.1.6-3). Although residential units to the south would not have direct views, the pedestrians along the sidewalks to the south and the few private residents to the north would have long-duration views of the Build Alternative features. Sensitivity to visual change would be moderate for those viewer groups. Also, many travelers/commuters along SR-74 would be exposed to moderate-duration views of the project. Due to the moderate number of viewers affected, the overall viewer response to change would be moderately high.

Key View 3

Key View 3 is representative of LU2 and was taken from the eastbound travel lane of SR-74 between Via Cristal and Via Errecarte. This view looks to the east, toward the eastbound travel lane of SR-74 (see Figure 2.1.6-4). Although residential units to the south would not have direct views, the pedestrians along the sidewalks to the south and the few private residents to the north would have long-duration views of the features of Build Alternatives 1 and 2. Sensitivity to visual change would be moderate for those viewer groups. Also, many travelers/commuters along SR-74 would be exposed to moderate-duration views of the project. Due to the moderate number of viewers affected, the overall viewer response to change would be moderately high.

Key View 4

Key View 4 is representative of LU2 and was taken from the westbound travel lane of SR-74 at Via Errecarte. This view looks west along the proposed project (see

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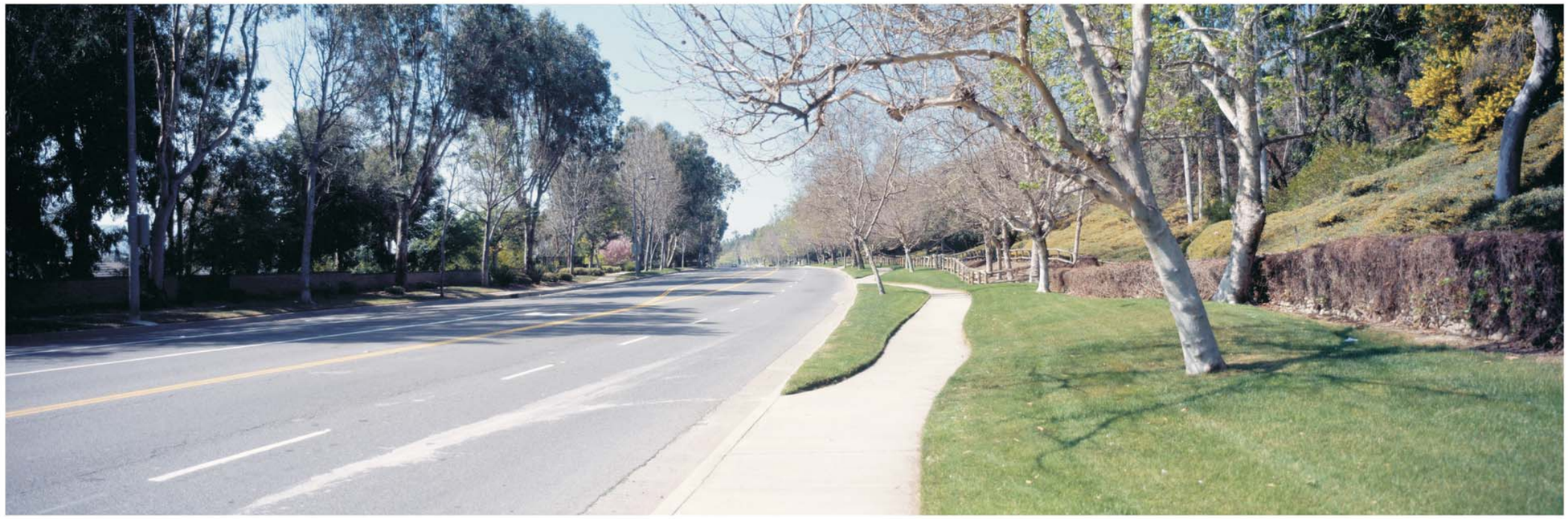

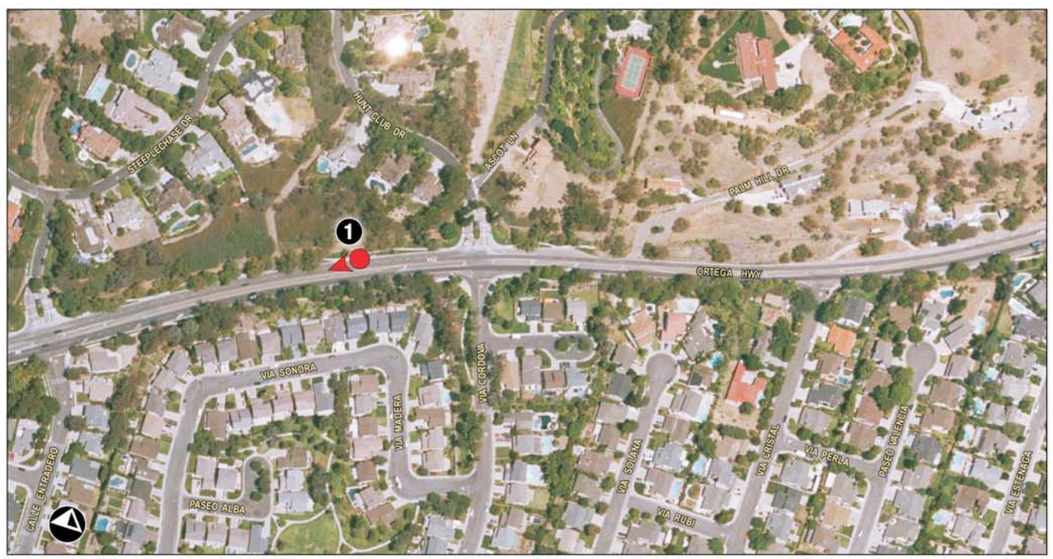

Direction of Photo
Viewpoint Location
1 Viewpoint Number

FIGURE 2.1.6-2

Lower SR-74 Widening Project
Key View 1
Existing Condition
12-ORA-74 PM 1.0/1.9
EA No. 086920

SOURCE: RBF

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Direction of Photo
Viewpoint Location
2 Viewpoint Number

FIGURE 2.1.6-3

Lower SR-74 Widening Project
Key View 2
Existing Condition
12-ORA-74 PM 1.0/1.9
EA No. 086920

SOURCE: RBF

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FIGURE 2.1.6-4

Lower SR-74 Widening Project

Key View 3

Existing Condition

12-ORA-74 PM 1.0/1.9

EA No. 086920

SOURCE: RBF

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Figure 2.1.6-5). Although residential units to the north and south would not have direct views, the pedestrians along the sidewalks to the south would have long-duration views of the features of Build Alternatives 1 and 2. Due to the fairly low pedestrian traffic in this portion of SR-74, viewer sensitivity to visual change would be moderately low for that viewer group. However, many travelers/commuters along SR-74 would be exposed to moderate-duration views of the project. Due to the moderate number of viewers from the road affected, the overall viewer response to change would be moderate.

Key View 5

Key View 5 is representative of LU3 and is located along westbound SR-74, between Avenida Siega and the City/County line. This view looks west along the proposed project (see Figure 2.1.6-6). Three residential units to the north and south would have long-duration views of the features of Build Alternatives 1 and 2. Due to the low number of dwelling units within this portion of SR-74, viewer sensitivity to visual change would be moderately low for that viewer group. However, many travelers/commuters along SR-74 would be exposed to moderate-duration views of the project. Due to the moderate number of viewers from the road affected, the overall viewer response to change would be moderate.

2.1.6.5 Environmental Consequences

Temporary Impacts

No Build Alternative

No changes would occur to the Lower SR-74 under the No Build Alternative. The No Build Alternative would not alter the site's visual quality or character, or have any visual impact on any visual resource or viewer group.

Build Alternatives

Temporary visual effects during construction, such as construction activity, staging sites, truck hauling, excavation activity, and construction area signage, are anticipated under both Build Alternatives. The visual effects related to construction activity are short term, and would cease after completion of construction. Any adverse effects due to vegetation clearing would gradually cease over time as replacement vegetation matures. Construction-related visual impacts would be minimized by implementing Department Standard Specifications for Construction. Temporary visual impacts are considered less than significant.

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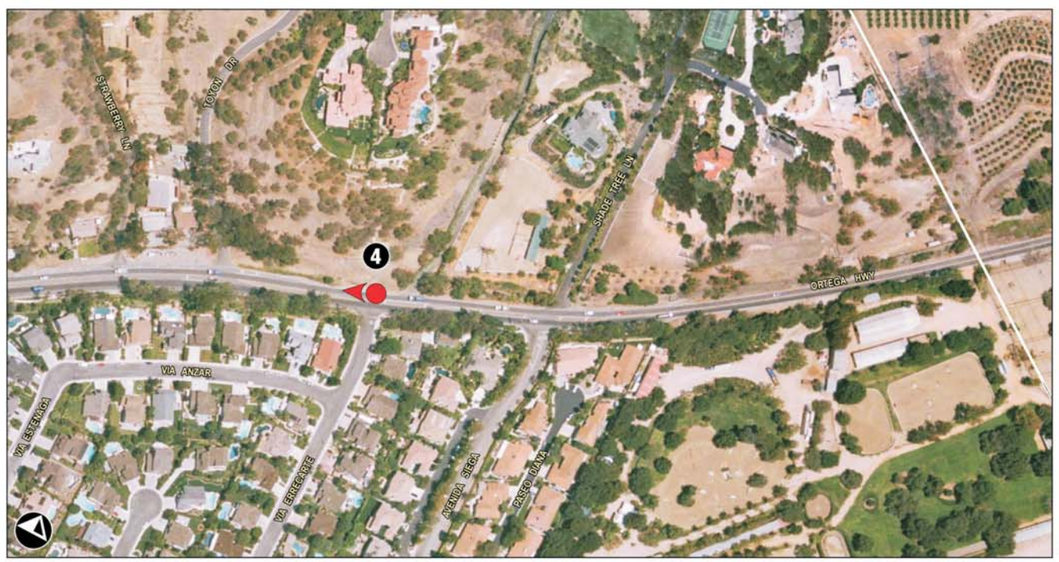

FIGURE 2.1.6-5

Lower SR-74 Widening Project
Key View 4
Existing Condition
12-ORA-74 PM 1.0/1.9
EA No. 086920

SOURCE: RBF

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Direction of Photo
Viewpoint Location
5 Viewpoint Number

FIGURE 2.1.6-6

Lower SR-74 Widening Project
Key View 5
Existing Condition
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EA No. 086920

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Permanent Impacts

No Build Alternative

No permanent impacts would occur to visual quality or character, visual resources, or viewer groups under the No Build Alternative.

Build Alternatives

Implementation of Build Alternatives 1 and 2 would widen SR-74 to four lanes and would generally introduce curb and gutter, retaining wall structures, noise barriers, new sidewalk, and ornamental landscaping throughout the project limits. All proposed noise barriers are anticipated to range from 747 to 1,228 ft in length. The height of noise barrier No. 2 (NB No. 2) would be a maximum of 16 ft in height and NB No. 3 would be a maximum of 14 ft. from station number (STA) 27+06 to STA 28+43 and 16 ft. from STA 28+43 to STA 30+76.5.[1] The proposed retaining walls would range in height from 2 to 24 ft and would range in length from 100 to 960 ft.

Key View 1

Implementation of project features in Key View 1 would result in a moderate to moderately high change to character/quality and a high viewer response to that change for both Alternatives 1 and 2. Both Build Alternatives would include removal of the existing sidewalk and ornamental landscaping and replacement with proposed roadway, curb and gutter, and ornamental landscaping (see Figure 2.1.6-7). Both Alternatives would remove mature trees and the existing meandering sidewalk, which currently contributes to a rural landscape within this suburban setting. Although implementation of Alternative 2 would replace the sidewalk, this new sidewalk would not be meandering. In addition, Alternative 2 would include two additional retaining wall structures. Therefore, although Alternative 2 would replace the sidewalk on the north side of SR-74 between Calle Entradero and Hunt Club Drive, Alternative 2 increases the developed appearance of the site and would change the rural/suburban landscape to a more suburban landscape. Light and glare impacts would remain similar to existing conditions.

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[1] Station numbers are based on the Department designation numbering in metric units as shown in Figure I-1 in Appendix I of this document.

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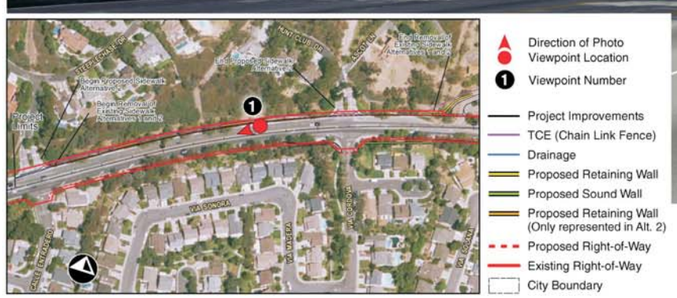
Alternative 1

Alternative 2



For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader information on the form, size, and scale of the proposed improvements within the project area. Specific project design features are subject to change during the plans, specifications, and estimates (PS&E) phase for the project, and would take place in consultation with the Department District Landscape Architect, and the City of San Juan Capistrano.

FIGURE 2.1.6-7

Lower SR-74 Widening Project
Key View 1
Proposed Condition
12-ORA-74 PM 1.0/1.9
EA No. 086920

SOURCE: RBF

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Implementation of the measures outlined below in Section 2.1.6.6, which require landscaping and aesthetic enhancements, would enhance the pedestrian and driver environment and reduce the appearance of hardscape. As shown in Section 2.2.6.6, the Department would replace in kind all landscaped trees that would be removed within this section; however, not all removed landscape (including removed trees) could be replanted in this section due to design constraints (refer to Mitigation Measure V-1, Section 2.1.6.6). Due to subjective human perception and due to the range in viewer awareness of moderate to moderately high visual impacts, the viewer awareness impacts are considered significant.

Key View 2

Implementation of project features in Key View 2 would result in a moderately high change to character/quality and a moderately high viewer response to that change for both Alternatives 1 and 2. Changes would include an increase in hardscape features (three retaining walls, curb and gutter, and the widened roadway) as well as removal of roadside vegetation adjacent to residents (see Figure 2.1.6-8). The proposed retaining walls would increase the dominance of hardscape features and increased light reflectivity from the additional concrete. Light and glare impacts would remain similar to existing conditions.

Implementation of the measures outlined in Section 2.1.6, which require landscaping and aesthetic enhancements, would reduce the appearance of the hardscape features. The visible change in character/quality at Key View 2 would be reduced with implementation of these measures, and Alternatives 1 and 2 would result in moderate visual impacts that are considered less than significant.

Key View 3

Implementation of project features in Key View 3 would result in a moderately low change to character/quality and a moderately high viewer response to that change. Changes would include an increase in hardscape features (curb and gutter, one retaining wall, one noise barrier, and a widened roadway) as well as removal of roadside vegetation (see Figure 2.1.6-9). The severity of the visible hardscape impacts from the noise barrier would vary depending on what architectural treatments are implemented. The visible encroachment would be greater with the decorative Sound Fighter® wall (moderately high) rather than the Plexiglas noise barrier (moderate). With implementation of the measures described in Section 2.1.6.6, which require landscaping and aesthetic

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Alternatives 1 and 2

For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader information on the form, size, and scale of the proposed improvements within the project area. Specific project design features are subject to change during the plans, specifications, and estimates (PS&E) phase for the project, and would take place in consultation with the Department District Landscape Architect, and the City of San Juan Capistrano.

FIGURE 2.1.6-8

Lower SR-74 Widening Project

Key View 2

Proposed Condition

12-ORA-74 PM 1.0/1.9

EA No. 086920

SOURCE: RBF

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Alternatives 1 and 2 • Architectural Treatment A

Alternatives 1 and 2 • Architectural Treatment B

For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader information on the form, size, and scale of the proposed improvements within the project area. Specific project design features are subject to change during the plans, specifications, and estimates (PS&E) phase for the project, and would take place in consultation with the Department District Landscape Architect, and the City of San Juan Capistrano.

FIGURE 2.1.6-9

Lower SR-74 Widening Project
Key View 3
Proposed Condition
12-ORA-74 PM 1.0/1.9
EA No. 086920

SOURCE: RBF

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enhancements, visible impacts from opaque wall structures would be reduced. Light and glare impacts would remain similar to existing conditions. Although the viewer awareness of these impacts would be moderately high and significant, the proposed planting and aesthetic treatments would reduce the moderate visual impacts and maintain the rural character of the community. Therefore, the visible change in character/quality at Key View 3 would be reduced to moderately low levels and are considered less than significant with implementation of the measures described below.

Key View 4

Implementation of project features in Key View 4 would result in a moderately high and significant change to character/quality and a moderate viewer response to that change. Changes would include an increase in the appearance of hardscape features (curb and gutter, one noise barrier, one retaining wall, and the widened roadway) and the removal of hillside vegetation (see Figure 2.1.6-10). The proposed noise barrier and retaining wall would increase the dominance of hardscape features and slightly increase light reflectivity from the additional concrete. However, light and glare impacts would remain similar to existing conditions. The severity of the visible hardscape impacts from the noise barrier would vary depending on what architectural treatments are implemented. The visible encroachment would be greater with the decorative Sound Fighter® wall (moderately high) rather than the Plexiglas noise barrier (moderate).

The measures described in Section 2.1.6.6 would reduce the developed appearance of the project; the moderate viewer awareness of these changes would result in moderately high and significant visual impacts because the rural landscape would change to a more suburban landscape. Therefore, the visible change in character/quality at Key View 4 would remain moderately high and significant after implementation of these measures.

Key View 5

Implementation of project features in Key View 5 would result in a moderately high change to character/quality and a moderate viewer response to that change. Changes would include increased hardscape features (curb and gutter, one retaining wall, new sidewalk, and the widened roadway) and the removal of mature vegetation to the south of SR-74 (see Figure 2.1.6-11). The proposed retaining wall and sidewalk would increase the dominance of hardscape

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Alternatives 1 and 2 • Architectural Treatment A

Alternatives 1 and 2 • Architectural Treatment B

For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader information on the form, size, and scale of the proposed improvements within the project area. Specific project design features are subject to change during the plans, specifications, and estimates (PS&E) phase for the project, and would take place in consultation with the Department District Landscape Architect, and the City of San Juan Capistrano.

FIGURE 2.1.6-10

Lower SR-74 Widening Project

Key View 4

Proposed Condition

12-ORA-74 PM 1.0/1.9

EA No. 086920

SOURCE: RBF

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Alternatives 1 and 2

For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader information on the form, size, and scale of the proposed improvements within the project area. Specific project design features are subject to change during the plans, specifications, and estimates (PS&E) phase for the project, and would take place in consultation with the Department District Landscape Architect, and the City of San Juan Capistrano.

FIGURE 2.1.6-11

Lower SR-74 Widening Project
Key View 5
Proposed Condition
12-ORA-74 PM 1.0/1.9
EA No. 086920

SOURCE: RBF

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features and would slightly increase light reflectivity from the additional concrete. However, light and glare impacts would remain similar to existing conditions. Implementation of the measures described below, which require landscaping and aesthetic treatments, would reduce the developed appearance of the Build Alternatives. However, the moderate viewer awareness of these changes would result in potentially significant visual impacts because the landscape would change from a rural landscape to a more suburban landscape. Therefore, the visible change in character/quality at Key View 5 would remain significant even after implementation of these measures.

2.1.6.6 Avoidance, Minimization, and/or Mitigation Measures

The following minimization measures listed below minimize the potential temporary or permanent visual effects that may result from the construction and operation of the project.

Erosion control seed species shall be determined by the Department District Landscape Architect to ensure that the mix and application strategy are appropriate for the specific soil composition of the area.

To maintain the context of the adjacent communities (color, form, and texture), the project shall install landscaping along proposed wall features and adjoining hillsides that is compatible with the existing landscaping. Landscape shall include trees (where feasible), shrub/groundcover mass planting, and vines on opaque noise barrier and/or retaining walls to soften the hardscape features and reduce the adverse environmental impacts (such as glare and radiant heat). All selected species within California Department) right-of-way shall share similar water requirements. The new landscape concept and plant palette shall be determined in consultation with the Department District Landscape Architect during the Project Design Phase.

All landscaping currently maintained by the City shall be replaced with similar landscaping. Trees that are removed shall be replaced consistent with the requirements set forth by Mitigation Measure V-1. Within the State ROW, where speeds are posted greater than 35 miles per hour (mph), large trees (trees with trunks over four inches in diameter when mature) shall be placed outside the clear recovery zone (30 ft from the travel lane). Small trees (trees with trunks four inches in diameter or less when mature) shall be used to replace the trees within the clear recovery zone. Tree spacing for small trees can be adjusted to account for the removal of existing mature trees.

132 All utilities that are to be moved shall be placed underground, where feasible. The Department will coordinate with the appropriate service provider and the City of San Juan Capistrano (City).

The following compensation and mitigation measures are proposed.

V-1 For trees (including coast live oak trees) that are removed, the California Department of Transportation (Department) will prepare a planting plan for approval by the City of San Juan Capistrano Planning Commission. The planting plan shall be in compliance with Section 9-2:349 of the City of San Juan Capistrano Municipal Code and shall require the replacement of trees at a minimum ratio of 1:1. The plan shall identify trees to be replanted within the State right-of-way and those to be planted off site. As part of this planting plan, the Department will recommend that the City of San Juan Capistrano install native tree species. The City Tree Removal Permit process can be referenced in Appendix J of this document.

V-2 To maintain consistency with the existing infrastructure (i.e., walls, sidewalks) in the project area, architectural treatments for the structure elements of the project shall be determined in consultation with the Department District Landscape Architect and the City of San Juan Capistrano during the Plans, Specifications, and Estimate (PS&E) phase.

V-3 To minimize visual impacts caused by the extensive large-scale walls, wall aesthetic enhancements shall be developed as a theme treatment (i.e., color treatment, textural treatment, varying materials) for all new retaining walls and noise barriers within the proposed project. Structural themes (i.e., walls, sidewalk) shall be similar in character to the surrounding environment. Theme elements shall be determined in consultation with the Department District Landscape Architect and the City of San Juan Capistrano during the Plans, Specifications, and Estimates (PS&E) phase. The visual simulations included in this Visual Impact Assessment represent standard wall treatments only and are subject to change.

V-4 To minimize visual impacts caused by the replacement sidewalk, aesthetic enhancements shall be implemented (i.e., color treatment,

textural treatment, varying setbacks from the highway, use of material other than concrete) for the replacement sidewalk, in accordance with V-3.

2.1.6.7 Level of Significance

The No Build Alternative would not result in temporary or permanent visual impacts.

Temporary visual impacts associated with the Build Alternatives would be less than significant. With implementation of the measures described above, permanent indirect and direct visual impacts of the Build Alternatives would be reduced to less than significant with the exception of Key Views 1, 4, and 5. Visual impacts at Key Views 1, 4, and 5 would remain significant after mitigation.

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2.1.7 Cultural Resources

A *Historic Property Survey Report* (HPSR) was prepared previously for the project (California Department of Transportation [Department], January 2007) when it was a federal undertaking. Subsequent to the completion of the HPSR, various changes to the project occurred requiring supplemental documentation. A *Supplemental Historical Resources Compliance Report* (SHRCR) for the SR-74 Widening project was prepared by the Department in July 2008 to document compliance under CEQA. The intention of this supplemental HRCR was fivefold: (1) to document the project's changes from a federal undertaking subject to Section 106 of the National Historic Preservation Act of 1966 (NHPA) to a State-only project subject to the requirements of the CEQA; (2) clarify the CEQA findings for the resources within the project limits; (3) to analyze design changes for potential impacts to cultural resources; (4) to discuss the results of previous consultation with the Office of Historic Preservation (OHP) regarding the findings of the 2007 HPSR; and (5) to reevaluate the road segment of SR-74 within the project limits and provide notice and summary to, and seek comments from, the State Historic Preservation Officer (SHPO) pursuant to California Public Resources Code (PRC) Section 5024(b) and PRC Section 5024.5 regarding the findings.

Potential cultural resources within the Area of Potential Effects (APE) were documented for the proposed project. The APE is the area within which cultural resources may be affected, either directly or indirectly, by a proposed project. The proposed project's APE encompasses the existing paved roadway and the maximum limit of any potential disturbances that may result from construction activities.

In September 2008, a potential noise mitigation measure (Section 2.2.7.3, Mitigation Measure N-1) was proposed for a residence along the north side of SR-74 within the project limits. As a result, a second SHRCR was completed in October 2008 to evaluate the property.

2.1.7.1 Regulatory Setting

"Cultural resources" as used in this document refers to all historical and archaeological resources, regardless of significance. Laws and regulations dealing with cultural resources include:

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. Section 106 of NHPA requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 CFR 800). On January 1, 2004, a Section 106 Programmatic Agreement (PA) between the Advisory Council, FHWA, State Historic Preservation Officer (SHPO), and the Department went into effect for Department undertakings, 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 the Department. The FHWA's responsibilities under the PA have been assigned to the Department as part of the Surface Transportation Project Delivery Pilot Program (23 CFR 773) (July 1, 2007). While the PA that the Department uses for Section 106 compliance was developed specifically for federal undertakings, Department policy is to use the instructions outlined in the PA attachments as guidance for CEQA projects.

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 National Register of Historic Places listing criteria. It further specifically requires the Department to inventory state-owned structures in its right-of-way. Section 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks. It is Department policy to apply both the National Register criteria and the California Register criteria simultaneously when conducting evaluations. The simultaneous use of National Register and California Register criteria is needed for compliance with PRC Section 5024 for state-owned resources.

2.1.7.2 Affected Environment

The information presented in this section is based on the evaluation results found in the January 2007 HPSR, the July 2008 SHRCR, and the October 2008 SHRCR. The HPSR document was forwarded to the SHPO in March 2007. In June 2007, comments were received from the SHPO. Subsequently, federal funding for the project was withdrawn, and Section 106 consultation was discontinued in June 2007.

As a result, a SHRCR was prepared to address CEQA compliance in July 2008. In August 2008, the SHRCR was submitted to the SHPO and consultation under PRC Section 5024 for State-owned resources was undertaken. See Appendix C for SHPO consultation. A second SHRCR was prepared in October 2008 to address potential noise mitigation measures being considered for a residence along the northern side of SR-74.

An indirect APE was established to take into account any indirect effects the proposed project may have on the built environment and is depicted on the APE map within the HPSR, SHRCR and the second SHRCR. In general, the indirect APE includes the first row of adjacent parcels along SR-74.

The HPSR and SHRCRs include findings from records/literature searches, consultation with interested parties, and pedestrian field surveys. Prior to the field survey, a records and literature search was conducted in August 2001 at the South Central Coastal Information Center for an area within a one-mile radius of the project and includes inventories of the National Register, the California Register, California Historical Landmarks, and California Points of Historic Interest. Additionally, local historical inventories were consulted. Updated searches were conducted in 2003, 2005, and 2006 with the same results. Additional sources consulted for the project area include:

- Native American Heritage Commission (NAHC).
- City of San Juan Capistrano Planning Department.
- Native American Tribes, Groups and Individuals.
- Juaneño Band of Mission Indians: David Belardes, Joyce Perry, Sonia Johnston, Anita Espinoza, Alfred Cruz, Kristen Rivers, Anthony Rivera, Joe Ocampo, Mike Aguilar, and Adolph “Bud” Sepulveda.
- Cahuilla Band of Mission Indians: Anthony Madrigal Jr. and Maurice Chacon.
- Gabrielino Tongva Indians of California Tribal Council: Robert Dorame and Mercedes Dorame.
- San Juan Capistrano Historical Society.
- San Juan Capistrano Historian Ilse Byrnes.
- Orange County Archives.
- Orange County Assessor’s Office.
- Orange County Recorder’s Office.
- San Juan Capistrano Regional Library.
- California State Library (Sacramento).

- California Department of Transportation Cultural and Community Studies Office Library (Sacramento).
- California Department of Transportation Library (Sacramento).
- Office of Historic Preservation (OHP).
- National Register of Historic Places, National Park Service (NPS).

In 2001, Department staff consulted with the NAHC, requesting a search of its Sacred Lands File. The NAHC responded by letter (dated August 16, 2001) that a search had failed to identify cultural resources within the project area. Department staff subsequently mailed letters and made follow-up calls requesting information regarding cultural resources within the project area to all the Native American contacts on the list provided by the NAHC. An updated NAHC search was requested in 2006, and the same response was received on September 27, 2006, with an updated contact list. Subsequently, letters and follow-up calls were made to each individual on the list who had not been listed previously. In 2008, the NAHC responded to the NOP for the EIR providing an updated Native American contact list. Department staff contacted those newly listed. Native American consultation resulted in the following. David Belardes and Joyce Perry (Juaneño Band of Mission Indians – Acjachemen Nation) requested to be kept informed regarding project developments and offered monitoring assistance. Anita Espinoza (Juaneño Band of Mission Indians) offered monitoring assistance and requested to be kept informed of project finds. Maurice Chacon (Cahuilla Band of Mission Indians) requested to be notified in case of construction finds. No other responses or comments were received.

Field surveys were conducted in stages by Department staff. The roadway and shoulder areas were surveyed in 2001 initially, and upon access rights, the adjacent parcels were surveyed in 2003. Additional field surveys and site visits were conducted by Department staff between 2004 and 2008.

Through background research, consultation with interested parties, and field surveys, the following eight resources within the proposed APE were identified and formally evaluated in accordance with Section 15064.5(a)(2)(3) of the CEQA Guidelines, using criteria outlined in Section 5024.1 of the California PRC: (1) 28241 Ortega Highway; (2) 28281 Ortega Highway; (3) 28341 Ortega Highway (San Juan Farms); (4) 28271 Ortega Highway; (5) 30981 Via Cristal (Hankey-Rowse House); (6) 30882 Via Errecarte (Errecarte House); (7) Manriquez Adobe archaeological site; and (8) the segment of SR-74 (Ortega Highway) also referred to as “Hot Springs Road,”

within the project area between Calle Entradero and the City/County limits approximately one mile to the east.

28241 Ortega Highway

The Department evaluated this residence constructed in 1951, in accordance with Section 15064.5(a)(2)(3) of the CEQA Guidelines, using criteria outlined in Section 5024.1 of the California PRC. The property was found not eligible for the NRHP, nor was it considered an historical resource under CEQA (SHPO concurred June 13, 2007).

28281 Ortega Highway

The Department evaluated this residence originally constructed in 1932 with later additions, in accordance with Section 15064.5(a)(2)(3) of the CEQA Guidelines, using criteria outlined in Section 5024.1 of the California PRC. The property was found not eligible for the NRHP, nor was it considered an historical resource under CEQA (SHPO concurred June 13, 2007).

28341 Ortega Highway

The Department evaluated this property in accordance with Section 15064.5(a)(2)(3) of the CEQA Guidelines, using criteria outlined in Section 5024.1 of the California PRC. Two buildings exist on the property of the former San Juan Farms: a house that was built in 1953 and a produce stand that was built in 1981. The property was found not eligible for the NRHP, nor was it considered an historical resource under CEQA (SHPO concurred June 13, 2007).

28271 Ortega Highway

The Department evaluated this residence constructed in 1954, in accordance with Section 15064.5(a)(2)(3) of the CEQA Guidelines, using criteria outlined in Section 5024.1 of the California PRC. The property does not meet the criteria for listing in the California Register of Historical Resources (CRHR), and the Department has determined that the property is not a historical resource for purposes of CEQA.

Hankey-Rowse House

The Department evaluated the Hankey-Rowse House constructed in 1884, in accordance with Section 15064.5(a)(2)(3) of the CEQA Guidelines, using criteria outlined in Section 5024.1 of the California PRC. Under these criteria, the Department determined that the Hankey-Rowse House is a historical resource for the purposes of CEQA.

As documented in the HPSR, the Department had determined that the Hankey-Rowse House was eligible for listing in the NRHP under Criterion C for its architecture as one of the last remaining farmstead homes from the early agricultural development that followed the introduction of irrigation to the area. The SHPO disagreed with the determination of eligibility (letter dated June 13, 2007) stating that the house lacks integrity of design, materials, and location. Although the Department ultimately agreed with the SHPO determination (letter dated June 20, 2007), the Hankey-Rowse House is locally listed on the San Juan Capistrano's Inventory of Historic and Cultural Landmarks (IHCL), and as such, is a historical resource for the purposes of CEQA.

Errecarte House

The Department evaluated this residence constructed in 1910. As documented in the HPSR, the Department had determined that the Errecarte House was not eligible for listing in the NRHP. The SHPO concurred by letter (dated June 13, 2007), that the Errecarte House was not eligible for inclusion in the NRHP. However, because it is included in San Juan Capistrano's IHCL listing, it is a historical resource for the purposes of CEQA.

Manriquez Adobe Historical Archaeological Site

The Manriquez Adobe site was identified through archival research and oral history. No surface manifestations of the site were identified during the field survey. However, archival research suggested that information-bearing archaeological deposits may have survived. Therefore, for the purposes of this undertaking only, the Manriquez Adobe site was determined to be eligible for inclusion in the NRHP.

The SHPO responded by letter (dated June 13, 2007), that without tangible evidence of the site's presence or absence, the SHPO would have no material basis on which to concur with the Department's determination regarding the site. Subsequently, the Department responded by letter (dated June 20, 2007), providing additional clarification on the site's eligibility determination. Before consultation was concluded, the Department notified the SHPO on July 11, 2007, that Section 106 consultation was being terminated because the project was no longer a federal undertaking. Consequently, the Department reinitiated consultation with the SHPO under PRC Section 5024 on August 3, 2007, for the Manriquez Adobe site.

The Department requested comments from the SHPO in regard to the following conclusions: the historical archaeological site (Manriquez Adobe) is considered

eligible for inclusion in the NRHP, the portion of the site within the state right-of-way is a noncontributing portion of the site, and as proposed, the project will result in no adverse effect to the site with the establishment of an Environmentally Sensitive Area (ESA) Action Plan. Pursuant to PRC Section 5024(f), the Department did not receive any comments from the SHPO and concurrence was assumed. Therefore, the Department has determined that, for purposes of this project only, the site is eligible for inclusion in the NRHP and is thereby considered a historical resource for the purposes of CEQA.

Segment of SR-74 (Ortega Highway or "Hot Springs Road")

As discussed in the HPSR, SR-74 (Ortega Highway) between San Juan Capistrano Mission and the Hot Springs located near the Orange/Riverside County border, was nominated for the NRHP as "Hot Springs Road" in the 1970s. In 1979, the Keeper of the NRHP returned the nomination to the SHPO because the resource did not meet the NRHP criteria as a historic district. The Keeper noted that some of the resources identified within the nomination could be individually eligible for listing in the NRHP as separate nominations in the future; however, no additional nominations were submitted.

As documented in the SHRCR, the segment of SR-74 within the project limits was re-evaluated as a result of the duration since the 1970s nomination and the contradictory reports of the NRHP status of SR-74 ("Hot Springs Road") on non-National Park Service listings. The Department, pursuant to CEQA Guidelines Section 15064.5(a)(1)-(4), formally evaluated SR-74 "Hot Springs Road" between Calle Entradero and the City/County line approximately one-mile to the east and determined that it is not a historical resource for purposes of CEQA. It was also determined that this resource does not meet the NRHP or California Historical Landmark eligibility criteria pursuant to PRC Section 5024(b). The SHRCR was submitted to the SHPO on August 4, 2008, for comments regarding the findings pursuant to PRC Section 5024(f).

On September 3, 2008, the SHPO concurred that the segment of the SR-74 (Ortega Highway) affected by the proposed project does not meet criteria for listing on the NRHP or for registration as a California Historical Landmark and will not be added to the Master List of State-owned Historical Resources. Additionally, there was no objection to the no adverse effect determination for the project.

2.1.7.3 Environmental Consequences

Temporary Impacts

No Build Alternative

The No Build Alternative does not include any construction activities, it would not alter the current condition, and would not result in temporary impacts to cultural or historical resources.

Build Alternatives 1 and 2

There are no temporary impacts to cultural resources or human remains. Any impacts to such resources during construction are considered permanent impacts and are discussed below.

Permanent Impacts

No Build Alternative

The No Build Alternative does not alter the current condition or result in permanent impacts to cultural or historical resources.

Build Alternatives 1 and 2

There will be no permanent impacts to the Hankey-Rowse House, Manriquez Adobe Historical Archaeological Site, or the Errecarte House as a result of either Build Alternatives 1 or 2.

There is the potential to encounter unknown cultural resources or human remains during ground-disturbing activities. With implementation of the measures contained in Section 2.1.7.4, potential impacts to unknown cultural resources or human remains are considered less than significant.

Hankey-Rowse House

The Hankey-Rowse House is located within the indirect APE for the proposed project, adjacent to the location of a proposed noise barrier. The noise barrier would be built at the northern edge of the property and would follow the alignment of the existing garden wall. The two types of noise barriers being considered are both built on pier-type footings that would not require removal of the existing mature vegetation. Because the mature trees would remain in place, and the green buffer that separates the house on the property from the SR-74 and surrounding developments would be retained, the historic building would not be affected by the construction of the proposed noise barrier. Given that this resource would not be directly or indirectly impacted, the cultural resources impacts of the Build Alternatives are considered less than significant.

Errecarte House

The Errecarte House is located within the indirect APE for the proposed project and would not be directly or indirectly impacted by the Build Alternatives.

Manriquez Adobe Historical Archaeological Site

A portion of the Manriquez Adobe Historical Archaeological Site is located within the proposed area of direct impact (ADI). The portions of the site within the proposed ADI are not expected to contain information-bearing deposits and, therefore, are noncontributing elements to the larger property. Potential permanent impacts could result at the Manriquez Adobe Historic Archaeological Site due to construction activities such as clearing, grubbing, trenching, excavation, and storage. However, permanent impacts to the potentially significant portion of the site would be avoided through establishment of an Environmentally Sensitive Area (ESA). Through establishment of an ESA Action Plan (Attachment 5 of the Supplemental Historical Resources Compliance Report [SHRCR]), potentially significant subsurface deposits will not be impacted, and impacts to known cultural resources are considered less than significant.

SR-74 (Ortega Highway or "Hot Springs Road")

Since it was determined that the segment of SR-74 (Ortega Highway or "Hot Springs Road") within the project limits is not a historical resource for purposes of CEQA and does not meet the NRHP or California Historical Landmark eligibility criteria, there will be no permanent impacts to this resource associated with the Build Alternatives.

2.1.7.4 Avoidance, Minimization, and/or Mitigation Measures

The following measures avoid and minimize potential impacts to cultural resources.

An Environmentally Sensitive Area (ESA) Action Plan shall be developed for the Manriquez Adobe Historic Archaeological Site. The ESA Action Plan includes: ESA fencing along the Direct Area of Potential Effects (APE) to ensure that no construction equipment inadvertently impacts potential information-bearing portions of the site; education of construction personnel on archaeological sensitivity and expected remains; incorporation of the ESA Action Plan into the Final Construction Plans, Special Provisions, and Resident Engineer (RE) File; and periodic monitoring to ensure protections are enforced.

If buried cultural materials are encountered during construction, it is the Department's policy that construction activities in the immediate vicinity of the find halt until a qualified archaeologist can evaluate the nature and significance of the find.

If human remains are discovered during construction activities, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in the area or nearby area suspected to overlie remains, and that the County Coroner be contacted. Pursuant to Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the Coroner will notify the Native American Heritage Commission (NAHC), which will then notify the Most Likely Descendant (MLD). At this time, the person who discovered the remains will contact the Resident Engineer for coordination with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable.

2.1.7.5 Level of Significance

The No Build Alternative would have no temporary or permanent impacts to cultural resources.

With the implementation of the measures identified above, the Build Alternatives proposed for the lower SR-74 Widening project are not expected to result in temporary direct or indirect impacts to cultural resources. Permanent direct or indirect cultural resource impacts associated with the Build Alternatives are considered less than significant.

Physical Environment

2.2.1 Hydrology and Floodplain

2.2.1.1 Regulatory Setting

Executive Order (EO) 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. Federal Highway Administration requirements for compliance are outlined in 23 Code of Federal Regulations (CFR) 650 Subpart A.

In order 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.
- 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."

2.2.1.2 Affected Environment

This section is based on the *Hydraulics Study for Lower SR-74 Widening* (August 2006).

The Federal Emergency Management Agency (FEMA) determines the presence or absence of the 100-year and 500-year flood zones within the Project Limits. According to FEMA Map No. 06059C0444H (February 2004) and FEMA Map No. 06059C0465H (February 2004), the project limits are outside the 100-year and 500-year floodplains.

2.2.1.3 Environmental Consequences

Temporary Impacts

No Build Alternative

The No Build Alternative does not involve any construction. Therefore, there would be no temporary hydrology and floodplain impacts associated with the No Build Alternative.

Build Alternatives 1 and 2

Build Alternatives 1 and 2 would not include construction involving any water bodies. Therefore, there will be no significant temporary hydrology impacts. SR-74 within the project limits is not located within a 100-year or 500-year floodplain and is not subject to flooding due to a storm of the 100-year or 500-year frequency. The Build Alternatives would not result in temporary floodplains impacts.

Permanent Impacts

No Build Alternative

The project limits are not within the 100 or 500-year floodplains, and the No Build Alternative does not involve any changes to existing drainage patterns. Therefore, there would be no impact to hydrology or the floodplain.

Build Alternatives 1 and 2

Neither Build Alternative 1 nor 2 would substantially alter the existing drainage pattern of the area. Runoff would increase due to the construction of 2.3 ac of additional paved area for Alternative 1 and 2.4 ac for Alternative 2. As a part of the widening project, both Build Alternatives 1 and 2 propose to construct additional drainage systems consisting of new inlets with bicycle-proof grates and pipes and to replace an existing trapezoidal channel with a reinforced concrete box culvert. The additional flow would travel via a new underground storm drain system that outfalls to San Juan Creek outside the project limits. These improvements do not alter the existing drainage patterns in the project area, and potential hydrological impacts are considered less than significant.

Build Alternatives 1 and 2 would not introduce any new risks or increase risk associated with flooding. As described, the project area is not located within a 100-year or 500-year floodplain, and the Build Alternatives would not permanently impact designated 100- or 500-year floodplains.

2.2.1.4 Avoidance, Minimization and/or Mitigation Measures

The completed project plans would incorporate all necessary Maintenance BMPs (Category IA), Design Pollution BMPs (Category IB), and Treatment BMPs (Category III) to meet the Maximum Extent Practical (MEP) requirements as discussed in Section 2.2.2.4.

Since the Build Alternatives would not permanently alter the hydrology of the project area and would not introduce new risk or increase risk associated with flooding, no avoidance, minimization, and/or mitigation measures are proposed other than those mentioned above.

2.2.1.5 Level of Significance

The No Build Alternative would not result in impacts to hydrology and floodplains.

The Build Alternatives are not expected to result in temporary, direct or indirect impacts to hydrology and floodplains. The hydrology and floodplain permanent direct or indirect impacts of the Build Alternatives are considered less than significant.

2.2.2 Water Quality and Storm Water Runoff

2.2.2.1 Regulatory Setting

Section 401 of the Clean Water Act (CWA) requires water quality certification from the State Water Resources Control Board (SWRCB) or from a Regional Water Quality Control Board (RWQCB) when the project requires a CWA Section 404 permit. Section 404 of the CWA requires a permit from the United States Army Corps of Engineers to discharge dredged or fill material into waters of the United States.

Along with CWA Section 401, CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of any pollutant into waters of the United States. The federal Environmental Protection Agency has delegated administration of the NPDES program to the SWRCB and nine RWQCBs. The SWRCB and RWQCB also regulate other waste discharges to land within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

The SWRCB has developed and issued a statewide NPDES permit to regulate storm water discharges from all Department activities on its highways and facilities. Department construction projects are regulated under the Statewide permit, and projects performed by other entities on Department right-of-way (encroachments) are regulated by the SWRCB's Statewide General Construction Permit. All construction projects over 1 ac require a Storm Water Pollution Prevention Plan (SWPPP) to be prepared and implemented during construction. Department activities less than 1 ac require a Water Pollution Control Program.

2.2.2.2 Affected Environment

A Water Quality Technical Study was prepared by the Department in November 2006 and was updated in March 2008 to address an additional alternative. A summary of the updated report is provided below. Detailed information regarding the water quality and storm water runoff is provided in the *Water Resources and Water Quality Technical Study* (March 2008).

Surface Water

The project area is located in the San Juan Creek Watershed. Runoff from the project site currently discharges into San Juan Creek via natural surface drainage and underground storm drain systems. San Juan Creek has a drainage area of

approximately 176 square miles. The proposed project is located within Reach 5 of San Juan Creek. The surrounding area within the project limits consists primarily of developed land with extensive areas of impervious surface and has few remaining natural drainage features.

San Juan Creek has been documented as having poor surface water quality. The SWRCB designated the lower portion of San Juan Creek, including the creek mouth, as impaired for bacteriological indicators under Section 303(d) of the CWA.

Surface water quality in the San Juan Creek watershed is primarily influenced by nonpoint sources of nonstorm water runoff from urban and residential developments. Contaminants affecting the watershed include various vehicle-related pollutants such as oil, grease, heavy metals, and other petroleum products from roadways. Other pollutants that also affect the watershed include illicit dumping, pesticides, herbicides, and fertilizers from parks, residential homes, and golf courses. Contaminated runoff from irrigated agricultural lands in the watershed also contributes to the poor surface water quality in San Juan Creek. Currently, wastewater treatment facilities do not contribute pollutants to the watershed because all effluents from these facilities are discharged directly into the Pacific Ocean.

Groundwater

Groundwater in the San Juan Creek Watershed exists unconfined in a generally narrow, shallow, alluvium-filled valley in the San Juan Canyon area and its tributaries. The depths of the alluvial fill range from 200 ft at the coast to 0 ft at the end of the main canyon tributaries in the Santa Ana Mountains.[1] The groundwater level at San Juan Creek is approximately 50 ft below the surface at an elevation of 111 ft above sea level.

The Cristianitos Fault is the main physical feature influencing the movement of groundwater within the watershed. Current total groundwater storage capacity is estimated at 63,220 acre-feet (af) (21,620 af for the Upper San Juan Basin and 41,600 af for the Lower San Juan Basin).

Recharge for the groundwater basins consists of subsurface inflow from the tributary alluvial riverbed areas, streambed percolation from San Juan and Trabuco Creeks; rainfall infiltration and percolation, and percolation from landscape and agricultural

[1] *SR-74 Lower Ortega Widening Project Water Resources and Water Quality Technical Study* (March 2008).

irrigation. The total basin inflow is estimated at 4,284 af per year. Outflow from the basins consists of well extractions, extractions from deep-rooted plants, and subterranean outflow at the river mouth. The total basin outflow of groundwater is estimated at 4,819 af per year.

Currently, only two water districts are actively pumping groundwater for supplemental domestic use. The Capistrano Valley Water District receives approximately 30 percent of its total water supply via groundwater, and the Trabuco Creek Water District receives approximately 15 percent of its total water supply via groundwater.

Groundwater in the San Juan Basin contains high levels of dissolved solids and salt. The problem is primarily related to the high salt content in the water-bearing sediments and not pollution from human sources. Therefore, local water agencies tend to favor the use of imported water for domestic needs, with pumped groundwater as the supplemental source.

2.2.2.3 Environmental Consequences

Temporary Impacts

No Build Alternative

The No Build Alternative does not contain construction elements; therefore, there will be no temporary water quality impacts.

Build Alternative 1

During construction, Build Alternative 1 would require approximately 4.54 ac of soil disturbance. Erosion and siltation in the drainage area may temporarily increase during project construction. The amount of sediments entering the San Juan Creek Watershed in the project area is expected to be minimal with the implementation of the SWPPP and temporary construction site Best Management Practices (BMPs) (Department Storm Water Quality Handbooks, Construction Site Best Management Practices Manual, March 2003).

Dewatering discharge could adversely impact surface water quality if the effluent is rich in sediment or contaminated with chemicals. Dewatering is a process of pumping out (dewatering) groundwater, if encountered, to form and construct the foundations for the construction of footings/foundations of noise barriers and retaining walls. Extracted groundwater may contain pollutants that may be a result of the decomposition of organic materials (e.g., hydrogen sulfide); leaking underground storage tanks; sewage; or the potential presence of nutrients (phosphorous and

nitrogen compounds). Geotechnical soil borings will determine the elevation of groundwater with respect to the elevations of the footings and/or foundations of the noise barriers and retaining walls. Based on information in the Revised Preliminary Geotechnical Report (August 2006), dewatering is unlikely. However, should dewatering be required for the project, it would only be temporary from construction activities. If construction-related dewatering is required, the project would be subject to the *General Waste Discharge Requirements for Groundwater Extraction Waste Discharges from Construction, Remediation, and Permanent Groundwater Extraction Projects to Surface Waters within the San Diego Region except for San Diego Bay* (Order No. 2001-96, NPDES No. CAG919002) or any subsequent permit/order at time of construction.

Potential temporary surface and groundwater water quality impacts associated with construction of Build Alternative 1 would be avoided or minimized through compliance with the existing Department NPDES permit and groundwater dewatering permit, as identified in the measures below, and are considered less than significant.

Build Alternative 2

As described in Chapter 1, Build Alternative 2 has the same improvements as in Build Alternative 1, with the addition of replacing the north sidewalk at the edge of the new curb. Even with this addition, temporary impacts to water quality beyond those outlined above for Build Alternative 1 are not expected since the impervious surface will be the same. Implementation of a SWPPP for the project and the application of construction site BMPs will be included as part of the proposed project. The construction site BMPs will address temporary erosion and siltation as well as management of construction related wastes associated with the construction of the sidewalk proposed for Build Alternative 2.

Potential temporary surface and groundwater water quality impacts associated with construction of Build Alternative 2 would be avoided or minimized through compliance with the Department NPDES Permit and groundwater dewatering permit identified as the *General Waste Discharge Requirements for Groundwater Extraction Waste Discharges from Construction, Remediation, and Permanent Groundwater Extraction Projects to Surface Waters within the San Diego Region except for San Diego Bay* (Order No. 2001-96, NPDES No. CAG919002) or any subsequent permit/order at time of construction.

Permanent Impacts

No Build Alternative

The No Build Alternative would not alter the existing roadway improvements on this segment of SR-74. All planned and approved maintenance work is included in the No Build Alternative. Currently, areas adjacent to the highway in the western portion of the project limits (Calle Entradero to Avenida Siega) are covered mostly by impervious surfaces such as asphalt and concrete, with some natural drainage features and little natural vegetation. As traffic increases, the length of time vehicles are stationary or moving slowly grows, this will lead to greater amounts of fluids from vehicles on the roadway. Therefore, this would lead to a slight increase in the amount of pollution in storm water runoff and a minor reduction in water quality. Slopes would not be cut or altered; therefore, an increase in long-term erosion and siltation would not occur. The rate of erosion would remain consistent with current conditions. The No Build Alternative would not implement any type of BMPs, and the existing levels of pollutants would continue to enter the watershed through off-site runoff. The No Build Alternative would have a less than significant impact to water quality.

Build Alternative 1

Surface Water

Build Alternative 1 would not substantially alter the existing pattern of natural surface drainage in the project area. In addition, it would not contribute to the exceedance of any adopted water quality standard or conflict with the objectives, plans, goals, policies, or implementation of the *San Diego Regional Water Quality Control Board's Basin Water Quality Control Plan* (1998).

The overall increase in road surface would be approximately 2.3 ac. Currently, areas adjacent to SR-74 within the western portion of the project limits (Calle Entradero to Avenida Siega) are covered primarily by impervious surfaces such as asphalt and concrete, with some natural drainage features and little natural vegetation. Build Alternative 1 would increase the percentage of impervious area in the project limits by 42 percent. The average runoff coefficient for the project limits would increase from 0.87 cubic feet per second (cfs) preconstruction to 0.88 cfs postconstruction, an increase of 1.1 percent.

Traffic projections conducted by the Department indicate that motor vehicle volume on SR-74 is expected to increase substantially in the future. This would occur with or without the proposed project. Consequently, the amount of motor vehicle-related pollutants discharged into the watershed and drainage channels

from the highway is expected to increase with or without implementation of the proposed project. The increase in the amount of motor vehicle-related pollutants associated with Build Alternative 1 is expected to have a less than significant impact on surface water quality with the minimization measures incorporated into the project plans. The amount of pollutants created from traffic congestion during peak periods may decrease due to the relief in current traffic congestion that the proposed project is expected to provide.

Postconstruction erosion can possibly occur from cut slopes. Loose sediment from these slopes may be carried to drainages and streams during a rain event or strong winds. Only the end of the slope (hillside) will be removed close to the highway on the north side. The south side of SR-74 would not be affected. Therefore, the amount of erosion and sediment from the slopes would be minimal. Vegetating the slopes and implementation of BMPs would greatly reduce the amount of erosion and siltation as identified in the Landscape Plan. Therefore, long-term permanent erosion impacts associated with Build Alternative 1 would be less than significant.

Groundwater

The increased areas of impervious surface associated with the proposed SR-74 improvements would divert runoff from pervious areas of natural drainages into constructed drainages. Less runoff would be allowed to percolate into the local portion of the groundwater basin. Although this amount of runoff may be available for recharge into the groundwater basin via streambed percolation during storm events, it is unlikely that this would occur due to the increased rate of streamflow. In addition, the recharge rate of streambed percolation, in comparison to the rate of streamflow, would ensure that only a minimal amount of runoff reaches the groundwater basin. As the increased area of impervious surface is extremely small in comparison to the local watershed, the impact on local groundwater resources and quality from Build Alternative 1 is considered less than significant.

Build Alternative 2

As described in Chapter 1, Build Alternative 2 has the same improvements as in Build Alternative 1, with the addition of replacing the north sidewalk at the edge of the new curb. However, the project impact area is the same as Build Alternative 1 and will not create any additional permanent water quality impacts beyond those already identified in the analysis of Build Alternative 1.

2.2.2.4 Avoidance, Minimization, and/or Mitigation Measures

Build Alternatives 1 and 2

Construction Period (Short-Term)

The following measures would be implemented during construction of Build Alternatives 1 or 2 to avoid or minimize temporary water quality impacts:

The Contractor will conform to the requirements of the National Pollutant Discharge Elimination System (NPDES) Permit for Storm Water Discharges from the California Department of Transportation (Department), Order No. 99-06-DWQ, NPDES No. CAS000003, in addition to the Best Management Practices (BMPs) specified in the Department's *Storm Water Management Plan* (SWMP). When applicable, the Contractor shall also conform to the requirements of the NPDES General Permit for Storm Water Discharges Associated with Construction Activity (General Permit), Order No. 99-08-DWQ, NPDES No. CAS000002, and any subsequent General Permit in effect at the time of project construction.

A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared by the Contractor and reviewed by the California Department of Transportation (Department) for approval prior to the commencement of any soil-disturbing activities. The SWPPP shall address all State and federal storm water control requirements and regulations. The SWPPP shall address all construction-related activities, equipment, and materials that have the potential to impact water quality. The SWPPP shall include Best Management Practices (BMPs) to control pollutants, sediment from erosion, storm water runoff, and other construction-related impacts. In addition, the SWPPP shall include the provisions of SWRCB Resolution No. 2001-046, which requires implementation of specific Sampling Analysis Procedures (SAP) to ensure that the implemented BMPs are effective in preventing exceedance of any water quality standards.

All work shall conform to the Construction Site Best Management Practices (BMPs) (Category II) requirements specified in the latest edition of the California Department of Transportation (Department) *Storm Water Management Plan* (SWMP) to control and minimize the impacts of construction and construction-related activities, materials, and pollutants on the watershed. These include, but are not limited to, temporary sediment control, temporary soil stabilization, scheduling, waste management, materials handling, and other nonstorm water BMPs. For a complete list, refer to Section 2 of the Department's SWMP (May 2003) and Appendix C of the

California Department of Transportation (Department) Storm Water Quality Handbook: Project Planning and Design Guide (May 2007).

If groundwater dewatering is required during construction, the Contractor shall comply with the *General Waste Discharge Requirements for Groundwater Extraction Waste Discharges from Construction, Remediation, and Permanent Groundwater Extraction Projects to Surface Waters within the San Diego Region except for San Diego Bay* (Order No. 2001-96, NPDES No. CAG919002) or any subsequent permit/order at time of construction.

Postconstruction Period (Long-term)

The Department's *Storm Water Management Plan* (SWMP) describes best management practices (BMPs) and practices to reduce the discharge of pollutants associated with the storm water drainage systems of state highways, facilities, and activities. The District 12 Storm Water Advisory Team will evaluate the project plans for the SR-74 widening before considering any BMP requirements. The completed project plans would incorporate all necessary Maintenance BMPs (Category IA), Design Pollution BMPs (Category IB), and Treatment BMPs (Category III) to meet the Maximum Extent Practical (MEP) requirements.

- **Maintenance BMPs.** This category includes routine maintenance work such as litter pickup, toxics control, street sweeping, drainage, and channel cleaning.
- **Design Pollution Prevention BMPs.** This category includes all permanent soil stabilization systems such as preservation of existing vegetation, concentrated flow conveyance systems (e.g., drainage ditches, dikes, berms, swales), and slope/ surface protection systems that utilize either vegetated or hard surfaces. Final determination regarding the selection of Design Pollution Prevention BMPs would occur during the Plan's Specifications & Estimates (PS&E) Process.
- **Treatment BMPs.** This category includes all permanent treatment devices and facilities, such as biofiltration strips/swales, infiltration basins, detention devices, dry weather flow diversion, media filters, and Gross Solids Removal Devices (GSRDs). These treatment facilities and devices are explained in more detail below. Final determination regarding the selection of Treatment BMPs would occur during the PS&E process.
- **Biofiltration Strips/Swales.** These are vegetated areas that remove pollutants from storm water runoff as it flows through the vegetation.

- **Infiltration Basin.** This is a depression used to detain storm water for short periods until it percolates to the groundwater table. It functions as a BMP through filtration of runoff and absorption of pollutants using site vegetation and soils.
- **Detention Devices.** Storm water runoff is conveyed from freeways to these basins through the storm drain system. These basins are lined with either vegetated soil or concrete. Storm water collects in these basins and the outlet allows water to drain slowly while sediment and other particulate forms of pollutants settle out.
- **Dry Weather Flow Diversion.** This may consist of a berm or other means to divert low flows to the sanitary sewer system and bypass high storm flows to the storm drain system.
- **Media Filters.** Media filters remove fine sediment and particulate pollutants through two concrete-lined vaults. This is done through an initial sedimentation vault and a second filtering vault.
- **Gross Solids Removal Devices (GSRDs).** GSRDs are structural devices designed to remove trash, vegetative material, and other particles of relatively large, gross size from storm water runoff.

Department-approved treatment BMPs will treat highway runoff to the Maximum Extent Practicable (MEP) before discharging to the receiving water.

A complete list of all applicable BMPs is provided in the latest version of the Department's Storm Water Management Plan (May 2003) and the Department's Storm Water Quality Handbook: Project Planning and Design Guide (May 2007).

2.2.2.5 Level of Significance

The No Build Alternative would have a less than significant impact to water quality.

Potential temporary, permanent direct or indirect water quality and storm water runoff impacts as a result of Build Alternatives 1 and 2 are considered less than significant.

2.2.3 Geology, Soils, Seismic, Topography

This section is based on the Preliminary Geotechnical Report prepared for the project (California Department of Transportation [Department], August 2006) and the City General Plan. The Preliminary Geotechnical Report is on file and available for review at the City and the Department offices.

2.2.3.1 Regulatory Setting

This section 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 Department's Office of Earthquake Engineering is responsible for assessing the seismic hazard for Department 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.

City of San Juan Capistrano General Plan

The City is located in the foothills of southern Orange County, near the southwestern edge of the Santa Ana Mountains and north of the San Joaquin Hills. The City General Plan states that due to the City's geographic location in a region that is considered seismically active, the City is subject to several types of geological hazards such as seismic activity, liquefaction, landslides, and erosion. Impacts can be reduced by implementing appropriate land use planning, development engineering, and building construction practices.

The City's General Plan identifies future development regulations for transportation arteries such as SR-74, which is classified as a critical use facility. Thus, detailed field and laboratory testing is required to establish the "survivability design and engineering requirements" for the proposed project. The activities to be undertaken for City projects include:

- Site-detailed geologic mapping and boring to determine that surface faulting and ground breakage has not occurred and is unlikely to occur in the future. Trenching is not an acceptable method for determining geologic conditions because of its adverse environmental effects.
- Adequate boring and field laboratory testing to determine accurately the subsurface profile and the static/dynamic properties of soil and rock materials.

- Calculation of design response spectra, based on repetition and structural properties (damping and ductility).
- Thorough inspection of the construction to ensure that designs are in compliance with the City's General Plan provisions, including a written certification by the contractor that all work has been done in strict accordance with plans and specifications.
- Periodic inspection of all structures and systems to determine that no detrimental modifications have been made, and that proper maintenance has been provided.

2.2.3.2 Affected Environment

Regional Geology

The project area is located in the Peninsular Ranges geomorphic province at the extreme southeastern margin of the Los Angeles Basin and lies between the Santa Ana Mountains and the San Joaquin Hills. The Peninsular Ranges geomorphic province is characterized by northwest to southeast-trending faults that are roughly parallel to the San Andreas Fault Zone. Underlying the project site area are Quaternary alluvium, terrace, and river deposits. Capistrano Formation bedrock is expected to underlie the alluvium and terrace deposits.

Topography

The topography within the Project Limits generally slopes down from the north to the south. The roadway is at a shallow grade and gradually increases in elevation from west to east. The general topographic gradient decreases gradually to the south and rises steeply to the north.

Steep slopes increasing in elevation are located along the north side of SR-74. These slopes are closer to the edge of SR-74 in the eastern portion of the proposed project. Gradual downslopes are located along the south side of SR-74.

Existing cut and fill slopes in the project area typically have slope ratios between 11:1 (horizontal:vertical [H:V]) and 1.2:1 (H:V). The elevation of the roadway increases from the west to the east.

Soil Conditions

The soils underlying the project site are underlain by alluvium, silty sands, and gravels derived from the San Joaquin Hills. The areas underlying the project site in the western portion of the project area are characterized by the Myford association soils. Myford associated soils are nearly level to moderately steep and are moderately well-drained sandy loams that have a strongly developed subsoil. The majority of the

areas south of SR-74 are classified under the Sorrento-Mocho association, which features nearly level to moderately sloping, well-drained sandy loams, loams, or clay loams on alluvial fans and floodplains. Areas within the project area to the north of SR-74 are comprised of the Cieneba-Anaheim-Soper association, which features strongly sloping to very steep, somewhat excessively drained and well-drained sandy loams, loams, clay loams, gravelly loams, and cobbly loams on coastal foothills. The expansion potential of these soil associations generally range from low to moderate, with the exception of a certain type of Myford association, which may have a high potential for expansion.[1] The depth to "bedrock-like" material and the corrosivity of soils at the site are not known at this time and would be determined during the final geotechnical investigation.

Groundwater

San Juan Creek is located south of SR-74 and runs parallel to the project site. The creek is a likely source for groundwater. According to the Preliminary Geotechnical Report, during previous investigations, groundwater was encountered at 111.7 ft below ground surface (bgs). However, groundwater well information obtained from the Prima Deshecha Landfill Site, located 0.6 mi from the eastern boundary of the project site, indicates that depth to groundwater may be encountered at depths as shallow as 8.29 ft bgs.[2]

Regional Faulting and Seismicity

The project is located in a seismically active area, and the geologic processes that have caused earthquakes in the past are expected to continue. A fault is considered active by the State of California if geologic evidence indicates that movement on the fault has occurred in the last 11,000 years, and potentially active if movement is demonstrated to have occurred in the last 2 million years. According to the Revised Preliminary Geotechnical Report, the closest active fault pursuant to the Alquist-Priolo Earthquake Fault Zoning Act (APEFZA) is the Whittier-Elsinore Fault Zone. This fault trends in a northwest-southeast direction. While not considered an active fault, the San Joaquin Hills Fault, located approximately 5.8 mi from the site, serves as the controlling fault for topographical landforms in this area. The San Joaquin Hills

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1 United States Department of Agriculture (USDA) Soil Conservation Service (SCS) and Forest Service, *Soil Survey of Orange County and Western Part of Riverside County, California*, September 1978.

2 Web site geotracker.swrcb.ca.gov/reports Prima Deschecha Sanitary Landfill.

Fault is capable of producing a maximum credible earthquake (MCE) magnitude of 7.0. A magnitude 7.0 event would give a peak bedrock acceleration of about 0.5g and a peak ground acceleration of 0.42g.

Ground Surface Rupture

The closest active fault in the area surrounding the project site that has been zoned active under APEFZA is identified as the Whittier-Elsinore Fault Zone. However, this northwest to southeast trending fault is located approximately 25 mi from the project site. Therefore, the possibility of ground surface rupture at the project site is remote.

Seismic Shaking

Although the San Joaquin Hills fault could produce a magnitude 7.0 event that could cause peak bedrock acceleration of 0.5g and a peak ground acceleration of 0.42g. In addition, design features will be included specifically to address the potential effects of seismic shaking on the project structures.

Liquefaction

Soil liquefaction is a phenomenon that occurs during strong ground shaking, most commonly in generally low- to medium-density, saturated, low-cohesion soils, where the soils experience a temporary loss of strength and behave essentially as a fluid. Areas most susceptible to liquefaction-induced damage are underlain by loose, water-saturated, granular sediment generally within 40 ft of the ground surface. Saturated conditions reduce the effective normal stress, thereby increasing the likelihood of earthquake-induced liquefaction. One of the major types of liquefaction-induced ground failures is lateral spreading of mildly sloping ground. Lateral spreading involves movement of earth materials due to ground shaking and is evidenced by near-vertical cracks with horizontal movement of the soil. Liquefaction-induced ground failure has historically been a major cause of earthquake damage in Southern California. According to Figure S-2, Seismic Hazards dated 1999, in the City's General Plan, within the area of the project limits, SR-74 and areas south of the highway are located in an area identified as a potential liquefaction hazard. The State of California Seismic Hazard Zone map for the San Juan Capistrano Quadrangle (December 21, 2001) indicates historical occurrences of liquefaction along SR-74 and south of SR-74, within the project limits, or local geological, geotechnical, and groundwater conditions that may indicate a potential for permanent ground displacements. Such permanent ground displacements would require mitigation as defined by Public Resources Code (PRC) Section 2693(c).

Slope instability, in the form of landslides and mudslides, is a potential adverse impact associated with seismic shaking. According to the State of California Seismic Hazard Zones map of the San Juan Capistrano Quadrangle, areas north of SR-74 within the project limits have been identified as areas that have a potential for earthquake-induced landslides. This includes areas where previous landslides have occurred, or local topographic, geological, geotechnical, and subsurface water conditions have indicated a potential for permanent ground displacements. Such permanent ground displacement would require mitigation as defined in PRC Section 2693(c).

Tsunami and Seiches Potential

A tsunami is defined as a gravitational sea wave produced by any large-scale disturbance of the sea floor. The Pacific Ocean is located approximately 6 mi from the project site, and the approximate elevation at the project site is 112 ft amsl. Therefore, the probability of a tsunami occurring within the project area is considered remote.

A seiche is defined as a free or standing wave oscillation of the water surface of an enclosed body of water. This phenomenon is not expected at this project site due to the large distance from an enclosed body of water.

Rockfall and Landslide and Slope Instability

According to the Revised Preliminary Geotechnical Report, portions of the project area fall within zones that have been identified as being at an increased risk for rockfall and landslides. In the project area, the low height of existing slopes makes the likelihood of a rockfall minimal.

According to Figure S-1, Geological Hazards, under the Safety Element in the City's General Plan, SR-74 and the areas immediately south of the highway are located in an area of major alluvial valleys where liquefaction is considered potentially high. However, areas immediately north of SR-74 are located in upper drainage areas where liquefaction is considered potentially low.

The majority of the areas further north of the project site are composed of Capistrano and Monterey geological formations with small pockets of terrace deposits. While terrace deposits are considered generally stable, the Capistrano and Monterey formations are considered slide-prone formations.

According to the Safety Element of the City General Plan, the primary cause for nonseismic-related landslides is attributed to the abundance of shales and siltstones underlying the hills of San Juan Capistrano. An abundance of shales and siltstones allows the soils to become highly porous, causing them to not hold together well when saturated and potentially leading to slope instability and landslides. Secondary factors that may result in nonseismic-related slope instability and landslides include rainfall and the City's complex water distribution system.

2.2.3.3 Environmental Consequences

Temporary Impacts

No Build Alternative

The No Build Alternative does not involve construction activities and would not alter existing geologic or soil conditions; therefore, it would not affect geological, or soil resources and no temporary impacts would occur.

Build Alternatives 1 and 2

The project is expected to have a minimal impact on geologic and topographic conditions. However, temporary impacts related to construction activities would occur. Build Alternatives 1 and 2 would alter existing topography due to construction grading and construction of cut-and-fill slopes within the project limits. Given the limited nature of the modifications, potential topographic impacts are considered less than significant.

Temporary erosion effects could occur due to project construction. These effects are discussed in Section 2.2.2, Water Quality and Storm Water Runoff. The Build Alternatives would not increase exposure to geologic hazards such as erosion. Erosion control measures that are discussed in Section 2.2.2, Water Quality and Storm Water Runoff, would minimize the temporary increase in erosion as a result of construction.. As discussed in Section 2.2.2, Water Quality and Storm Water Runoff, with implementation of erosion control Best Management Practices (BMPs) in the Storm Water Pollution Prevention Plan (SWPPP), potential erosion impacts are considered less than significant .

Permanent Impacts

No Build Alternative

The No Build Alternative does not alter the existing facility and would not increase exposure to geologic hazards such as erosion and earthquakes. The proposed project is, however, located in an area that may be subject to liquefaction, with or without

implementation of the proposed project, that could result in damage to the existing facility during a major seismic event. Therefore, the No Build Alternative will have a less than significant impact on geology, soil, seismic and topography.

Build Alternatives 1 and 2

Build Alternatives 1 and 2 are expected to have a minimal impact on geologic and topographic conditions. The primary geologic and geotechnical constraints affecting the design and construction of any of the Build Alternatives include:

- Seismic Hazards.
- Erosion and slope instability.

Seismic Hazards

As previously discussed, the project is located in a seismically active area where, south of the SR-74, liquefaction is considered potentially high. Therefore, the Build Alternatives would be constructed according to seismic design parameters used for the preliminary design of the proposed structures using the California Seismic Hazard Map 1996 (Mualchin 1996) and procedures outlined in the Department's Standard Seismic Design Criteria (SDC), Version 1.4 (2006), and the Department's Guidelines for Foundation Investigations and Reports (GFIR), Version 2.0 (2006).

As previously discussed, areas north of SR-74 within the project limits have been identified as having a potential for earthquake-induced landslides. To address the potential for landslides, a Geotechnical Design Report would be prepared as part of final design that would provide detailed analyses for the various design features, including, but not limited to, retaining walls and noise barriers. The preliminary geotechnical report analyzed four types of retaining walls. The types that were analyzed include: Type 1 retaining wall, soil nail wall, soldier pile wall, and secant/tangent wall. During the design phase, a detailed study would be conducted to finalize the selection for retaining walls. Regardless of the wall type, the walls shall include aesthetic treatment. Under Build Alternative 2, slope cuts are slightly greater due to the improvements on the north side of SR-74 to accommodate the relocated sidewalk.

Furthermore, the project is not located within an APEFZA area, and no well-defined fault traces have been mapped within the project limits. The possibility of surface rupture from an earthquake is considered low. The Build Alternatives are, however, located in an area that may be subject to liquefaction. However, the

Department considers the possibility of seismic activity and includes design standards to minimize and avoid potential adverse impacts from seismic events. In addition, since liquefaction is a factor in certain areas within the project limits, the project design would incorporate deepened foundations and/or increased depth of piles as needed, as outlined in the Preliminary Geotechnical Report. With implementation of the recommendations of the Final Design Report, as identified in Section 2.2.3.5, potential seismic impacts associated with the Build Alternatives are considered less than significant.

Erosion

Permanent erosion impacts can possibly occur from cut slopes. Loose sediment from these slopes may be carried to drainages and streams during a rain event or strong winds. As discussed in Section 2.2.2, only the end of the slope (hillside) would be removed close to the highway on the north side. The south side of SR-74 would be limited. Therefore, the amount of erosion and sediment from the slopes would be . Vegetating the slopes and implementation of permanent BMPs (outlined in Section 2.2.2) would greatly reduce the amount of erosion and siltation as identified in the Landscape Plan. In addition, the natural slopes within the project site are covered with material that is granular in nature (i.e., sand and gravel). Slopes are typically covered with vegetation. Where cuts are proposed, the slope faces will be protected and held in place by retaining walls. Considering that the area impacted is limited and the measures have been incorporated into the project design, potential long-term erosion impacts would be less than significant.

Soils

Expansive and collapsing soils are characterized by their ability to undergo significant volume changes (shrink or swell) due to variations in moisture content even without an increase in external loads. Changes in soil moisture content can result from precipitation, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors and may result in unacceptable settlement or heave of structures or concrete slabs supported on grade. As previously discussed, soils underneath the project area generally have only a low to moderate likelihood of expansion. Further testing during the Final Geotechnical Design Report would evaluate soil conditions existing within the project area and identify appropriate remedial actions, as needed. With implementation of the recommendations of the Final Geotechnical Design Report, it is anticipated that Build Alternatives 1 and 2 would have a less than significant impact on soils.

Landslides

Landslides are rock, earth, or debris flows on slopes due to gravity. They can occur on any terrain given the right conditions of the soil, moisture, and angle of slope as result of seismic and/or nonseismic activity. According to Figure S-1, Geological Hazards, referenced in the Safety Element of the San Juan Capistrano General Plan, SR-74 is not located in an area where there confirmed, known, or highly suspected landslides. Therefore, potential landslide impacts associated with Build Alternatives 1 and 2 are considered less than significant.

2.2.3.4 Avoidance, Minimization, and/or Mitigation Measures

The following minimization measure would minimize potential geological, seismic, and soil impacts.

During final design, the Department shall prepare a *Final Geotechnical/Structures Design Report* for the project, refining the existing *Preliminary Design Report*. The *Final Design Report* shall include detailed site testing and design recommendations based on the recommendations in the *Preliminary Design Report*. The recommendations of the *Final Design Report* shall be incorporated into the final design for the project. Since liquefaction is a factor in certain areas within the project limits, the project shall incorporate deepened foundations and/or increased depth of piles as needed.

Implementation of erosion control Best Management Practices (BMPs) in the Storm Water Pollution Prevention Plan (SWPPP) is required, as discussed in Section 2.2.2, Water Quality and Storm Water Runoff.

2.2.3.5 Level of Significance

The No Build Alternative will have no impact associated with liquefaction, landslides, seismic shaking, and erosion.

With implementation of the measure described above, potential temporary, permanent, direct or indirect impacts associated with liquefaction, landslides, seismic shaking, and erosion are less than significant under Build Alternatives 1 and 2.

2.2.4 Paleontology

2.2.4.1 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 United States Code (USC) 431-433], Federal-Aid Highway Act of 1935 [20 USC 78]). Under California law, paleontological resources are protected by the California Environmental Quality Act (CEQA); the California Code of Regulations (formally known as the California Administrative Code), Title 14, Division 3, Chapter 1, Sections 4307 and 4309; and Public Resources Code (PRC) Section 5097.5.

2.2.4.2 Affected Environment

A *Paleontology Report* for the SR-74 Widening project was prepared by the Department's Central Coast Technical Studies Branch in November 2006 (Mills 2006). Subsequently, a Paleontological Identification Report and Paleontological Evaluation Report (PIR/PER) was prepared for the Lower 74 Widening project in May 2008 (Smith 2008), to meet the Department's current Paleontological Guidelines as outlined in Volume 1, Chapter 8, of the Standard Environmental Reference (SER). A summary of these reports is provided below. For more detailed information regarding paleontology, refer to either Mills (2006) or Smith (2008). In addition, in 2002 a report, Final Report Development of a Model Curation Program for Orange County's Archaeological & Paleontological Collections, was prepared for the County that rated the paleontological sensitivity for all geologic units and formations within the County and detailed some of the fossils (if any) that have been recovered from each.

The project study area in both Mills (2006) and Smith (2008) was larger than the proposed ADI by approximately 328 ft (100 meters [m]) on all sides in order to ensure that any design changes would be included in the study. The project study area is set in San Juan Canyon, a northeast-southwest trending canyon formed by San Juan Creek. The SR-74 in the project area is set against the hills that border the northern side of the canyon. Throughout the project area, the elevation ranges from 140 to 283 ft (45 to 86 m). The current road bed elevation ranges from 149 to 162 ft (45 to 49 m).

The following formations underlie the project area according to the geologic map of Orange County, California:

- Quaternary alluvium and colluvium.
- Pleistocene nonmarine terrace deposits.
- Upper Miocene Capistrano Formation.
- Miocene Monterey Formation.

2.2.4.3 Environmental Consequences

Temporary Impacts

No Build Alternative

Since the No Build Alternative does not involve a construction element and there would be no excavation activities, there is no potential for encountering paleontological resources. Therefore, there would be no temporary impact to paleontological resources.

Build Alternatives 1 and 2

There are no temporary impacts to paleontological resources. Any impacts to such resources during construction are considered permanent impacts and are discussed under the permanent impacts heading.

Permanent Impacts

No Build Alternative

Since the No Build Alternative does not involve a construction element and there would be no excavation activities, there is no potential for encountering paleontological resources, and there will be no permanent impacts.

Build Alternative 1 and 2

The potential for sensitive resources to be found in the project area varies depending on the geological unit or formation that will be excavated. Build Alternative 2 would excavate farther into the hillside in areas where two additional retaining walls are required to accommodate the road widening and the replacement sidewalk between Calle Entradero and Via Cordova. Therefore, Build Alternative 2 has a slightly higher probability for encountering sediments that may contain paleontological resources than with Build Alternative 1.

According to Mills (2006), there is low potential for sensitive paleontological resources in the Quaternary alluvium and colluvium as well as the Pleistocene nonmarine terrace deposits. This report also states that there is a high potential for

encountering sensitive resources within the Upper Miocene Capistrano Formation and the Miocene Monterey Formation.

However, according to the Final Report–Development of a Model Curation Program for Orange County's Archaeological & Paleontological Collections (Eisentraut and Cooper, 2002), sensitivity for the nonmarine terrace deposits in Orange County is high. Therefore, all geologic units with the exception of the Quaternary alluvium and colluvium have a high potential for containing paleontological resources. In addition, the results of the Paleontological Investigation Report/Paleontological Evaluation Report (PIR/PER) (Smith 2008) indicated that the sensitivities as reported by Eisentraut and Cooper (2002) are correct, and all sediments except the Quaternary alluvium and colluvium have high paleontological sensitivities.

According to Eisentraut and Cooper (2002) and Smith (2008), Pleistocene nonmarine terrace deposits have produced a variety of terrestrial Ice-Age mammal fossils such as mammoth, bison, horse, camel, sloth, and a variety of birds. Grading in such deposits routinely turns up important Pleistocene fossils. Eisentraut and Cooper (2002) and Smith (2008) report that the Capistrano Formation can contain a diverse collection of marine vertebrates, including fish, shark, whale, dolphin, porpoise, sea lion, sea cow, and sea-going birds, as well as invertebrate remains such as clams, gastropods, sand dollars, and crabs. Finally, Eisentraut and Cooper (2002) and Smith (2008) state that numerous fossil fish, sharks, and marine mammal remains (whales, dolphins, seals, and sea cows) have been recovered from the Monterey Formation. In addition, some areas contain invertebrate remains such as clams, gastropods, sand dollars, and crabs.

All vertebrate fossils are significant, and there is a potential to excavate into several geologic units and formations that contain these significant remains. As the proposed project involves excavating into the hillside on the north side of the SR-74 to build retaining walls, there is no way to avoid excavation into potentially sensitive sediments.

If resources are impacted during construction, those impacts would be considered permanent. In addition, a mitigation plan will be developed to address any significant resources that are encountered during grading activities that would result in permanent impacts. Therefore, the Build Alternatives' permanent impacts to paleontological resources are considered less than significant.

2.2.4.4 Avoidance, Minimization, and/or Mitigation Measures

The Paleontological Mitigation Plan (PMP) must be completed prior to the beginning of construction. Since there is potential to find significant resources within the project limits, the PIR and PER recommended that a PMP needs to be prepared by a qualified Principal Paleontologist. A full list of sections of the PMP is included in the Department's SER Environmental Handbook, Volume 1, Chapter 8.

The following minimization measures would be implemented.

Attendance at the pregrade meeting by a qualified paleontologist or his/her representative. At this meeting the paleontologist will explain the likelihood for encountering paleontological resources, what resources may be discovered, and the methods that will be employed if anything is discovered (see below).

All employees, subcontractors, and Contractor's representatives on the project site involved in subsurface disturbing activities must receive a one-hour paleontological resource awareness training program provided by the Paleontological Salvage Team prior to performing on-site work.

During construction excavation, a qualified vertebrate paleontologic monitor shall initially be present on a full-time basis whenever excavation will occur within the sediments that have a high sensitivity rating and on a spot-check basis in sediments that have a low sensitivity rating. Monitoring may be reduced to a part-time basis if no resources are being discovered in sediments with a high sensitivity rating (monitoring reductions and when they occur will be determined by the qualified Principal Paleontologist). The monitor shall inspect fresh cuts and/or spoils piles to recover paleontological resources. The monitor shall be empowered to temporarily divert construction equipment away from the immediate area of the discovery. The monitor shall be equipped to rapidly stabilize and remove fossils to avoid prolonged delays to construction schedules. If large mammal fossils or large concentrations of fossils are encountered, the Department shall consider using heavy equipment on site to assist in the removal and collection of large materials.

Localized concentrations of small (or micro-) vertebrates have the potential to be found in all native sediments. Therefore, it is recommended that these native sediments occasionally be spot-screened through one-eighth to one-twentieth-inch mesh screens to determine whether microfossils are present. If microfossils are encountered, additional sediment samples (up to 3 cubic yards or 6,000 pounds) shall

be collected and processed through one-twentieth-inch mesh screens to recover additional fossils.

Any recovered specimens shall be prepared to the point of identification and permanent preservation. This includes the picking of any washed mass samples to recover small invertebrate and vertebrate fossils, the removal of surplus sediment from around larger specimens to reduce the volume of storage for the repository and the storage cost, and the addition of approved chemical hardeners/stabilizers to fragile specimens.

Specimens shall be identified to the lowest taxonomic level possible and curated into an institutional repository with retrievable storage. The repository institutions usually charge a one-time fee based on volume, so removing surplus sediment is important. The repository institution may be a local museum or university that has a curator who can retrieve the specimens on request. The Department requires that a draft curation agreement be in place with an approved curation facility prior to the initiation of any paleontological monitoring or mitigation activities.

Preparation of a report of findings with an appended, itemized inventory of specimens is required following construction. When submitted to the Lead Agency, the report and inventory would signify completion of the program to mitigate impacts to paleontological resources. The report should also be submitted to the museum repository along with the fossil specimens.

The above listed measures are standard mitigation measures for projects that have the potential to encounter sensitive sediments. During the development of the PMP, additional measures may be added; this list is only meant to provide a summary of what may be involved, as additional documentation is often needed on projects that involve the Department.

2.2.4.5 Level of Significance

The No Build Alternative would have no temporary or permanent paleontological impacts.

The Build Alternatives would have no temporary direct, or indirect impacts and a less than significant permanent direct or indirect impact on paleontological resources.

2.2.5 Hazardous Wastes and Materials

This section is based on the Hazardous Waste Initial Site Assessment (ISA) (August 2008) prepared by LSA Associates, Inc., an ISA prepared by GeoCon Geotechnical & Environmental Consultants (GeoCon) (May 2000), the Revised Preliminary Geotechnical Report prepared by the California Department of Transportation (Department) (August 2006), and the Ultimate Aerially Deposited Lead (ADL) Site Investigation Report prepared by Laguna Geosciences, Inc. (December 1, 2006). These documents are on file and available for review at the Department District 12 Environmental Engineering Branch.

2.2.5.1 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 the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper handling of hazardous material is vital if it is disturbed during project construction.

2.2.5.2 Affected Environment

The ISA was conducted to determine whether the proposed project area could be impacted by hazardous waste. The work effort for the ISA included a search of government records to obtain a listing of properties or known incidents from State or federal databases for hazardous waste sites to identify any potential for the existence of contamination within the project area.

The search of federal, State, and local regulatory agency databases identified four known hazardous releases within 0.75 mi of the project site, including two leaking underground storage tanks (LUSTs) and two State sites (State) with reported hazardous releases. These sites are summarized in Table 2.2.5-1 and depicted in Figure 2.2.5-1.

The ISA revealed no evidence of recognized environmental conditions involving hazardous waste on or immediately adjacent to the project site except for the following:

- **Power pole-mounted transformers:** Transformers within the project limits that are anticipated to be disturbed as part of construction of the proposed project may contain polychlorinated biphenyls (PCBs). Transformers should not be considered a potential environmental concern during construction unless they are observed to be leaking.
- **Yellow paint and tape used for pavement marking:** Yellow paint traffic stripes used prior to 1997 may exceed the hazardous waste criteria under Title 22, California Code of Regulations (CCR), and require the disposal in a Class I disposal facility authorized to accept this type of wastes.

Table 2.2.5-1 Hazardous Waste Releases within and Adjacent to the Project Limits

Figure 2.2.5-1 ID No.	Address, Distance from Subject Site	Database	Status
1	Rancho Mission Viejo 28675 Ortega Highway San Juan Capistrano, CA (approximately 0.8 mi east of the project limits)	LUST	One LUST containing gasoline was discovered on March 18, 1992. The release impacted groundwater. A letter from County of Orange Health Care Agency (COHCA) was issued on May 9, 2002, indicating site closure.
1	Chiquita Water Reclamation Plant 28793 Ortega Highway San Juan Capistrano, CA (approximately 0.45 mi northeast of the project limits)	LUST UST	One LUST containing gasoline was discovered on February 24, 2000. The release impacted groundwater. The site was issued site closure on October 19, 2001.
3	Tutor Time Day Care Center 31711 San Juan Creek Road San Juan Capistrano, CA (0.47 mi from the project site)	State	According to the database search report, a Preliminary Assessment Report was conducted at Calmortgage and School Site Properties for future development as Tutor Time Day Care Center. On March 27, 2003, Department of Toxic Substances Control (DTSC) determined that “no action” was necessary regarding investigation or remediation of this facility.
4	Plant Depot School Site 31251 Avenida Los Cerritos San Juan Capistrano, CA (0.74 mi from the project site)	State	According to the database search report, a Voluntary Cleanup Program was completed at the Plant Depot School Site on March 12, 2003. On January 13, 2005, DTSC determined that a “voluntary cleanup program” was necessary regarding investigation or remediation of this facility. According to the Envirostor database maintained by DTSC, the potential constituents of concern include arsenic and nitrates. No other information is available at this time.

Source: Hazardous Waste Initial Site Assessment (May 27, 2008).

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LSA

* THESE SITES ARE UNLIKELY TO IMPACT THE PROJECT

FIGURE 2.2.5-1

LEGEND

Project Area

Hazardous Release Sites

N

0 500 1,000 FEET

SOURCE: AirPhotoUSA (6/07); TBM (2007); LAN Engineering (4/08)

I:\CDT0802\GIS\HazwasteSites_Fig2_2_5_1.mxd (8/26/2008)

Lower SR-74 Widening Project

Hazardous Site Location Map

12-ORA-74 PM 1.0/1.9
EA# 086920

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There is a potential for old transformers within the project site to contain PCBs. A list of potential transformers that would be disturbed as part of the proposed project was submitted to the local utility, SDG&E, in order to determine if older PCB-containing transformers were located in the project area. Table 2.2.5-2 lists the transformers that may be disturbed within the project area.

Table 2.2.5-2 List of Potentially Impacted Transformers

Transformer Type	ID Number	Approximate Location
SDG&E Concrete Pedestal Mounted*	D4711057410	South side of Ortega Highway, approximately 450 feet east of Calle Entradero
SDG&E Concrete Pedestal Mounted	D4912257437	South side of Ortega Highway, approximately 55 feet west of Via Cordova
Pole Mounted	10375314H	South side of Ortega Highway, approximately 530 feet west of the eastern project limits
Pole Mounted*	P25688	South side of Ortega Highway, approximately 50 feet west of the eastern project limits
Pole Mounted	P25686	North side of Ortega Highway, approximately 150 feet east of Shadetree Lane
Pole Mounted	P208244	Northeastern corner of Ortega Highway and Shadetree Lane
Pole Mounted*	P126641	Northwestern corner of Ortega Highway and Shadetree Lane
Pole Mounted	838070H	Near the northeastern corner of Ortega Highway and Palm Hill Drive
Pole Mounted	1014509H	Near the northwestern corner of Ortega Highway and Palm Hill Drive

Source: Visual Observation and Confirmation by Department Engineer Le-Ha Tran
* Not anticipated by SDG&E to contain PCBs

Transformers installed prior to 1980 have the potential to contain PCBs. SDG&E records indicate that three transformers (D4911057410, P25688, and P126641) are unlikely to contain PCBs. Information contained within a letter issued by SDG&E on June 25, 2008, states that based on their statistical sampling and testing program, it is unlikely that equipment along Ortega Highway is PCB contaminated; however, according to SDG&E, the only way to determine this with certainty is by testing. A charge would be assessed for testing of transformers for PCBs. In the event that a transformer is found to be contaminated, SDG&E would refund the cost of testing. A copy of the SDG&E response letter can be found in Appendix F of the ISA.

The records search conducted for the ISA listed two LUST incidents and two State-listed facilities within 0.75 mi of the project site. One nongeocoded solid waste landfill (SWL) facility was also listed approximately 0.6 mi from the eastern perimeter of the project site. Nongeocoded sites consist of sites where missing or

inaccurate information has been provided by the reporting agency, or where insufficient information prevents the proper placement of the site on a given map.

The SWL site, identified as the San Juan Capistrano Landfill or Prima Deshecha Landfill, is currently undergoing leachate monitoring. Leachate testing is performed on an annual basis and is implemented by the County of Orange Integrated Waste Management District (IWMD). However, because the project is located 0.6 mi south of the eastern project limits and groundwater is anticipated to flow south and away from the site, it is unlikely that this nongeocoded SWL site will pose an environmental concern during construction of the proposed project.

The first LUST site is located approximately 220 ft east of the project limits and is identified as the Rancho Mission Viejo facility. Two steel gasoline tanks (500 and 1,000 gallons in size) were removed at this facility on March 18, 1992. During this removal, contaminated soil was discovered in the area of the former USTs. Approximately 400 cubic yards of contaminated soil was removed and disposed of at a soil recycling facility on December 17, 1992.[1] Vapor extraction was utilized to remediate the remaining contaminated soil and groundwater on site. A Remedial Action Completion Certification letter issued by the County of Orange Health Care Agency (COHCA) indicated that the site investigation and corrective action completed for this site was in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code, and no further action was required.[2] A Groundwater Monitoring Report dated January 15, 2000,[3] was reviewed to verify the extent of the soil and groundwater contamination at the site. Based on the information provided within the report, contaminated soil and groundwater appeared to be limited to the southern end of the project limits, away from SR-74. In addition, the Groundwater Monitoring Report indicated that groundwater flow was to the south-southeast, away from the proposed project. Therefore, this site is unlikely to pose a concern to the project site.

The second LUST site is located approximately 550 ft northeast of the project limits and is identified as the Chiquita Water Reclamation Plant. This facility has a documented release of gasoline into the groundwater. However, the LUST was closed and removed from the site, and the LUST facility was issued site closure on

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1 Case Closure Summary, Rancho Mission Viejo, December 15, 2000.

2 COHCA, Remedial Action Completion Certification, May 9, 2002.

3 Environmental Equalizers, Inc., Groundwater Monitoring Report – Rancho Mission Viejo Office, January 15, 2000.

October 19, 2001. Therefore, the leak is unlikely to pose a concern during construction of the proposed project.

Two State-listed facilities have been identified as Tutor Time Day Care Center and Plant Depot School Site. According to the database search, the Department of Toxic Substances Control (DTSC) has reviewed the Phase I Environmental Assessment for the Tutor Time Day Care Center site and has made a No Action determination for this facility. Therefore, it is unlikely that this site will pose a concern during construction of the proposed project. The Plant Depot School Site has been historically utilized as an orchard and a nursery. According to the EnviroStor database maintained by DTSC, the potential contaminants of concern include nitrate and arsenic. However, due to the distance away from the project site and the fact that there are no recorded impacts to groundwater, it is unlikely that this site will pose a concern during construction of the proposed project.

According to the Ultimate ADL Site Investigation Report,[1] 10 geotechnical test pits were advanced to a maximum depth of 15 ft between June 27 and 30, 2006. Soil samples were then collected from test pits at the surface. Additional soil borings were advanced at the project site between July 24 and August 2, 2006. These soil samples were collected and analyzed for total lead using United States Environmental Protection Agency (EPA) Method 6010B. The objective of the site investigation was to evaluate whether the soil lead concentration met the requirements of the Department District 12 Variance for reuse as fill at the project. All the total lead results, with the exception of the sample identified as SW-5 at 0 ft below ground surface (bgs), which was detected at 110 milligrams/kilogram, were within the range of concentrations considered as background levels for soils in California. Based on these results, the soil is considered nonhazardous and is acceptable for reuse as fill at the project site.

[1] Laguna Geosciences, Inc., Ultimate ADL Site Investigation Report, December 1, 2006.

2.2.5.3 Environmental Consequences

Temporary Impacts

No Build Alternative

The No Build Alternative would not result in any construction and therefore, would result in no temporary impacts related to hazardous materials and wastes.

Alternatives 1 and 2

Power pole-mounted electrical transformers were observed within the project limits during the visual site survey and may contain PCBs if manufactured between 1929 and 1977.[1] A list of transformers potentially disturbed by the construction of the proposed project was sent to SDG&E. According to SDG&E, three out of the nine transformers listed in Table 2.2.5-2 were identified as using non-PCB-containing oils; however, according to SDG&E, the specific contents of these transformers are unknown unless tested. Therefore, if these transformers are observed to be leaking, they should be considered an environmental concern and would be handled accordingly.

Yellow traffic stripe and pavement marking materials (paint, thermoplastic, permanent tape, and temporary tape) were observed within the project limits during the visual site survey conducted for the ISA. Yellow paint traffic stripes used prior to 1997 may exceed hazardous waste criteria under Title 22 CCR and require disposal in a Class I disposal site.

Based on these conclusions and in addition to any coordination with regulatory agencies for approvals, permits, or site closures, additional investigation or monitoring efforts would be required. The procedures for hazardous materials investigation for the project are presented in Section 2.2.5.4. Build Alternatives 1 and 2 are anticipated to have a less than significant temporary hazardous waste impact.

Permanent Impacts

No Build Alternative

The No Build Alternative would not result in any construction and therefore, would result in no permanent impacts related to hazardous materials and wastes.

Alternatives 1 and 2

Operation and maintenance of the facilities proposed as part of the Build Alternatives would not introduce new sources of hazardous materials/waste but rather would

[1] EPA Web site www.epa.gov.

continue existing exposure to transport of hazardous materials/waste associated with vehicles currently utilizing SR-74. No new permanent hazardous materials/waste impacts (direct or indirect) beyond existing conditions related to hazardous materials are anticipated and are considered less than significant.

2.2.5.4 Avoidance, Minimization, and/or Mitigation Measures

The avoidance measures below would avoid potential impacts related to hazardous materials and hazardous wastes encountered during construction of the Build Alternatives.

If the removal of yellow traffic striping, thermoplastic paint, and pavement will occur as part of the proposed project, testing and disposal of these materials shall be in accordance with Department SSP XE 15-300.

Prior to construction, any leaking transformers within the project limits that will be disturbed during construction of the project shall be considered a potential polychlorinated biphenyls (PCB) hazard unless tested and shall be handled appropriately.

To ensure that utility owners mark the locations of underground transmission lines and facilities, notify the Underground Service Alert of Southern California by calling 811 at least two working days prior to subsurface excavation.

Prior to the start of construction, a site-specific Health and Safety Plan shall be prepared for the proposed project that is consistent with California Department of Transportation requirements. The Plan shall include:

- Identification of key personnel.
- Summary of risk assessment for workers, the community, and the environment.
- Air Monitoring Plan.
- Emergency Response Plan.

As is the case for any project that proposes excavation, 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 Appendix H in the ISA (Caltrans Unknown Hazards Procedures) shall be followed.

2.2.5.5 Level of Significance

The No Build Alternative will not have any temporary or permanent hazardous wastes and materials impacts.

The Build Alternatives would result in less than significant temporary indirect or direct impacts to hazardous wastes and materials. There would not be any permanent, direct, or indirect impacts to hazardous wastes and materials with the implementation of the proposed project.

2.2.6 Air Quality

The analysis of the potential air quality impacts of the SR-74 Lower Ortega Widening project is based on the Air Quality Assessment (LSA, November 2008). The Air Quality Analysis is on file and available for review at the Department District 12 offices.

2.2.6.1 Regulatory Setting

The Clean Air Act as amended in 1990 is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for six criteria pollutants that have been linked to potential health concerns; the criteria pollutants are: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), lead (Pb), and sulfur dioxide (SO_2).

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve Federal actions to support programs or projects that are not first found to conform to State Implementation Plan for achieving the goals of the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional level conformity in California is concerned with how well the region is meeting the standards set for carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), and particulate matter (PM). California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans (RTP) are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the RTP, an air quality model is run to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the regional planning organization, such as the Southern California Association of Governments [SCAG] for Orange County) and the appropriate federal agencies (such as the Federal Highway Administration), make the determination that the RTP is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP must be modified until conformity is attained. If

the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to meet regional conformity requirements for purposes of project-level analysis.

Regulations and Standards

Pursuant to the Federal CAA of 1970, the USEPA established NAAQS for several major pollutants, termed "criteria" pollutants. The six criteria pollutants are: O_3, CO, PM, NO_2, SO_2, and Pb. PM includes particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) and particulate matter less than 10 microns in diameter (PM_{10}). These pollutants are referred to as criteria pollutants because numerical criteria have been established for each pollutant, which define acceptable levels of exposure. Table 2.2.6-1 identifies the federal and State standards of these pollutants.

Table 2.2.6-1 National and California Air Quality Standards

Pollutant	Averaging Time	State Standard	Federal Standard	Health and Atmospheric Effects	Typical Sources
Ozone (O_3)[a]	1 hour 8 hours	0.09 ppm 0.070 ppm	N/A 0.075 ppm	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include a number of known toxic air contaminants.	Low-altitude ozone is almost entirely formed from reactive organic gases (ROG) and nitrogen oxides (NO_x) in the presence of sunlight and heat. Major sources include motor vehicles and other mobile sources, solvent evaporation, and industrial and other combustion processes. Biologically-produced ROG may also contribute.
Carbon Monoxide (CO)	1 hour 8 hours	20 ppm 9.0 ppm[c]	35 ppm 9 ppm	Asphyxiant. CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.
Respirable Particulate Matter (PM10)[a]	24 hours Annual	50 µg/m^3 20 µg/m^3	150 µg/m^3 N/A	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many aerosol and solid compounds are part of PM_{10}.	Dust- and fume-producing industrial and agricultural operations; combustion smoke; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources (wind-blown dust, ocean spray).
Fine Particulate Matter (PM2.5)[a]	24 hours Annual	N/A 12 µg/m^3	35 µg/m^3 15 µg/m^3	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through

Table 2.2.6-1 National and California Air Quality Standards

Pollutant	Averaging Time	State Standard	Federal Standard	Health and Atmospheric Effects	Typical Sources
				soiling. Most diesel exhaust particulate matter – considered a toxic air contaminant – is in the $PM_{2.5}$ size range. Many aerosol and solid compounds are part of $PM_{2.5}$.	atmospheric chemical (including photochemical) reactions involving other pollutants including NO_x, sulfur oxides (SO_x), ammonia, and ROG.
Nitrogen Dioxide (NO_2)	1 hour Annual	0.18 ppm N/A	N/A 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain.	Motor vehicles and other mobile sources; refineries; industrial operations.
Sulfur Dioxide (SO_2)	1 hour 3 hours 24 hours Annual	0.25 ppm N/A 0.04 ppm N/A	N/A N/A 0.14 ppm 0.030 ppm	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing.
Lead (Pb)[d]	Monthly Quarterly	1.5 µg/m^3 N/A	N/A 1.5 µg/m^3	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also considered a toxic air contaminant.	Primary: lead-based industrial process like batter production and smelters. Past: lead paint, leaded gasoline. Moderate to high levels of aerially deposited lead (ADL) from gasoline may still be present in soils along major roads, and can be a problem if large amounts of soil are disturbed.

Sources: California Air Resources Board Ambient Air Quality Standards chart, 05/17/2006 (http://www.arb.ca.gov/aqs/aaqs2.pdf)
Sonoma-Marin Area Rail Transit Draft Air Pollutant Standards and Effects table, November 2005, page 3-52.
U.S. EPA and California Air Resources Board air toxics websites, 05/17/2006

[a] Annual PM10 NAAQS revoked October 2006; was 50 µg/m3. 24-hr. PM2.5 NAAQS tightened October 2006; was 65 µg/m^3.

[b] 12/22/2006 Federal court decision may affect applicability of Federal 1-hour ozone standard. Prior to 6/2005, the 1-hour standard was 0.12 ppm. Case is still in litigation.

[c] Rounding to an integer value is not allowed for the State 8-hour CO standard. A violation occurs at or above 9.05 ppm.

[d] The CARB has identified lead, vinyl chloride, and the particulate matter fraction of diesel exhaust as toxic air contaminants. Diesel exhaust particulate matter is part of PM_{10} and, in larger proportion, PM2.5. Both the CARB and U.S. EPA have identified various organic compounds that are precursors to ozone and $PM_{2.5}$ as toxic air contaminants. There is no threshold level of exposure for adverse health effect determined for toxic air contaminants, and control measures may apply at ambient concentrations below any criteria levels specified for these pollutants or the general categories of pollutants to which they belong.

ppm = parts per million
µg/m^3 = micrograms per cubic meter

The CARB administers the air quality policy in California. The CAAQS were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in Table 2.2.6-1, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates. The CCAA, which was approved in 1988, requires that each local air district prepare and

maintain an AQMP to achieve compliance with CAAQS. These AQMPs also serve as the basis for preparation of the SIP for the State of California.

2.2.6.2 Affected Environment

Climate

The project site is located in Orange County, an area within the South Coast Air Basin (Basin) that includes Orange County and the nondesert parts of Los Angeles, Riverside, and San Bernardino Counties. Air quality regulation in the Basin is administered by the South Coast Air Quality Management District (SCAQMD), a regional agency created for the Basin.

The Basin climate is determined by its terrain and geographical location. The Basin is a coastal plain with connecting broad valleys and low hills. The Pacific Ocean forms the southwestern boundary, and high mountains surround the rest of the Basin. The region lies in the semipermanent high-pressure zone of the eastern Pacific. The resulting climate is mild and tempered by cool ocean breezes. This climatological pattern is rarely interrupted. However, periods of extremely hot weather, winter storms, and Santa Ana wind conditions do occur.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s degrees Fahrenheit (EF). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the site monitoring temperature is the Laguna Beach Station.[1] The annual average maximum temperature recorded at this station is 71.2EF, and the annual average minimum is 51.0EF. January is typically the coldest month in this area of the Basin.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. Inversion layers are important in determining O_3 formation. O_3 and its precursors will mix and react to produce higher concentrations under an inversion. The inversion will also simultaneously trap and hold directly emitted pollutants such as CO. PM_{10} is

[1] Western Regional Climatic Center. 2008. http://www. wrcc.dri.edu (accessed April 9, 2008).

both directly emitted and created indirectly in the atmosphere as a result of chemical reactions. Concentration levels are directly related to inversion layers due to the limitation of mixing space.

Regional Air Quality

The proposed project is located within the South Coast Air Basin (SCAB). The SCAB is characterized as having a "Mediterranean" climate (a semi-arid environment with mild winters, warm summers and moderate rainfall). The SCAB is a 6,600-square-mile area bound by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The SCAB includes all of Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino Counties, in addition to the San Gorgonio Pass area of Riverside County. Its terrain and geographical location determine the distinctive climate of the SCAB, as the SCAB is a coastal plain with connecting broad valleys and low hills.

The general region lies in the semi-permanent, high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the SCAB is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the SCAB.

Local Air Quality

The project site is located within SCAQMD jurisdiction. The SCAQMD maintains ambient air quality monitoring stations throughout the Basin. The air quality monitoring stations closest to the site are the Mission Viejo-26081 Via Pera Station and the Costa Mesa-Mesa Verde Drive Station. Their air quality trends are representative of the ambient air quality in the project area. Pollutants monitored at the Mission Viejo-Via Pera Station are CO, O_3, $PM_{2.5}$, and PM_{10}. The pollutant monitored at the Costa Mesa station is NO_2.

Air quality trends identified from data collected at both air quality monitoring stations between 2005 and 2007 are listed in Table 2.2.6-2 and are discussed below. The ambient air quality data in Table 2.2.6-2 show that NO_2, $PM_{2.5}$ and CO levels are below the relevant State and federal standards. The State one-hour O_3 standard was

Table 2.2.6-2 Ambient Air Quality Standards at the Mission Viejo and Costa Mesa Air Monitoring Stations

Pollutant	Standard	2005	2006	2007
CO				
Max 1-hr concentration (ppm)		2.2	1.9	2.9
No. days exceeded: State Federal	> 20 ppm/1-hr > 35 ppm/1-hr	0 0	0 0	0 0
Max 8-hr concentration (ppm)		1.6	1.6	2.2
No. days exceeded: State Federal	> 9.1 ppm/8-hr > 9.5 ppm/8-hr	0 0	0 0	0 0
O_3				
Max 1-hr concentration (ppm)		0.125	0.123	0.108
No. days exceeded: State	> 0.09 ppm/1-hr	3	13	5
O_3[1]				
Max 8-hr concentration (ppm)		0.085	0.105	0.090
No. days exceeded: Federal	> 0.08 ppm/8-hr	1	6	2
PM_{10}				
Max 24-hr concentration (ppm)		41.0	57.0	74.0
No. days exceeded: State Federal	> 50 µg/m^3 > 150 µg/m^3	0 0	1 0	3 0
$PM_{2.5}$[2]				
Max 24-hr concentration (ppm)		35.3	46.9	34.3
No. days exceeded: Federal	> 65 µg/m^3	0	0	0
NO_2				
Max 1-hr concentration (ppm): State	> 0.25 ppm/1-hr	0.085	0.101	0.074
No. days exceeded		0	0	0
Annual avg. concentration: Federal	0.053 ppm annual avg.	0.014	0.015	0.011
Exceeded?		No	No	No

Source: EPA and CARB 2005 to 2007.

[1] The exceedances of the federal O_3 standard are based on the old 0.080 ppm standard. In 2008, the EPA revised the standard to 0.075 ppm.

[2] The exceedances of the federal 24-hour $PM_{2.5}$ standard are based on the old 65 µg/m^3 standard. In 2006, the EPA revised the standard to 35 µg/m^3.

CO = carbon monoxide

NO_2 = Nitrogen Dioxide

O_3 = ozone

$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter

PM_{10} = particulate matter less than 10 microns, but greater than 2.5 microns in diameter

ppm = parts per million

µg/m^3 = micrograms per cubic meter

exceeded 3 to 13 times per year in the last three years. The federal eight-hour O_3 standard was exceeded 1 to 6 times per year in the last three years. The State 24-hour PM_{10} standard was exceeded once in 2006 and three times in 2007 but has not exceeded the federal 24-hour standard since 1999.

2.2.6.3 Environmental Consequences

Temporary Impacts

No Build Alternative

The No Build Alternative would not result in the construction of any of the proposed improvements to SR-74 and therefore would not result in short-term impacts to air quality.

Build Alternatives 1 and 2

Construction activities produce combustion emissions from various sources, such as site grading, utility engines, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, and motor vehicles transporting the construction crew. Completion of the Build Alternatives is anticipated to occur within two years from the start of construction. Exhaust emissions during the construction envisioned on site will vary daily as construction activity levels change. The use of construction equipment on site will result in localized exhaust emissions. Caltrans Standard Specifications for construction (Sections 10 and 18 for dust control and Section 39-3.06 for the AC concrete plant) will be adhered to in order to reduce emissions as a result of construction equipment.

Additionally, the SCAQMD has established Rule 403 for reducing the fugitive dust emissions (PM_{10}). The Best Available Control Measures (BACM), as specified in the SCAQMD Rule 403, shall be incorporated into the project commitments. With the implementation of the standard construction measures (providing 50 percent effectiveness) such as frequent watering (e.g., minimum twice per day), fugitive dust emissions from construction activities are considered less than significant.

The project is located in Orange County, which is not among the counties listed as containing serpentine and ultramafic rock. Therefore, there would be no impacts from Naturally Occurring Asbestos during project construction.

Permanent Impacts

No Build Alternative

Traffic congestion would continue to increase and LOS operations of nearby roadways and intersections would deteriorate and traffic congestion would worsen.

Long-term mobile emissions generated by vehicle trips would be greater under the No Build Alternative due to reduced traffic flow in the project area. Additionally, the No Build Alternative would not facilitate the air quality attainment goals of the AQMP and RMP, as it does not implement planned roadway improvements that would reduce congestion and improve air quality emissions. Since the No Build Alternative would not improve air quality through a reduction in congestion, its air quality impacts are considered potentially significant.

Build Alternatives 1 and 2

Long-term Vehicle Emissions Impact

The purpose of the proposed project is to alleviate existing and future traffic congestion along SR-74 during peak hours. The proposed project would not generate new vehicular traffic trips since it would not construct new homes or businesses. However, there is a possibility that some traffic currently utilizing other routes would be attracted to use the improved facility, thus resulting in slight increases in vehicle miles traveled (VMT). Therefore, the potential impact of the proposed roadway widening project on regional vehicle emissions was calculated using traffic data for the SCAG region and emission rates from the EMFAC2007 emission model.

A supplemental traffic analysis prepared by Austin-Foust Associates, Inc. (July 18, 2008) estimated the impact that the proposed project would have on regional VMT and regional vehicle hours traveled (VHT).

The VMT and VHT data listed in Table 2.2.6-3, along with the EMFAC2007 emission rates, were used to calculate the CO, ROG, NOX, SOX, PM_{10}, and $PM_{2.5}$ emissions for the 2035 regional conditions. The results of the modeling are listed in Table 2.2.6-4. As shown in Table 2.2.6-4, the proposed project would increase the emissions within the region. However, the increases are very small and less than the SCAQMD's significant thresholds. Therefore, the proposed project would not contribute significantly to regional vehicle emissions.

As shown in Table 2.2.6-4, the proposed project would result in an increase in VMT and VHT in 2013 and 2035.

Table 2.2.6-3 Change in Regional VMT and VHT

Year	Regional VMT	Regional VHT
2013 Increase	1,430	240
2035 Increase	4,297	714
2035 Regional No Build	344,523,122	10,453,545
2035 Regional Build	344,527,419	10,454,259

Source: Austin-Foust Associates, Inc., July 2008.
VMT = vehicle miles traveled
VHT = vehicle hours traveled

Table 2.2.6-4 Change in Regional Vehicle Emissions (lb/day)

Pollutant	2035 Baseline Emissions	2035 With Project Emissions	Project Related Increase	SCAQMD Threshold (lb/day)
CO	626,518	626,542	24	550
ROG	30,413	30,415	2	55
NO_X	146,654	146,659	5	55
SO_X	3,348	3,349	1	150
PM_{10}	32,072	32,073	1	150
$PM_{2.5}$	19,919	19,920	1	55

Source: LSA Associates, Inc., November 2008.
CO = carbon monoxide
lb = pounds
NO_x = nitrogen oxide
O_3 = ozone
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter
PM_{10} = particulate matter less than 10 microns, but greater than 2.5 microns in diameter
ROG = reactive organic gases
SCAQMD = Southern California Air Quality Management District
SO_x = sulfur oxide

Regional Analysis

An AQMP describes air pollution control strategies to be taken by counties or regions classified as nonattainment areas. The AQMP's main purpose is to bring the area into compliance with the requirements of federal and State air quality standards. The AQMP uses the assumptions and projections by local planning agencies to determine control strategies for regional compliance status. Therefore, any projects causing a significant impact on air quality would impede the progress of the AQMP. As shown in Table 2.2.6.4, the increase in regional vehicle emissions would not exceed the SCAQMD's significance thresholds. Therefore, proposed project will not significantly contribute to or cause deterioration of

existing air quality. In addition, the project is included in the 2008 RTP and in the 2006 RTIP (Project ID: ORA120535). The RTP Program Environmental Impact Report states that all emissions are anticipated to be consistent with applicable AQMPs and SIPs and on-road emissions within regional conformity emission budgets. Therefore, the Build Alternatives are consistent with the SIP and the AQMP. Mitigation measures are not required for the long-term operation of the project. Hence, the proposed project is considered to be consistent with the City's General Plan and the SCAG forecast and is therefore consistent with the AQMP.

CO Hot-Spot Analysis

The Department document, *Transportation Project-Level Carbon Monoxide Protocol* (1997) (Protocol) was used to determine if a CO hot spot analysis would be required. The Protocol provides two conformity requirement decision flowcharts that are designed to assist the project sponsor(s) in evaluating the requirements that apply to specific projects. The area affected by the project is expected to experience a much lower CO concentration than the worst-case intersection in the 2003 AQMP. Results of the CO qualitative analysis in the *Air Quality Assessment Report* concluded that the project would not result in any CO hot spots and would not exacerbate existing hot spots. Therefore, potential CO impacts of the Build Alternatives are considered less than significant.

2.2.6.4 Avoidance, Minimization, and/or Mitigation Measures

The following minimization measure has been identified to minimize potential emissions of pollutants during construction activities:

In order to minimize construction-related emissions, all construction vehicles and construction equipment shall be required to be equipped with the State-mandated emission control devices pursuant to State emission regulations and standard construction practices. All disturbed areas, including storage piles that are not being actively used for construction purposes, shall be effectively stabilized for dust emissions using water, chemical stabilizers/suppressants, or vegetative ground cover, as appropriate. Short-term construction particulate matter less than 10 microns in diameter (PM_{10}) emissions shall be further reduced with the implementation of required dust suppression measures outlined within South Coast Air Quality Management District (SCAQMD) Rule 403 Caltrans Standard Specifications for construction [Section 10 and 18 (Dust Control) and Section 39-3.06 (AC Plants)] shall also be adhered to.

2.2.6.5 Level of Significance

The No Build Alternative would result in no temporary air quality impacts but would result in potentially significant permanent air quality impacts.

Permanent, temporary, direct and indirect air quality impacts of the Build Alternatives are considered less than significant.

2.2.7 Noise and Vibration

The analysis of the potential noise impacts of the SR-74 (Ortega Highway) widening project from Calle Entradero (PM 1.0) to the City/County limits (PM 1.9) is based on the Final Technical Noise Impact Analysis Report for Ortega Highway from Calle Entradero to 0.27 mi east of La Pata Avenue (LSA, June 2007) and the Final Technical Noise Impact Analysis Report Addendum for Ortega Highway (LSA, July 2008). It should be noted that the project limits covered in the Final Technical Noise Impact Analysis Report for Ortega Highway from City/County limits (PM 1.9) to 0.27 mi east of La Pata Avenue are located outside the City limits and are proceeding as a separate project; therefore, it is not analyzed as a part of this Draft EIR section. In addition, receptors and proposed noise barriers located in the unincorporated County areas that are referenced in this section will be noted but not evaluated. The Final Technical Noise Impact Analysis Report and addendum are on file and available for review at the City and the Department District 12 offices.

2.2.7.1 Regulatory Setting

CEQA provides the broad basis for analyzing and abating highway traffic noise effects. The intent of this law is to promote the general welfare and foster a healthy environment. CEQA requires a strictly baseline versus build analysis to assess whether a project will have a noise impact. If a project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless such measures are not feasible.

Table 2.2.7-1 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

In accordance with CEQA, a noise impact occurs when the future noise level is substantially higher than existing levels. If it is determined that the project will have noise impacts, mitigation measures must be considered.

Table 2.2.7-1 Noise Level of Common Activities

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet Fly-over at 300m (1000 ft)		
	100	
Gas Lawn Mower at 1 m (3 ft)		
	90	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)		Food Blender at 1 m (3 ft)
	80	Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime		
Gas Lawn Mower, 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area		Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (Background)
	20	Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

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2.2.7.2 Affected Environment

The applicable technical reports used to prepare this section include the Final Technical Noise Impact Analysis Report for Ortega Highway from Calle Entradero to 0.27 mi east of La Pata Avenue (LSA, June 2007) and the addendum to the Final Technical Noise Impact Analysis Report for Ortega Highway (LSA, July 2008). It should be noted that the project limits covered in the Final Technical Noise Impact Analysis Report for Ortega Highway from Calle Entradero (PM 1.0) to the City/ County limits (PM 1.9).

Identified noise-sensitive areas can be largely categorized into three groups for the purpose of this study: Group 1 (below), Group 2 (above), and Group 3 (at-grade elevations). Group 1 comprises areas that are below grade elevations in comparison with Ortega Highway. Noise-sensitive land uses in Group 1 include existing residential structures along eastbound Ortega Highway that are mostly protected by existing slopes and property walls located below the highway elevations, with elevations ranging from several feet to approximately 15 ft below highway grade. Noise-sensitive land uses in Group 2 consist of the homes along westbound Ortega Highway that are mostly above grade. Last, noise-sensitive land uses in Group 3 include residences along eastbound and westbound Ortega Highway that are situated roughly at the same elevation as Ortega Highway. Land uses within the project area that are not considered noise-sensitive include a horse ranch.

Department engineers visited the project site on several occasions to identify possible noise monitoring locations for long-term 24 hour noise measurements and short-term measurements, each of these measurements are described below.

Long-term 24-Hour Noise Measurements

The following are the results of the long-term noise measurements, which were conducted along eastbound and westbound Ortega Highway at Receptors R-1 (28361 Via Anzar), R-2 (31071 Via Sorona), and R-3 (28271 Ortega Highway). The peak traffic noise hours at Receptors R-1 and R-2 (south side) and R-3 (north side) of Ortega Highway occurred between 7.00 a.m. and 8:00 a.m., with an L_{eq} of 59.8 at Receptor R-1, 55.8 at Receptor R-2, and 69.5 dBA at Receptor R-3, respectively. Tables 2.2.7-2, 2.2.7-3, and 2.2.7-4, show the results of the long-term 24-hour noise

Table 2.2.7-2 Measured 24-Hour Noise Level at Receptor R-1 (28361 Via Anzar)

Start Time	End Time	Measured 1 Hour dBA L_{eq}
9:00	10:00	59.5
10:00	11:00	58.7
11:00	12:00	58.6
12:00	13:00	58.3
13:00	14:00	58.4
14:00	15:00	58.3
15:00	16:00	58.8
16:00	17:00	58.5
17:00	18:00	57.5
18:00	19:00	56.1
19:00	20:00	53.6
20:00	21:00	52.7
21:00	22:00	51.2
22:00	23:00	50.7
23:00	0:00	49.6
0:00	1:00	48.1
1:00	2:00	47.7
2:00	3:00	46.5
3:00	4:00	48.1
4:00	5:00	53.6
5:00	6:00	57.7
6:00	7:00	59.0
7:00	8:00	59.8
8:00	9:00	59.4
9:00	1:00	58.8

Note: Noise levels were measured at this site from January 14 to January 15, 2004

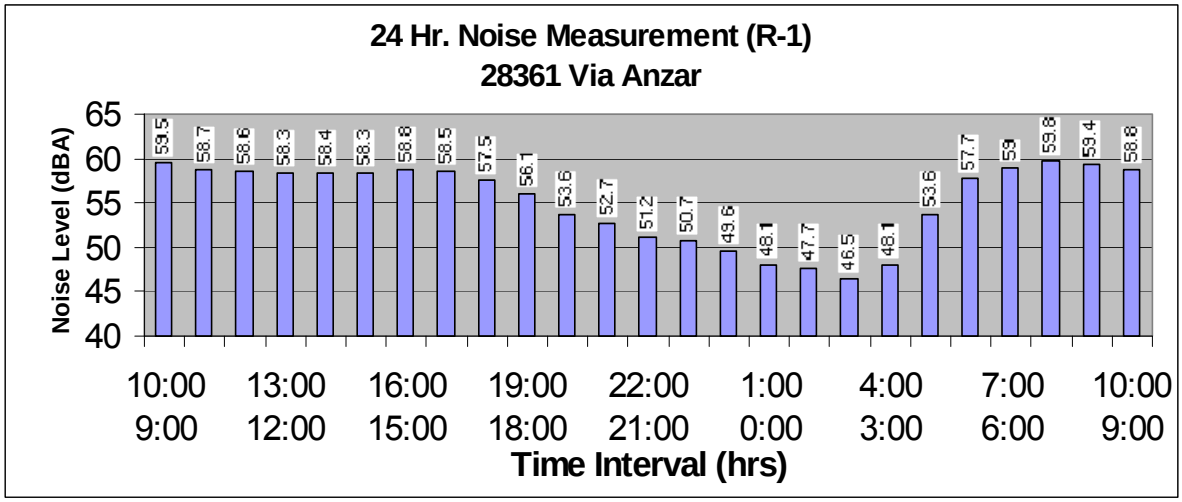


Table 2.2.7-3 Measured 24-Hour Noise Level at Receptor R-2 (31071 Via Sonora)

Start Time	End Time	Measured 1 Hour dBA L_{eq}
14:45	15:00	54.2
15:00	16:00	54.4
16:00	17:00	54.1
17:00	18:00	53.4
18:00	19:00	52.3
19:00	20:00	49.8
20:00	21:00	48.9
21:00	22:00	48.0
22:00	23:00	46.2
23:00	0:00	45.1
0:00	1:00	43.0
1:00	2:00	40.9
2:00	3:00	42.2
3:00	4:00	44.1
4:00	5:00	46.7
5:00	6:00	52.9
6:00	7:00	55.3
7:00	8:00	55.8
8:00	9:00	55.3
9:00	10:00	54.0
10:00	11:00	54.6
11:00	12:00	55.1
12:00	13:00	55.3
13:00	14:00	54.4
14:00	14:45	54.5

Note: Noise levels were measured at this site from January 21 to January 22, 2004

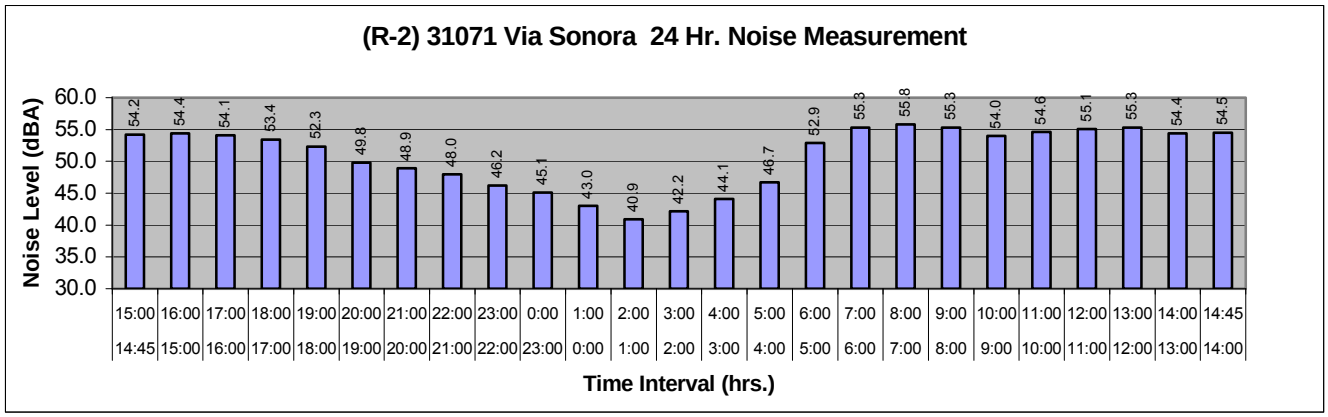
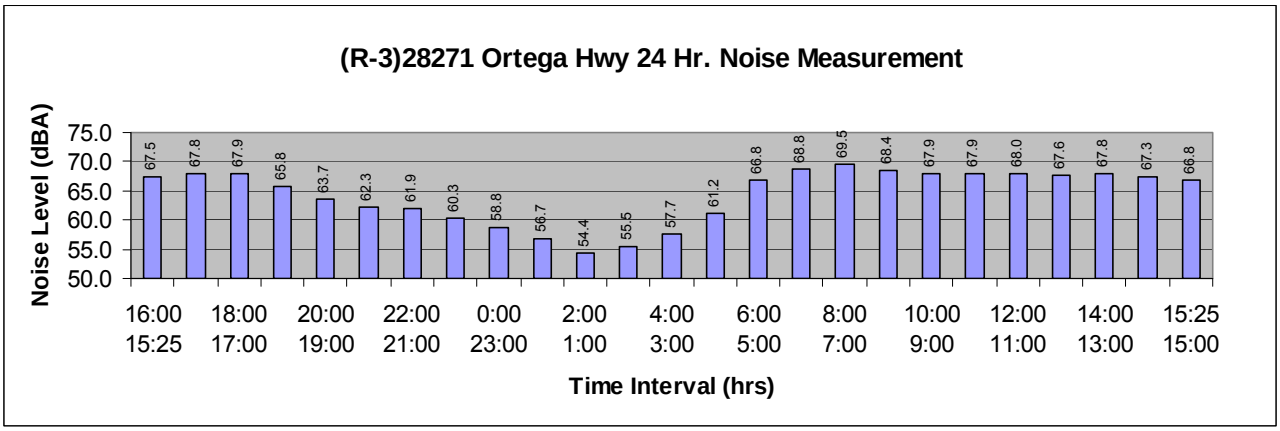


Table 2.2.7-4 Measured 24-Hour Noise Level at Receptor R-3 (28271 Ortega Highway)

Start Time	End Time	Measured 1 Hour dBA L_{eq}
15:25	16:00	67.5
16:00	17:00	67.8
17:00	18:00	67.9
18:00	19:00	65.8
19:00	20:00	63.7
20:00	21:00	62.3
21:00	22:00	61.9
22:00	23:00	60.3
23:00	0:00	58.8
0:00	1:00	56.7
1:00	2:00	54.4
2:00	3:00	55.5
3:00	4:00	57.7
4:00	5:00	61.2
5:00	6:00	66.8
6:00	7:00	68.8
7:00	8:00	69.5
8:00	9:00	68.4
9:00	10:00	67.9
10:00	11:00	67.9
11:00	12:00	68.0
12:00	13:00	67.6
13:00	14:00	67.8
14:00	15:00	67.3
15:00	15:25	66.8

Note: Noise levels were measured at this site from January 21 through January 22, 2004



measurements. Figure I-1 in Appendix I, shows the receptors locations. Following are descriptions of the three measurement sites.

- **Site R-1.** 28361 Via Anzar. The measurement was conducted in the backyard of this single-family residence. This site was selected for a 24-hour measurement because it represents a typical home at below highway grade elevation and represents an area of frequent human outdoor activity for homes along Via Anzar. The surrounding communities on both sides are single-family residences. The worst traffic noise level of 59.8 dBA L_{eq} was recorded between 7:00 a.m. and 8:00 a.m.
- **Site R-2.** 31071 Via Sorona. The measurement was conducted in the backyard of this single-family residence. This site was selected for a 24-hour measurement because it represents an area of frequent human outdoor activity for homes along Via Sorona. The surrounding communities on both sides are single-family residences. The worst traffic noise level of 55.8 dBA L_{eq} was recorded between 7:00 a.m. and 8:00 a.m.
- **Site R-3.** 28271 Ortega Highway. The measurement was conducted in the side yard/backyard of this single-family residence. This site was selected for a 24-hour measurement because it has a direct line of sight to Ortega Highway and represents an area of frequent human outdoor activity. The surrounding communities on both sides are single-family residences. The worst traffic noise level of 69.5 dBA L_{eq} was recorded between 7:00 a.m. and 8:00 a.m.

Short-term Measurements

Short-term (10-minute interval) measurements were conducted at 15 locations and at sensitive receptors along the proposed project area. As shown in Table 2.2.7-5, the peak-hour noise levels at sensitive outdoor human use areas (in backyards) for the first-row residences along eastbound Ortega Highway ranged from 59.0 to 64.2 dBA. The second-row noise measurements along eastbound Ortega Highway ranged from 52.5 to 60.7 dBA L_{eq}. The westbound Ortega Highway short-term noise measurements for first-row residences ranged from 58.7 to 70.2 dBA L_{eq}. The following is a description of the above measurement sites.

- **Site A-1 (Eastbound).** 28391 Via Anzar. The measurement was conducted in the backyard of this single-family residence on Via Anzar. This site was selected for a 10-minute measurement because it represents an area of frequent human

Table 2.2.7-5 Existing Noise Levels (Short-term Measurements)
Eastbound Ortega Highway Short-term Noise Measurements (10-minute) for First Row and Second Row

Type of Development	Receiver, First Row	First-Row Address	10 minute dBA L_{eq}	Receiver, Second Row	Second-Row Address	10-minute dBA L_{eq}	Difference (dBA)	Time	Date
SFR[1]	A1	28391 Via Anzar[2]	60.5	A2	28402 Via Anzar[2]	52.5	8.0**	8:35 a.m.–8:45 a.m.	2/4/04
SFR	B1	28351 Via Anzar[2]	59.0	B2	283 42 Via Anzar[2]	52.6	6.4**	8:50 a.m.–9:00 a.m.	2/4/04
SFR	C1	31102 Calle Entradero	64.2	C2	31112 Calle Entradero	60.7	3.5	9:25 a.m.–9:35 a.m.	2/4/04
SFR	D1	28111 Paseo Asteca	60.2	D2	28112 Paseo Asteca	55.5	4.7	9:54 a.m.–10:04 a.m.	2/4/04
SFR	E1	30882 Via Errecarte[2]	62.8	E2	30892 Via Erregarte[2]	53.8	9.0**	10:30 a.m.–10:40 a.m.	2/4/04

Source: LSA Associates, Inc., Final Technical Noise Impact Analysis Report, June 27, 2007.
[1] SFR = single-family residence.
[2] This monitoring location is also used for modeling calibration.

Westbound Ortega Highway Short-term Noise Measurements (10-minute) for First Row

Type of Development	Receiver	First-Row Address	Time	10-minute dBA L_{eq}	Date
SFR	F-1	No. 6 Palm Hill Drive, rear portion of balcony	8:23 a.m.–8:33 a.m.	58.7	2/5/04
SFR	F-2	No. 6 Palm Hill Drive, top of slope	8:34 a.m.–8:44 a.m.	66.9	2/5/04
SFR	G-1	28241 Ortega Highway	8:50 a.m.–9:00 a.m.	70.2	2/5/04
SFR	H-1	28321 Ortega Highway	9:11 a.m.–9:21 a.m.	68.6	2/5/04
SFR	I-1	Along Ortega Highway, first house just to the west of Horno Drive	9:32 a.m.–9:42 a.m.	64.4	2/5/04

Source: LSA Associates, Inc., Final Technical Noise Impact Analysis Report, June 27, 2007.

outdoor activity for homes along Via Anzar that are below grade elevation in comparison with Ortega Highway. The surrounding communities on both sides are single-family residences. The short-term traffic noise level of 60.5 dBA L_{eq} was recorded between 8:35 a.m. and 8:45 a.m.

- **Site A-2 (Eastbound).** 28402 Via Anzar. The measurement was conducted in the front yard of this second-row single-family residence on Via Anzar. This site was selected for a 10-minute measurement because it represents an area of frequent human outdoor activity for homes along Via Anzar that are below grade elevation in comparison with Ortega Highway. The surrounding communities on both sides are single-family residences. The short-term traffic noise level of 52.5 dBA L_{eq} was recorded between 8:35 a.m. and 8:45 a.m. This reading was recorded simultaneously in conjunction with site A-1. The difference between noise levels at sites A-1 and A-2 was later used for calibration. Site A-2 (second row) is shielded by the first-row two-story homes.
- **Site B-1 (Eastbound).** 28351 Via Anzar. The measurement was conducted in the backyard of this single-family residence on Via Anzar. This site was selected for a 10-minute measurement because it represents an area of frequent human outdoor activity for homes on Via Anzar. The surrounding communities on both sides are single-family residences. The short-term traffic noise of 59.0 dBA L_{eq} was recorded between 8:50 a.m. and 9:00 a.m.
- **Site B-2 (Eastbound).** 28342 Via Anzar. The measurement was conducted in the front yard of this second-row single-family residence on Via Anzar. This site was selected for a 10-minute measurement because it represents an area of frequent human outdoor activity for homes along Via Anzar. The surrounding communities are single-family residences. The short-term traffic noise level of 52.6 dBA L_{eq} was recorded between 8:50 a.m. and 9:00 a.m. This reading was recorded simultaneously in conjunction with site B-1. The difference between noise levels at sites B-1 and B-2 was later used for calibration. Site B-2 (second row) is shielded by the first-row two-story homes.
- **Site C-1 (Eastbound).** 31102 Calle Entradero. The measurement was conducted in the backyard of this single-family residence along eastbound Ortega Highway. This noise measurement represents an area of frequent human outdoor activity, which is shielded by the existing 5 ft high property block wall. The house is located on the southeast corner of Calle Entradero and Ortega Highway. Surrounding communities to the east and south are single-family residences. The short-term traffic noise level of 64.2 dBA L_{eq} was recorded between 9:25 a.m. and 9:35 a.m.

- **Site C-2 (Eastbound).** 31112 Calle Entradero. The measurement was conducted in the front yard of this second-row single-family residence on Calle Entradero. This site was selected for a 10-minute measurement because it represents an area of frequent human outdoor activity for homes along Calle Entradero. The surrounding communities on the north and east sides are single-family residences. The short-term traffic noise level of 60.7 dBA L_{eq} was recorded between 9:25 a.m. and 9:35 a.m. This reading was recorded simultaneously in conjunction with site C-1; however, the difference between noise levels at sites C-1 and C-2 was not used for calibration. This is due to an angle noise received from Ortega Highway at site C-2 during the measurement. Site C-2 (second row) is not considered to be shielded.
- **Site D-1 (Eastbound).** 28111 Paseo Asteca. The measurement was conducted in the backyard area of the single-family residence along eastbound Ortega Highway. This noise measurement represents an area of frequent human outdoor activity that is shielded by existing shallow slope and a 3 ft high block wall. The house is located at the southeast corner of Via Cordova and Ortega Highway. The surrounding communities to the east and south are residential buildings. The short-term traffic noise level of 60.2 dBA L_{eq} was recorded between 9:54 a.m. and 10:04 a.m.
- **Site D-2 (Eastbound).** 8112 Paseo Asteca. The measurement was conducted in the front yard of this second-row single-family residence. This site was selected for a 10-minute measurement because it represents an area of frequent human outdoor activity for homes along Paseo Asteca. The surrounding communities on all sides are single-family residences. The short-term traffic noise level of 55.5 dBA L_{eq} was recorded between 9:54 a.m. and 10:04 a.m. This reading was recorded simultaneously in conjunction with site D-1; however, the difference between noise levels at site D-1 versus D-2 was not used for calibration. This is due to an angle noise received at this location from Ortega Highway during the measurement. Site D-2 (second row) is not considered to be shielded; however, site D-1 was partially shielded by the existing property block wall.
- **Site E-1 (Eastbound).** 30882 Via Errecarte. The measurement was conducted in the backyard area of this single-family residence along eastbound Ortega Highway. This noise measurement represents an area of frequent human outdoor activity that is shielded by a shallow slope and a 2.5 ft high block wall. The house is located at the southeast corner of Via Errecarte and Ortega Highway. The surrounding communities to the east and south are residential buildings. The

short-term traffic noise level of 62.8 dBA L_{eq} was recorded between 10:30 a.m. and 10:40 a.m.

- **Site E-2 (Eastbound).** 30892 Via Errecarte. The measurement was conducted in the backyard area of this second-row single-family residence. The surrounding communities on the north, south, and east sides are single-family residences. The short-term traffic noise level of 53.8 dBA L_{eq} was recorded between 10:30 a.m. and 10:40 a.m. This reading was recorded simultaneously in conjunction with site E-1. The difference between noise levels at sites E-1 and E-2 was used for calibration. Receiver E-2 was shielded by the neighboring homes to the north.
- **Site F-1 (Westbound).** No. 6 Palm Hill Drive. The measurement was conducted in various locations of this three-story home located along westbound Ortega Highway. This site was selected for a 10-minute measurement on the rear portion of the balcony because it represents an area of frequent human outdoor activity. The surrounding communities on the north, east, and west sides are single-family residences. The short-term traffic noise level of 58.7 dBA L_{eq} was recorded between 8:23 a.m. and 8:33 a.m.
- **Site F-2 (Westbound).** No. 6 Palm Hill Drive. The measurement was conducted along the top of slope for this first-row three-story home located along westbound Ortega Highway. This site was selected for a 10-minute measurement because it represents an area of frequent human outdoor activity. The surrounding communities on the north, east, and west sides are single-family residences. The short-term traffic noise level of 66.9 dBA L_{eq} was recorded between 8:34 a.m. and 8:44 a.m. This area is in direct line of sight of Ortega Highway. In addition, this particular site represents similar homes located along the north side and above the highway grade elevation.
- **Site G-1 (Westbound).** 28241 Ortega Highway. The measurement was conducted along the top of slope for this first-row, three-unit, two-story dwelling along westbound Ortega Highway. This site was selected for a 10-minute measurement because it represents an area of frequent human outdoor activity. The surrounding communities on the north, east, and west sides are single-family residences. The short-term traffic noise level of 70.2 dBA L_{eq} was recorded between 8:50 a.m. and 9:00 a.m. This area is in direct line of sight of Ortega Highway. In addition, this particular site represents similar homes located above the highway grade elevation and a relatively close distance to the north side of Ortega Highway.
- **Site H-1 (Westbound).** 28321 Ortega Highway. The measurement was conducted for this first-row one-story residential/commercial combination structure along westbound Ortega Highway. This site was selected for a 10-minute measurement

because it represents an area of frequent human outdoor activity. The surrounding communities on the north, east, and west sides are single-family residences. The short-term traffic noise level of 68.6 dBA L_{eq} was recorded between 9:11 a.m. and 9:21 a.m. This area is in direct line of sight of Ortega Highway. In addition, this particular site represents similar homes located at the same elevation with Ortega Highway and a close distance to the north side of the highway.

- **Site I-1 (Westbound).** This house is located just to the west of Horno Drive, along the north side of Ortega Highway. The measurement was conducted for this first-row one-story residential structure. This site was selected for a 10-minute measurement because it represents an area of frequent human outdoor activity. The surrounding communities on the east and west sides are single-family residences. The short-term traffic noise level of 64.4 dBA L_{eq} was recorded between 9:32 a.m. and 9:42 a.m. This area is in direct line of sight of Ortega Highway. In addition, this particular site represents similar homes located slightly above highway grade elevation and a close distance to the north side of Ortega Highway.

2.2.7.3 Environmental Consequences

Temporary Impacts

No Build Alternative

The No Build Alternative would not result in construction in the project area and, therefore, would result in no short-term noise impacts during construction.

Build Alternatives 1 and 2

Construction Noise Impacts

Two types of short-term noise impacts would occur during construction of the project. The first type would be from construction crew commutes and the transport of construction equipment and materials to the project site and would incrementally raise noise levels on access roads leading to the site. The pieces of heavy equipment for grading and construction activities will remain on site for the duration of the construction phase, will be present during construction work hours, and will be removed during nonwork hours. A high single-event noise exposure potential at a maximum level of 87 dBA L_{max} from trucks passing at 15 m (50 ft) will exist. However, the projected 2035 construction traffic will be minimal when compared to existing traffic volumes on Ortega Highway and other affected streets, and its associated long-term noise level change will not be perceptible.

The second type of short-term noise impact is related to noise generated during excavation, grading, and roadway construction. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated and, therefore, the noise levels along the project alignment as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table 2.2.7-6 lists typical construction equipment noise levels (L_{max}) recommended for noise impact assessments, based on a distance of 15 m (50 ft) between the equipment and a noise receptor.

Table 2.2.7-6 Typical Construction Equipment Noise Levels

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 ft)	Suggested Maximum Sound Levels for Analysis (dBA at 50 ft)
Pile Drivers, 12,000 to 18,000 ft-lb/blow	81–96	93
Rock Drills	83–99	96
Jackhammers	75–85	82
Pneumatic Tools	78–88	85
Pumps	74–84	80
Dozers	77–90	85
Scrapers	83–91	87
Haul Trucks	83–94	88
Cranes	79–86	82
Portable Generators	71–87	80
Rollers	75–82	80
Tractors	77–82	80
Front-End Loaders	77–90	86
Hydraulic Backhoe	81–90	86
Hydraulic Excavators	81–90	86
Graders	79–89	86
Air Compressors	76–89	86
Trucks	81–87	86

Source: Noise Control for Buildings and Manufacturing Plants, Bolt, Beranek & Newman 1987.

Typical noise levels at 15 m (50 ft) from an active construction area range up to 91 dBA L_{max} during the noisiest construction phases. The site preparation phase, which includes grading and paving, tends to generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may

involve one or two minutes of full-power operation followed by three or four minutes at lower power settings.

Construction of the Build Alternatives is expected to require the use of earthmovers, bulldozers, water trucks, and pickup trucks. Noise associated with the use of construction equipment is estimated between 79 and 89 dBA L_{max} at a distance of 15 m (50 ft) from the active construction area for the grading phase. As seen in Table 2.2.7-6, the maximum noise level generated by each scraper is assumed to be approximately 87 dBA L_{max} at 15 m (50 ft) from the scraper in operation. Each bulldozer would also generate approximately 85 dBA L_{max} at 15 m (50 ft). The maximum noise level generated by water trucks and pickup trucks is approximately 86 dBA L_{max} at 15 m (50 ft) from these vehicles. Each doubling of the sound source with equal strength increases the noise level by 3 dBA. Each piece of construction equipment operates as an individual point source.

The worst-case composite noise level at the nearest noise-sensitive receptor during this phase of construction would be 91 dBA L_{max} (at a distance of 15 m [50 ft] from an active construction area).

The closest sensitive receptor locations are located 15 m (50 ft) from the project construction boundary. Therefore, these receptor locations may be subject to short-term noise reaching 91 dBA L_{max} generated by construction activities along the project alignment. To minimize the construction noise impact for sensitive land adjacent to the project site, construction noise is regulated by Caltrans Standard Specifications, Section 7-1.01I, "Sound Control Requirements," in the Standard Special Provisions. These provisions follow:

> "Sound control shall conform to the provisions in Section 7-1.01I, Sound Control Requirements, of the Standard Specifications and these special provisions. The noise level from the Contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m., shall not exceed 86 dBA at a distance of 15 m (50 ft). This requirement in no way relieves the contractor from responsibility for complying with local ordinances regulating noise level. The noise level requirement shall apply to the equipment on the job or related to the job, including but not limited to trucks, transit mixer or transient equipment that may or may not be owned by the contractor. The use of loud signals shall be avoided in favor of light warnings except those required by safety laws for the

protection of personnel. Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional will be allowed therefore."

With implementation of the standard Caltrans noise specification, potential temporary noise impacts of Build Alternatives 1 and 2 are considered less than significant.

Construction-Related Groundborne Vibration Impacts

Construction-related vibration generated by construction equipment can result in varying degrees of ground vibration, depending on the equipment. The operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings situated on soil near the active construction area respond to these vibrations that range from no perception to low rumbling sounds with perceptible vibrations and slight damage at the highest vibration levels. Typically, construction-related vibrations do not reach vibration levels that would result in damage to nearby structures. However, old and fragile structures would require special consideration to avoid damage.

Table 2.2.7-7 shows the vibration damage potential threshold criteria. Table 2.2.7-7 indicates that the vibration damage threshold is 0.3 peak particle velocity (PPV) (inches per second [in/sec]) for old residential structures and 0.5 PPV (in/sec) for new residential structures. Table 2.2.7-8 shows the vibration annoyance potential criteria. Tables 2.2.7-7 and 2.2.7-8 were used to evaluate short-term, construction-related groundborne vibration.

Table 2.2.7-7 Guideline Vibration Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources[1]	Continuous/Frequent Intermittent Sources[2]
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Department Transportation- and Construction-Induced Vibration Guidance Manual, June 2004.
Transient sources create a single, isolated vibration event, such as blasting or drop balls.
Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
in/sec = inches per second PPV = peak particle velocity

Table 2.2.7-8 Guideline Vibration Annoyance Potential Criteria

Human Response	Maximum PPV (in/sec)	
	Transient Sources[1]	Continuous/Frequent Intermittent Sources[2]
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Source: Department Transportation- and Construction-Induced Vibration Guidance Manual, June 2004.
[1] Transient sources create a single, isolated vibration event, such as blasting or drop balls.
[2] Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
in/sec = inches per second PPV = peak particle velocity

Build Alternatives 1 and 2 may require the use of a vibratory steel wheel roller during AC placement to compact the AC. Other heavy-tracked construction equipment may be required for project construction. As shown in Table 2.2.7-9, a typical vibratory steel wheel roller would generate approximately 0.210 PPV (in/sec) when measured at 25 ft. Table 2.2.7-9 also shows that typical heavy-tracked construction equipment would generate approximately 0.003 to 0.089 PPV (in/sec) when measured at 25 ft. In addition, the project proposes to use cast-in-drilled-hole (CIDH) piles as an alternative to pile drivers. Vibration generated from drilling using the CIDH method would be negligible. Therefore, no groundborne vibration impacts from the installation of CIDH piles would occur.

Table 2.2.7-9 Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV at 25 ft (in/sec)
Vibratory roller	0.210
Large bulldozer	0.089
Caisson drilling	0.089
Loaded trucks	0.076
Jackhammer	0.035
Small bulldozer	0.003
Crack-and-seat operations	2.4

Sources: Federal Transit Administration 1995 (except Hanson 2001 for vibratory rollers) and Caltrans 2000 for crack-and-seat-operations.
ft = feet
in/sec = inches per second
PPV = peak particle velocity

The closest existing residence is located on the southeast corner of Calle Entradero and Ortega Highway. The distance from the house to the edge of Ortega Highway is approximately 25 ft and would be exposed to groundborne vibration levels of 0.210 PPV (in/sec) and 0.089 PPV (in/sec) from potential AC placement and heavy tracked construction equipment, respectively. As shown in Table 2.2.7-7, short-term construction-related vibration levels from heavy tracked construction equipment is well below 0.3 PPV (in/sec) for older residential structures.

The closest existing historical residence is the Hankey Rowse house, which is located on the southwest corner of Via Cristal and Ortega Highway. The distance from the house and garage to the edge of Ortega Highway is approximately 50 ft and 20 ft, respectively. Therefore, the house and garage would be exposed to groundborne vibration levels of 0.098 PPV (in/sec) and 0.268 PPV (in/sec), respectively. Table 2.2.7-8 shows that this level of groundborne vibration is considered strongly perceptible to humans. Although the City has designated the house as historic, the house is constructed of wood frame structures and may be considered as an older residential structure, with maximum vibration impact criteria of 0.3 PPV (in/sec). However, the garage located next to the house is identified as a modern structure with a maximum vibration level of 0.5 PPV (in/sec). Vibration levels generated by AC placement and heavy tracked construction equipment would be below the impact criteria of 0.3 PPV (in/sec) for older residential structures and would not damage either the house or the garage structures. Table 2.2.7-8 shows that this level of groundborne vibration is considered strongly perceptible to humans. Therefore, impacts from short-term construction-related vibration levels generated by heavy-tracked construction equipment are considered less than significant.

Permanent Impacts

No Build Alternative

Groundborne Vibration Impacts

The No Build Alternative would not have groundborne vibration impacts beyond those of the existing condition.

Traffic Noise Impacts

The No Build Alternative would result in increased noise levels at many of the same receptors under the future 2035 traffic conditions, as shown in Table 2.2.7-10. These increases are approximately 1 to 2 dBA from existing conditions and there would not be a significant noise increase. Therefore, under

Table 2.2.7-10 Projected Noise Levels, dBA L_{eq}

Receptor No.	Existing Noise Levels	Future (2035) No Build	Future (2035) Build	Change from Existing Noise Levels
Eastbound Side				
1	70.9	72.3	72.8	1.9
1A	58.4	59.8	60.3	1.9
2	61.8	63.2	63.7	1.9
2A	55.9	57.3	57.8	1.9
2B	55.4	56.9	57.3	1.9
3A	54.0	55.4	55.9	1.9
R-2 K-1	60.5	62.0	62.1	1.6
4	60.2	61.6	61.8	1.6
4A	54.2	55.6	55.9	1.7
5	59.7	61.1	61.3	1.6
5B	62.7	64.1	64.5	1.8
6	68.6	70.0	70.1	1.5
6A	56.7	58.1	58.6	1.9
7	70.6	72.1	71.4	0.8
7A	55.8	57.2	57.4	1.6
8	65.8	67.2	65.7	-0.1
8A	57.5	58.9	58.7	1.2
9	67.0	68.4	66.0	-1.0
10	69.6	71.1	70.1	0.5
10A	58.4	59.8	59.4	1.0
11	70.2	71.6	70.4	0.2
11A	57.9	59.3	59.2	1.3
12	64.2	65.6	65.2	1.0
13	65.2	66.6	66.2	1.0
13A	56.6	58.1	58.2	1.6
14	64.3	65.7	65.5	1.2
14A	54.0	55.4	55.6	1.6
R-1	63.6	65.0	64.8	1.2
15	62.9	64.3	64.2	1.3
15A	53.1	54.5	54.8	1.7
16 K-3	65.1	66.5	66.2	1.1
16A	53.9	55.4	55.6	1.7
17	64.1	65.6	65.3	1.2
17B	65.2	66.6	66.6	1.4
17A	59.2	60.7	60.5	1.3
18	66.9	68.3	66.9	0.0
18A	56.6	58.0	58.4	1.8
19	63.6	65.1	64.3	0.7
19A	54.9	56.3	56.7	1.8
20	62.8	64.2	64.3	1.5
21	63.7	65.2	65.7	2.0
21M[1]	69.5	71.0	71.8	2.3
21N	66.2	67.6	68.3	2.1

Table 2.2.7-10 Projected Noise Levels, dBA L_{eq}

Receptor No.	Existing Noise Levels	Future (2035) No Build	Future (2035) Build	Change from Existing Noise Levels
Westbound Side				
22	69.3	70.7	71.3	2.0
23	66.3	67.8	68.4	2.1
24	62.2	63.6	64.1	1.9
25	65.8	67.3	67.9	2.1
26	67.6	69.0	69.6	2.0
27	63.4	64.8	65.5	2.1
28 K4	67.2	68.6	69.6	2.4
29	69.9	71.4	72.5	2.6
30	71.1	72.6	73.0	1.9
31 K5	71.4	72.8	77.1	5.7
32	68.5	70.0	73.8	5.3
33	68.0	69.5	73.0	5.0
34	69.1	70.5	73.6	4.5
35	68.6	70.1	73.5	4.9

Source: LSA Associates, Inc., June 2008.
[1] Shaded rows indicate that receptors are located outside of the project limits.

the No Build Alternative, the noise increase of 1 to 2 dBA is considered less than significant.

Build Alternatives 1 and 2

The potential traffic noise impact for Build Alternatives 1 and 2 would be the same because the proposed roadway alignments are the same.

Groundborne Vibration Impacts

Groundborne vibrations are mostly associated with passenger vehicles and trucks traveling on poor roadway conditions, such as potholes, bumps, expansion joints, or other discontinuities in the road surface. Passenger vehicles and delivery trucks would cause effects such as rattling of windows, and the source is almost always airborne noise. As the project will use new asphalt pavement, there will be no potholes, bumps, expansion joints, or other discontinuities in the road surface that would generate groundborne vibration or noise impacts from vehicular traffic traveling on Ortega Highway. Therefore, groundborne vibration impacts generated by vehicles traveling on Ortega Highway under the Build Alternatives would be considered less than significant under Build Alternatives 1 and 2.

Traffic Noise Impacts

This noise analysis was conducted to determine the potential noise impacts at sensitive receptors within the boundaries of this project for 2035. The highest traffic noise occurs when the traffic is very heavy but remains free-flowing. Traffic engineers refer to this condition as level of service (LOS) C for worst-case traffic conditions. The existing and future 2035 peak-hour volumes were provided by the Department District 12 for worst-case traffic conditions. These traffic volumes were used to evaluate potential long-term noise impacts associated with project operations. Traffic on other local surface streets was not modeled because the dominant noise source is Ortega Highway. It should be noted that the existing noise levels were not adjusted to the peak traffic noise because short-term noise measurements were conducted during the peak traffic noise hour, and the existing traffic volumes were used to establish the existing noise levels using the existing peak-hour volume.

As indicated above, future noise levels were modeled using traffic volumes provided by the Department District 12 Traffic Operations South for the worst-case traffic conditions. Topographic constituents such as existing slopes were included in the modeling. Table 2.2.7-10 summarize the results of the predicted future noise levels at representative receptor locations. As shown in Table 2.2.7.10, the predicted noise levels (future build) do not result in significant increases except for Receptor No. 31K5.

As shown in Table 2.2.7-10, Receptor 31 K5 is predicted to experience a traffic noise level of 77 dBA L_{eq}. This noise level is considered a severe traffic noise impact by the Department because it exceeds 75 dBA L_{eq} and is considered potentially significant. Appendix I shows the residence represented by Receptor 31 K5 has an access onto Ortega Highway, hence a sound wall would not be effective with a break in the wall to accommodate the driveway. Interior noise mitigation shall be offered to the property owner of the Receptor 31 K5**.** If interior noise mitigation is provided, an agreement must be entered into with the owner of the subject property that specifies that the Department is not responsible for any future cost of operating or maintaining the noise mitigation. This mitigation is expected to reduce the interior noise levels by approximately 5 dBA.

2.2.7.4 Avoidance, Minimization, and/or Mitigation Measures

The following minimization measure must be implemented and Mitigation Measure N-1 must be implemented to reduce permanent significant noise impacts for Build Alternatives 1 and 2 to below a level of significance.

Construction of the proposed Build Alternatives shall comply with the Department's Standard Specifications, "Sound Control Requirements."

N-1 To reduce permanent significant noise impacts to Receptor 31 K5 to below a level of significance, the Department shall offer interior noise mitigation measures such as installation of double-paned windows and a mechanical heating and cooling system (air conditioning).

2.2.7.5 Level of Significance

The No Build Alternative would have no temporary noise impacts; and predicted future noise levels are considered less than significant.

For Build Alternatives 1 and 2, temporary, direct, or indirect noise impacts are considered less than significant. With the implementation of the Department's standard specifications and Mitigation Measure N-1 that requires the offering of interior noise mitigation (e.g., double-paned windows and mechanical heating and cooling) for Receptor 31 K5, the permanent, direct, or indirect noise impacts of the Build Alternatives is considered less than significant.

2.2.8 Energy

2.2.8.1 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.

2.2.8.2 Affected Environment

Southern California has had the benefit of sufficient energy supplies to serve the rapid growth that has taken place over the past 50 years. Much of the energy consumed in the region is for residential, commercial, and transportation purposes. SCAG tracks and forecasts energy use in the Southern California area. The proposed project's region includes the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura (SCAG, 2008). Transportation energy for motor vehicles is primarly provided by direct combustion of petroleum fuels (gasoline and diesel) with smaller contributions from compressed natural gas. Electricity is used in a relatively small number of electric-powered vehicles.

In addition to hydrocarbon energy sources, there are nearly 300 operational power plants located in the counties of Los Angeles, Orange, Riverside, and San Bernardino that each produce at least 100 kilowatts of electricity (CEC 2007a). Electric energy in the region is provided primarily through Southern California Edison and the Los Angeles Department of Water and Power distribution networks, along with three municipalities having their own power plants located in the region (i.e., Glendale, Burbank, and Pasadena) and by the Imperial Irrigation District and San Diego Gas & Electric providing service to the extreme southern areas of Riverside and Orange counties, respectively. Because of the current restructuring of the electric energy industry throughout California, many of the facilities are planned for the Los Angeles region, and they are currently going through the permitting process (CEC 2007b).

Most of the electric energy used in Southern California is imported to the region from coal-fired and hydroelectric generating facilities located elsewhere in California and out of state. Utilities in Southern California participate in power-sharing arrangements with many other entities throughout the western United States. In 2005, the SCAG region consumed almost 128,000 gigawatt-hours (GWh) of electricity, which was approximately 48 percent of the total consumption of the State. Electricity consumption has been increasing approximately 1.3 percent per year (SCAG 2007).

In 2005, the region consumed approximately 8.8 billion gallons of vehicle fuels, which was an increase of more than 20 percent from 1995 (SCAG 2007). The California Energy Commission (CEC) predicts that the natural gas demand in on-road vehicles will increase from 46 million therms in 2000 to 150 million therms in 2020. Transportation electricity will grow from 540 million kilowatt-hours (kWh) to 3,000 million kWh between 2000 and 2025 (CEC 2007c).

Forecasts by CEC indicate that on-road VMT (for light-duty vehicles, freight, and transit) in California will experience an average growth of 1.8 percent per year between 2000 and 2020 (CEC 2007).

The CEC base-case forecast projects statewide on-road gasoline demand to increase by 1.6 percent per year from 2000 to 2020. Diesel demand is expected to grow by an average of 2.4 percent per year from 2000 to 2020 (CEC 2007).

2.2.8.3 Environmental Consequences

Temporary Impacts

No Build Alternative

The No Build Alternative does not involve any construction. Therefore, there would be no temporary energy impacts associated with the No Build Alternative.

Build Alternatives 1 and 2

Construction equipment and construction worker vehicles operated during project demolition and construction would use fossil fuels. This increased fuel consumption would be temporary and would cease at the end of the construction activity, and it would not have a residual requirement for additional energy input. The marginal increases in fossil fuel use resulting from project construction are not expected to have appreciable impacts on energy resources.

Permanent Impacts

No Build Alternative

With the No Build Alternative, the portion of Ortega Highway from Calle Entradero to the City/County line would remain in its existing condition without improvements. Based on the traffic analysis conducted for this project (Austin-Foust, 2008), the ADT and VMT on Ortega Highway within the project limits for 2008 and 2035 under the No Build Alternative are shown in Table 2.2.8-1.

Table 2.2.8-1 Existing and Future (2035) Forecast ADT and VMT – No Build Alternative

	Automobiles	Trucks[3]
2008 ADT	27,000	5,292
2008 round-trips[1]	13,500	2,646
2008 VMT[2]	24,300	4,762
2035 ADT	39,000	7,644
2035 round-trips[1]	19,500	3,822
2035 VMT[2]	35,100	6,879

Source: Austin-Foust, 2008.
[1] Assumes that 50 percent of the total ADT represents round trips
[2] Assumes 20 miles round trip per automobile and truck.
[3] ADT and VMT assuming 2+ axle trucks make up 19.6 percent of total traffic for current year (2008) and for the forecasted year (2035).
ADT = average daily traffic
VMT = vehicle miles traveled

To determine the current (2008) fuel consumption, the 2008 average VMT for the project area is divided by the current average gasoline and diesel fuel efficiencies (24.1 miles per gallon [mpg] and 9.7 mpg, respectively) calculated for the project area, which yields a daily 2008 gasoline use estimate of approximately 1,008.3 gallons and a daily 2008 diesel use estimate of approximately 490.9 gallons.

Determining future 2035 fuel consumption under the No Build scenario would require the estimation of 2035 fuel efficiencies for both gasoline and diesel vehicles and advances in alternative fuel technology. The forecast future fuel efficiency is difficult to accurately predict, so this analysis will consider the "worst-case scenario," which utilizes the current fuel efficiencies, and assumes there is no improvement in alternative fuel technology or increase in alternative fuel technology use.

Under these "worst-case assumptions," the 2035 estimated daily gasoline use in the project area under the No Build Alternative would be approximately 1,456.4 gallons and the estimated daily 2035 diesel use would be 709.2 gallons.

The No Build Alternative does not involve any construction. Therefore, there would be no permanent energy impacts associated with the No Build Alternative.

Build Alternatives 1 and 2

Both Build Alternatives 1 and 2 would have similar impacts. Based on the traffic analysis conducted for this project (Austin-Foust, 2008), the ADT and VMT along Ortega Highway between Calle Entradero and the City/County line for 2008 and 2035 under the Build Alternatives are shown in Table 2.2.8-2. Using 2008 Alternative 1 a

Table 2.2.8-2 Existing and Future (2035) Forecast ADT and VMT – Build Alternatives

	Automobiles	Trucks[3]
2008 ADT	27,000	5,292
2008 round-trips[1]	13,500	2,646
2008 VMT[2]	24,300	4,762
2035 ADT	39,000	7,644
2035 round-trips[1]	19,500	3,822
2035 VMT[2]	35,100	6,879

[1] Assumes that 50 percent of the total ADT represents round trips
[2] Assumes 20 miles round trip per automobile and truck.
[3] ADT and VMT assuming 2+ axle trucks make up 19.6 percent of total traffic for current year (2008) and for the forecasted year (2035).
ADT = average daily traffic
VMT = vehicle miles traveled

nd 2 VMT forecasts and future fuel efficiencies provides an estimate of daily 2035 gasoline use of approximately 1,456.4 gallons and a forecast 2035 diesel use of approximately 709.2 gallons. Since this is a no-growth project, there is no increase in traffic associated with this project; therefore, the only increase in energy use would be limited to the temporary increase in energy use during construction. When balancing energy used during construction in the short-term against energy saved by relieving traffic congestion during long-term operation, the project would not have substantial energy impacts and would benefit the region and residents of the State.

When balancing energy used during construction and operation against energy saved by relieving congestion and other transportation efficiencies, the project would not have substantial energy impacts.

2.2.8.4 Avoidance, Minimization and/or Mitigation Measures

Build Alternatives 1 and 2 are not expected to result in permanent impacts to energy, and no avoidance, minimization, or mitigation measures are required.

Although, temporary impacts to energy are expected during construction activities, consumption of fossil fuels and electricity would occur at typical amounts, and excesses in consumption are not expected. Therefore, permanent impacts to energy are considered less than significant, and no avoidance, minimization, or mitigation measures are required.

2.2.8.5 Level of Significance

The No Build Alternative would not result in impacts to energy resources.

The Build Alternatives are not expected to result in permanent direct or indirect impacts to energy. As stated previously, the consumption of fossil fuels and electricity would occur at typical amounts, and excesses in consumption are not expected. Therefore, temporary direct or indirect impacts to energy are considered less than significant.

BIOLOGICAL ENVIRONMENT

The analysis of potential impacts of the proposed Lower SR-74 Widening project on biological resources is based on the Natural Environment Study (NES) (EA 086900) (June 2007) and the NES Supplement (August 2008) (EA 086920). The NES and NES Supplement are on file and available for review at the Department District 12 offices. The NES was prepared with input from resource agencies including the ACOE, CDFG, the National Marine Fisheries Service (NMFS), and USFWS. Additional information was obtained from the: *Joint Programmatic Environmental Impact Report/Environmental Impact Statement (EIR/EIS) and Draft Implementation Agreement (IA) for the Southern Subregion Natural Community Conservation Plan/ Master Streambed Alteration Agreement/Habitat Conservation Plan (Southern Subregion NCCP/MSAA/HCP)* (County of Orange, July 2006), the *Final EIS, San Juan Creek and Western San Mateo Creek Watershed Special Area Management Plan (SAMP)* (ACOE, January 2007), *Addendum No. 1 (PA06-0023) for Final EIR No. 589 The Ranch Plan Planning Area 1* (BonTerra Consulting, May 2006), and the *Final EIR No. 589 General Plan Amendment/Zone Change (PA 01-114) for The Ranch Plan* (Certified Draft EIR Orders and Approvals, Technical Appendices, Comments and Responses [SCH No. 2003021141]) (County of Orange, November 2004).

Project Coordination

From January 2001 to May 2006, the Department coordinated with the resource agencies. A history of coordination, events, and survey findings is contained within Appendix F to the NES. During coordination, it was determined that the Department will apply for and obtain resource agency permits for the proposed project. The Department will review these resource agency permits for impacts and conditions associated with SR-74 itself. The Department will assume responsibility for mitigation and monitoring commitments for any impacts to biological resources associated with the proposed project, including mitigation required pursuant to CEQA as well as any additional measures required by the resource agencies during the permitting process. Mitigation for impacts to biological resources will be implemented by the Department. No mitigation will be planted within the state right-of-way to account for impacts to biological resources.

Biological Study Area and Context

The City portion of the project is referred to as the "proposed project," the "project area," or the "Biological Study Area" (BSA). The BSA contains the disturbance limits for the proposed project, including such activities as cut, fill, and grading. For purposes of this environmental document, only the areas within the Project Limits from Calle Entradero to the City/County limits are analyzed. The BSA is located in the City of San Juan Capistrano, United States Geological Survey (USGS) *San Juan Capistrano, California* quadrangle, Sections 6 & 32, Township 7-8 south, and Range 7 west.

The BSA is located just west of the approximately 22,815 ac Ranch Plan project located in unincorporated Orange County. Ladera Ranch is located to the north of the BSA; the Donna O'Neill Land Conservancy is located to the southeast of the BSA; and Caspers Wilderness Park is located to the northeast of the BSA. The topography of the BSA generally slopes down from the north to the south and ranges in elevation from 656 to 1,640 ft. (200 to 500 m). "The Oaks" property (28650 Ortega Highway), a regionally important large equestrian farm owned by Joan Irvine Smith, founder of the Capistrano Valley Conservancy, is located on the southern side of the BSA at the eastern end of the project limits. The Ranch Plan's Planning Area (PA) 1 is located immediately east of the BSA.

The BSA comprises the disturbance limits and a 25–35 ft buffer. During the April and May 2008 surveys, private properties within the buffer area were assessed visually from within the public right-of-way where feasible, but they were not surveyed on foot. Areas beyond solid walls, fences, or dense vegetation were not assessed.

The BSA includes the existing SR-74 (Department and City right-of-way), low-density residential areas, landscaped areas, and disturbed roadway shoulders. The BSA is surrounded by rural and residential development. Small undeveloped areas occur along the shoulder of the north side of the road where landscaping is not regularly maintained. These areas are highly disturbed and comprised primarily of nonnative and invasive species, including scattered ornamental species, with occasional native species.

The following sections describe applicable regulatory settings, existing environments, impacts, and avoidance, minimization and mitigation measures for these categories of biological resources.

2.3.1 Natural Communities

This section of the document discusses natural communities of concern. This section focuses on biological communities, not on individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat, thereby lessening its biological value.

Habitat areas designated as critical habitat under the Federal Endangered Species Act (FESA) are discussed below under the Threatened and Endangered (T/E) Species section heading. Wetlands and other waters are discussed under the corresponding section heading. Specific plant species and animal species are discussed under the corresponding section headings.

2.3.1.1 Regulatory Setting

Laws that are applicable for the protection of natural communities include those listed under Section 2.3.2, Wetlands and Other Waters, and Section 2.3.3, Plant Species.

Natural Communities of Concern

This section discusses natural communities and habitat not listed as critical habitat under the FESA and not discussed later in the Wetlands and Other Waters section. Vegetation communities are considered natural communities of concern based on (1) federal, State, or local laws regulating their development; (2) limited distribution; and/or (3) the habitat requirements of special status plants or animals occurring on the site. The CDFG has designated natural communities of concern within California.

Natural Communities Conservation Plans

In addition, in an effort to respond to growing concern over the conservation of coastal sage scrub and other biological communities, federal, state, and local agencies have developed a multispecies approach to habitat conservation planning known as the Natural Communities Conservation Planning process. This was made possible by Assembly Bill 2172 (AB 2172), which authorized the CDFG to enter into agreements for the preparation and implementation of Natural Communities Conservation Plans (NCCPs). The USFWS joined in this effort, utilizing both the Section 4(d) Special Rule and the Habitat Conservation Plan (HCP) processes. The NCCP program aims primarily to conserve natural communities at the ecosystem scale while accommodating compatible land use. By focusing on the long-term stability of wildlife and plant communities, and by including key interests in the process, the

program seeks to anticipate and prevent the controversies and gridlock caused by species' listings.

The County Board of Supervisors certified the FEIR for the MSAA/HCP and approved the HCP in October 2006. This final document sets forth a proposed Conservation Strategy to be implemented by the Department in cooperation with state and federal agencies and participating landowners in southern Orange County. The proposed Conservation Strategy focuses on long-term protection and management of multiple natural communities that provide habitat essential to the survival of a broad array of wildlife and plant species. The plan encompasses 91,000 ac, with 57,000 ac of natural habitat including coastal sage scrub, chaparral, grassland, riparian, and oak woodlands. State-listed species covered by the plan include least Bell's vireo *(Vireo bellii pusillus),* southwestern willow flycatcher *(Empidonax traillii extimus),* and thread-leaved brodiaea *(Brodiaea filifolia).* The USFWS distributed the Final EIS for public review on November 13, 2006. The IA was signed by the Participating Landowners (the County, RMV, and Santa Margarita Water District) in December 2006. The USFWS signed the IA, approved the HCP, and issued Incidental Take Permits (ITP) to each of the participating landowners on January 10, 2007. The Southern HCP assumes the Ranch Plan development. Coordination with CDFG on the NCCP/MSAA is ongoing.

2.3.1.2 Affected Environment

The BSA is highly disturbed and contains primarily landscaped areas of the City (south side) and low-density residential areas (north side). As of January 2007, silt fence is present along areas to the north of SR-74. These improvements to private property appear to have changed the topography and hydrological conditions of the BSA. Differences observed on site during surveys conducted for the 2007 NES and the 2008 NES Supplement include changes in topography (private property yard improvements) and changes to Department mowing practices.

Vegetation in the BSA includes no native plant communities. The BSA is comprised of developed areas (8.29 ac), ornamental vegetation (8.33 ac), ruderal vegetation (2.68 ac), and disturbed wetlands (0.04 ac). The disturbed wetlands (associated with Drainage System [DS] 7) contain some native plant species that may provide habitat value for native wildlife; Section 2.3.2 (Wetlands and Other Waters), below, discusses this further. The ornamental trees and shrubs within the study area may serve as roosting and nesting habitat for raptors and other migratory bird species.

Refer to Section 2.3.4 (Animal Species) for discussion of potential project impacts on migratory bird species.

The NES identified the disturbed wetlands and eight coast live oak *(Quercus agrifolia)* trees that would be affected by the proposed project; the document states these areas "have limited function and value and occur in very small areas next to the roadway shoulder." These oaks, located at "The Oaks" property (28650 Ortega Highway), are not considered an oak woodland given that there are less than a dozen trees that may be impacted. The eight oak trees do not occur within CDFG jurisdictional areas; however, the City's Tree Removal Permit process will be applicable for the removal of any of these trees. A total of 70 trees of various species will be impacted along the north side of the road and 41 trees along the south side of SR-74. Refer to Section 2.3.3 (Plant Species) for a discussion of potential project impacts related to tree removal.

Wildlife currently travels along San Juan Creek, south and east of the BSA, searching for food, water, shelter, and mates. There are no major existing wildlife corridors within the project limits. The NES acknowledges that wildlife may use the small box culverts and corrugated metal pipe culverts that occur within the BSA to cross below SR-74; however, none of these is of sufficient size or suitable configuration (with suitable habitat on either side) to serve as a noteworthy wildlife corridor. San Juan Creek, near the BSA, provides a regional wildlife movement corridor.

2.3.1.3 Environmental Consequences

Temporary Impacts

No Build Alternative

The No Build Alternative does not propose any construction or other disturbance in the project area. Therefore, the No Build Alternative will result in no impacts related to natural communities.

Build Alternatives 1 and 2

The Build Alternatives would not result in the removal of sensitive plant communities because none are found within or immediately adjacent to the project disturbance limits. Impacts to wetlands are discussed in Section 2.3.2 (Wetlands and Other Waters), and impacts to mature trees are discussed in Section 2.3.3 (Plant Species).There would be no temporary impacts to sensitive communities.

Permanent Impacts

No Build Alternative

The No Build Alternative proposes no construction or other disturbance in the project area. Therefore, the No Build Alternative would not result in impacts related to natural communities.

Build Alternatives 1 and 2

Impacts to wetlands are discussed in Section 2.3.2 and impacts to oak trees are discussed in Section 2.3.3, respectively. Impacts related to invasive species are addressed in Section 2.3.6.

The Build Alternatives would not result in the removal of sensitive plant communities because none are found within or immediately adjacent to the project disturbance limits. Therefore, there would be no permanent impacts to natural communities.

The Build Alternatives would improve an existing transportation facility and would not result in fragmentation of habitat or impacts to wildlife corridors. Culverts that are present in the BSA allow passage of mobile species and may provide marginal habitat. Habitat within the BSA would not be further fragmented by the proposed project since SR-74 is an existing roadway.

This project is consistent with the Orange County Southern Subregion NCCP/MSAA/HCP as discussed above. The NCCP/MSAA/HCP acknowledges the proposed widening of SR-74 within the City; however, covered status is only extended to the portion of SR-74 within the RMV planning area, east of the BSA. The potentially applicable requirements of the NCCP/MSAA/HCP include the policies for New Infrastructure Projects (Section 11.2.5(a) of the NCCP/MSAA/HCP), the New Infrastructure Operation and Maintenance Policies (Section 11.2.5(b) of the NCCP/MSAA/HCP), and, if necessary, the Infrastructure Emergency Procedures and Policies (Section 11.2.5(c) of the NCCP/MSAA/HCP).

Given that Build Alternatives 1 and 2 would not affect natural or sensitive communities and would not affect wildlife corridors, there are no impacts to natural communities.

2.3.1.4 Avoidance, Minimization, and/or Mitigation Measures

The Lower SR-74 Widening project will not result in significant impacts related to natural communities. No avoidance, minimization, or mitigation measures are required.

2.3.1.5 Level of Significance

The No Build and Build Alternatives would have no temporary, permanent, direct or indirect impacts to natural communities.

2.3.2 Wetlands and Other Waters

This section of the document discusses wetlands and other waters and summarizes the Supplemental Wetlands Delineation and Assessment of Jurisdictional Waters Report (July 2008) (EA 086920), the NES (June 2007), and the NES Supplement (August 2008).

2.3.2.1 Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (CWA) (33 U.S.C. 1344) is the primary law regulating wetlands and waters. The CWA regulates the discharge of dredged or fill material into waters of the United States (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 (i.e., plants that require saturated soils) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the ACOE with oversight by the Environmental Protection Agency (EPA).

At the state level, lakes, rivers and streambeds and waters of the U.S. are regulated primarily by the CDFG and the Regional Water Quality Control Boards (RWQCB), respectively. In certain circumstances, the RWQCB can assert jurisdiction over "waters of the State" pursuant to the Porter-Cologne Water Quality Control Act (Porter-Cologne). Waters of the State under Porter-Cologne are defined as "…any surface water or groundwater, including saline waters, within the boundary of the state." In certain circumstances, the California Coastal Commission (or Bay Conservation and Development Commission) 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 the 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 will be required. CDFG jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the ACOE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFG.

The Regional Water Quality Control Boards were established under Porter-Cologne to oversee water quality. The RWQCB also issues water quality certifications in compliance with Section 401 of the Clean Water Act. Please see the Water Quality section for additional details.

The ACOE has prepared a SAMP for the San Juan Creek and Western San Mateo Creek Watershed, which covers permits for drainage activities within the BSA for this project. The SAMP process is applicable to the BSA. According to the SAMP EIS, the purpose of the SAMP is to provide for reasonable economic development and the protection long-term management of sensitive aquatic resources. As applicable to the proposed project, the SAMP includes Long-Term Individual Permits/Letters of Permission (LOP) procedures for long-term activities proposed for properties within the SAMP study area, which includes the project site. The City, as a SAMP Participant, would be required to adhere to SAMP LOP procedures and applicable conditions of the NCCP/MSAA/HCP. A Streambed Alteration Agreement from CDFG and 401 Water Quality Certification from the San Diego Regional Water Quality Control Board will be required for the proposed project.

2.3.2.2 Affected Environment

The northern side of the BSA contains disturbed conditions typical of roadside shoulders, and the southern side of the BSA contains landscaped areas within City right-of-way. The surrounding areas are primarily low-density residential and rural. The entire BSA is highly disturbed, and vegetated areas are comprised primarily of nonnative and invasive species, with scattered ornamental and occasional native species.

The BSA contains culverts and ditches that eventually discharge into San Juan Creek, located south and east of the Project Limits. All existing drainages would be modified and extended to intercept at the proposed edge of pavement. An additional seven drainage systems to collect and convey runoff would be added in the BSA on the north side of SR-74. Three existing drainages are potentially jurisdictional waters/ streambed based on ACOE and CDFG guidelines. These drainage areas will be filled

during north side roadway widening. These drainages eventually discharge into the main channel of San Juan Creek, located less than one mile east of the BSA. The three drainages were evaluated as discussed below; however, it should be noted that the Department regularly mows the area, and site conditions (particularly relative to vegetative cover) are subject to change as a result of current mowing practices.

The NES identified three of the existing drainage systems, DS 7, 8, and 10 (discussed in further detail below), as considered jurisdictional "atypical wetlands" (as defined in the 1987 ACOE Wetland Delineation Manual, Section F, Atypical Situation). Previously, the ACOE and CDFG verified jurisdictional waters during a site visit. A subsequent wetland delineation was conducted in May 2008, which found that some areas previously verified as jurisdictional do not meet the criteria for wetland waters of the U.S. or CDFG jurisdiction, particularly in light of recent regulatory changes. The ACOE and CDFG staff were consulted regarding the difference in conclusions; both agencies agreed that a formal jurisdictional delineation report documenting site conditions observed in 2008 would be sufficient to justify the difference in conclusions. The 2008 NES Supplement concluded that DS 7, 8, and 10 are potentially jurisdictional waters of the U.S., but only DS 7 contains potential wetland waters of the U.S. This conclusion is based on additional field work conducted in accordance with the 1987 *ACOE Wetland Delineation Manual* as well as the 2006 *Interim Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region*.

The three potential jurisdictional features (DS 7, DS 8 and DS 10, also referred to as Features A, B, and C) are illustrated in Figure 2.3.2-1. Within the BSA, potential jurisdictional nonwetland waters of the U.S. subject to ACOE jurisdiction total 0.058 ac. Of this area, 0.036 ac is potential wetland waters of the U.S., and 0.022 ac is potential nonwetland waters of the U.S. The three features are discussed in further detail below.

DS 7 (Feature A) is parallel to the north side of SR-74 approximately 100 ft west of the intersection with Via Errecarte. This unnamed feature is the result of an unidentified seep from the adjacent hillside to the north or an unidentified existing culvert. This feature appears to have a permanent or near-permanent water source and supports hydrophytic vegetation. All three wetland criteria (hydrophytic vegetation, hydric soils, and wetland hydrology) were determined to be present. Therefore,

FEATURE A (DS 7)

FEATURE B (DS 8)

TOYON DR

ORTEGA HWY

VIA ERRECARTE

AVD SIECA

LEGEND

- Biological Study Area
- Wetland Waters of the U.S.
- Nonwetland Waters of the U.S.
- CDFG Jurisdiction
- Sheetflow (Nonjurisdictional)
- 18" Culvert
- Proposed Project Features
- City Boundary
- Permanent Impact Area
- Temporary Impact Area

0 25 50 Feet

Map Index

1

2

SOURCE:Air Photo USA (2007), Thomas Bros (2007).

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FIGURE 2.3.2-1

Sheet 1 of 2

Lower SR-74 Widening Project

Potential CDFG and Corps Jurisdiction

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LEGEND

- Biological Study Area
- Wetland Waters of the U.S.
- Nonwetland Waters of the U.S.
- CDFG Jurisdiction
- Sheetflow (Nonjurisdictional)
- 18" Culvert
- Proposed Project Features
- City Boundary
- Permanent Impact Area
- Temporary Impact Area

0 25 50 Feet

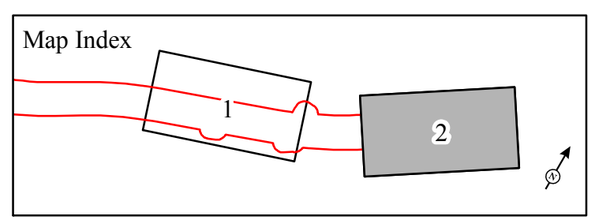

FIGURE 2.3.2-1

Sheet 2 of 2

Lower SR-74 Widening Project

Potential CDFG and Corps Jurisdiction

12-ORA-74 PM 1.0/1.9

EA# 086920

SOURCE:Air Photo USA (2007), Thomas Bros (2007).

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approximately 0.036 ac of DS 7 is potentially jurisdictional wetland waters of the U.S. This 0.036 ac area would also be subject to CDFG jurisdiction as streambed.

DS 8 (Feature B) consists of a concrete-lined channel that varies from approximately 3 ft in width on the eastern end to approximately 8 ft in width for the remaining portion of the feature.

This feature was determined to be potential jurisdictional nonwetland waters of the U.S. subject to ACOE jurisdiction and was determined to be nonriparian streambed (bed, bank and channel) that may potentially be considered subject to CDFG jurisdiction. The total area in Feature B potentially subject to ACOE jurisdiction is 0.005 ac of nonwetland waters of the U.S., and the area potentially subject to CDFG jurisdiction is 0.045 ac.

DS 10 (Feature C) conveys storm water and runoff flows from east to west originating from an 18-inch storm drain culvert. The feature is an approximately 400 ft long shallow depression that occurs on the SR-74 westbound shoulder. Since all three criteria were not satisfied, the feature is potentially a jurisdictional nonwetland waters of the U.S. and subject to CDFG jurisdiction due to the presence of a defined bed, bank, and channel. The total area potentially subject to ACOE jurisdiction is 0.017 ac, and the area potentially subject to CDFG jurisdiction is 0.017 ac.

The project is within the jurisdiction of the Santa Ana (Region 8) RWQCB, which is responsible for the administration of Section 401 of the CWA. Water quality certification under Section 401 of the CWA is required as part of an application process for federal licenses or permits, such as the Section 404 permit/LOP from ACOE this project will require.

The project area contains a total of 0.098 ac of streambed potentially subject to CDFG jurisdiction. It is anticipated that the CDFG would authorize the alteration of these features for project construction under a Section 1602 Lake or Streambed Alteration Agreement.

Initial consultation with resource agencies was conducted on March 15, September 21, and October 5, 2006. Follow up conversations were held with Stephanie Hall of ACOE (May 28, 2008) and Naeem Siddiqui of CDFG (May 29, 2008) to address the difference in the areas identified as potentially jurisdictional during the May 2008 delineation (as compared to preliminary determination made during a site visit in

2006). Both agreed that the routine jurisdictional delineation would provide adequate documentation of jurisdictional areas, and were in general agreement with the permitting approach. Consultation with resource agencies is discussed in detail in Section 5.5 of the NES and Chapter 5 of the NES Supplement.

The project is required by law to comply with all environmental permit conditions, such as those which will likely be issued by the CDFG, RWQCB, and ACOE. The permit conditions will likely require measures that would offset project impacts. However, because the environmental permit conditions are not known at this time, for purposes of providing suitable mitigation in compliance with CEQA, specific mitigation measures are proposed in Section 2.3.2.4 below. These measures are intended to be complementary to the anticipated environmental permit conditions, and to provide minimum requirements to ensure adequate mitigation in accordance with the requirements of CEQA.

2.3.2.3 Environmental Consequences

Build Alternatives 1 and 2 would have the same impact footprint to waters of the U.S. and streambed, and both would result in the same impacts to wetlands and nonwetland waters of the U.S. The Build Alternatives are designed to maintain pre-project downstream flow conditions by replacing the drainage functions with drainage pipes that will tie into the existing storm drain system.

Within the BSA, the drainage function of all drainages would be replaced by new pipes under Build Alternatives 1 and 2. With the completion of the project, these drainage systems will be modified and will have increased capacity. Existing conditions provide minimal habitat value, and the jurisdictional features do not provide high quality habitat for plants, wildlife, or special interest species. Additionally, due to the lack of native vegetation and the disturbed conditions typical of a roadside shoulder, the functions and values (as discussed in the Supplemental Wetlands Delineation and Assessment of Jurisdictional Waters Report, July 2008) of the jurisdictional features are minimal. It is anticipated that a Section 404 LOP pursuant to the SAMP will be required from the ACOE.

Temporary Impacts

No Build Alternative

The No Build Alternative does not propose any construction or other disturbance in the project area. Therefore, the No Build Alternative will result in no impacts related to wetlands or other waters of the U.S.

Build Alternatives 1 and 2

The Build Alternatives would result in 0.001 ac of temporary impacts to nonwetland waters of the U.S within Feature C (DS 10). This 0.001 ac of temporary impacts is also potentially subject to CDFG jurisdiction. An additional 0.001 ac of streambed habitat potentially subject to CDFG jurisdiction within Feature B (DS 8) will be temporarily impacted. Temporary impacts to CDFG potentially jurisdictional streambed total 0.002 ac. All other impacts will be permanent and are addressed below. Build Alternatives 1 and 2 would both require issuance of a 404 Permit from the ACOE and a 1602 Agreement from the CDFG to address temporary impacts as outlined in Section 2.3.2.4. Therefore, temporary impacts are considered less than significant.

Permanent Impacts

No Build Alternative

The No Build Alternative proposes no construction or other disturbance in the project area. Therefore, the No Build Alternative will result in no impacts related to wetlands or other waters of the U.S.

Build Alternatives 1 and 2

Both Build Alternatives have the same impact footprint to wetlands and other waters, and would permanently affect 0.056 ac of potential jurisdictional waters subject to ACOE jurisdiction. Approximately 0.021 ac of nonwetland waters of the U.S. will be permanently impacted by the proposed project. Approximately 0.035 ac of wetland waters of the U.S. will be permanently impacted by the proposed project. A Section 404 LOP or NWP for linear transportation projects (e.g. NWP 14) will be required from the ACOE.

Build Alternatives 1 and 2 will directly and permanently affect 0.085 ac of streambed potentially subject to CDFG jurisdiction. It is anticipated that the CDFG would authorize the alteration of these features for construction under a Section 1602 Lake or Streambed Alteration Agreement.

Table 2.3.2-1 identifies the permanent impacts to waters associated with Build Alternatives 1 and 2. Impacts to wetlands and other waters involve the loss of vegetation from filling of DS 7, 8, and 10 for SR-74 widening, and direct removal of vegetation due to site preparation such as vegetation clearing, tree removal, grubbing, and grading. As noted above, the area is subject to periodic mowing by the

Table 2.3.2-1 Impacts to Potential ACOE and CDFG Jurisdictional Areas

Feature	Permanent Impacts to Potential ACOE Wetland Waters (ac)	Permanent Impacts to Potential ACOE Nonwetland Waters (ac)	Temporary Impacts to Potential ACOE Nonwetland Waters (ac)*	Permanent Impacts to Potential CDFG Jurisdictional Streambed (ac)	Temporary Impacts to Potential CDFG Jurisdictional Streambed (ac)
DS 7	0.035	0	0	0.035	0
DS 8	0	0.005	0	0.034	0.001
DS 10	0	0.016	0.001	0.016	0.001
Total	**0.035**	**0.021**	**0.001**	**0.085**	**0.002**

ac = acre
ACOE = United States Army Corps of Engineers
CDFG = California Department of Fish and Game

Department, which may result in changes to the conditions of these drainages depending on current mowing practices. Build Alternatives 1 and 2 will have a less than significant impact on wetlands and other waters. Since most of the widening will occur on the north side of SR-74, all existing drainages would be modified and extended to intercept at the proposed edge of pavement. The drainage features shall be replaced by drainage pipes that tie into the existing storm drain system. An additional seven drainages would be added on the north side of SR-74 throughout the BSA.

Indirect effects to wetlands and other waters may include: (1) changes in hydrology from increased sediment entering drainage areas after vegetation clearing and/or (2) invasive, non-native plants transported into areas along the roadway with the movement of soil and/or placement of fill material that is present on construction equipment brought on-site or taken off-site and is inadvertently included in seed mixes. These indirect effects would only last during construction. Implementation of BMPs in the SWPPP and the measures outlined in Section 2.3.6, Invasive Species, would minimize these effects during construction.

Based on the above considerations, it is determined that Build Alternatives 1 and 2 include all practicable measures to minimize harm to wetlands that may result from such use. The drainage areas are highly disturbed, primarily concrete-lined, and are located in the roadway shoulder. Therefore, impacts to wetlands are considered less than significant under Build Alternatives 1 and 2.

2.3.2.4 Avoidance, Minimization, and/or Mitigation Measures

As discussed in previous sections, the Department has assumed responsibility for mitigation of impacts to biological resources. The project will comply with all permit requirements and applicable conditions of approval from relevant resource agencies, in addition to implementing mitigation measures identified in this environmental document to ensure adequate mitigation under CEQA. The CDFG and other resource agencies are likely to issue environmental permit conditions that require compensatory measures commensurate with project impacts (e.g., purchasing credits in an off-site mitigation bank or in-lieu fee program, or planning and funding off-site restoration efforts) to offset the permanent loss of jurisdictional streambed. Impacts to wetland waters of the U.S. are required to be offset through wetland creation at a minimum 1:1 ratio under the federal no-net-loss of wetlands policy.

In accordance with the agency coordination conducted to date, the Department shall be responsible for negotiating the terms of the environmental permits and funding implementation of permit conditions, subject to review by the Department. The Department will negotiate appropriate environmental permit conditions with the resource agencies during the permit application process. The Department will serve as the Applicant for the resource agency permits (e.g., Section 404 NWP or LOP, Section 401 Water Quality Certification, and Section 1602 Lake or Streambed Alteration Agreement). The Department will be responsible for implementing applicable conditions of the SAMP and the MSAA/HCP.

If the Department is required to plan and fund off-site mitigation as part of the environmental permit conditions, it is anticipated that they would be required to retain a qualified habitat restoration biologist to create a compensatory mitigation plan and technical specifications, which would be implemented by a qualified native habitat landscape contractor. The resource agencies and the habitat restoration biologist would determine success criteria for the compensatory mitigation and monitoring plan. The plan would include five-year monitoring and reporting requirements that would document when the mitigation site becomes self-sustaining habitat without further human intervention. The mitigation would not be considered successful until the resource agencies issue final approval in the form of release from further maintenance and monitoring obligations.

The project is required by law to comply with all environmental permit conditions, such as those that will likely be issued by the CDFG, RWQCB, and ACOE. The permit conditions will likely require measures that would offset project impacts.

However, because the environmental permit conditions are not known at this time, for purposes of providing suitable mitigation in compliance with CEQA, specific mitigation measures are proposed below. These measures are intended to be complementary to the anticipated environmental permit conditions, and to provide minimum requirements to ensure adequate mitigation in accordance with the requirements of CEQA.

Minimization measures described in Section 2.2.2, Water Quality, will minimize impacts to wetlands as a result of Build Alternatives 1 and 2..

In addition to the measures identified above, the following measures will minimize, avoid, and compensate for potential project impacts.

The project would result in permanent impacts to Waters of the United States (waters of the U.S.) requiring a Letter of Permission (LOP) from the ACOE to authorize the discharge of dredged and/or fill materials into waters of the U.S., pursuant to Section 404 of the Clean Water Act (CWA). A Compensatory Mitigation Plan addressing unavoidable impacts to waters of the U.S. and the program goal of no net loss of wetlands shall be prepared and approved by the ACOE prior to the issuance of the first grading permit. Mitigation ratios shall be determined by the ACOE, but shall be no less than 1:1 to offset loss of wetland waters of the U.S. The measures, which are anticipated conditions of the LOP, are described in the NES.

Best Management Practices (BMPs) will be implemented during construction. Please refer to Section 2.2.2, Water Quality, for a description of these BMPs.

No fueling, lubrication, storage, or maintenance of construction equipment within CDFG or ACOE jurisdictional areas is permitted. Spoil sites shall not be located within the CDFG or ACOE jurisdictional areas, or in areas where it could be washed into a drainage channel that outlets at San Juan Creek.

A qualified biologist shall be designated responsible for overseeing biological monitoring, regulatory compliance, and restoration activities associated with the proposed project in accordance with the adopted mitigation measures, applicable regulations and laws, and environmental permit conditions. The biologist will provide periodic reports to the Department, the County, ACOE, CDFG, and RWQCB to document monitoring efforts and project compliance with the adopted mitigation measures, applicable regulations and laws, and environmental permit conditions.

Biological resources shall be protected during construction. To ensure this protection, a Biological Resources Construction Plan that provides for the protection of the resource and establishes the monitoring requirements will be completed to be reviewed and approved by the resource agencies prior to ground disturbance.

2.3.2.5 Level of Significance

The No Build Alternative will have no impact on wetlands and other waters.

The Build Alternatives will have a less than significant temporary, permanent, or direct impact with incorporation of compensation for wetlands and other waters. The Build Alternatives will not result in temporary, permanent, or indirect impacts to wetlands.

2.3.3 Plant Species

This section of the document discusses plant species with the potential to occur within the BSA, and it summarizes the results of research and field work conducted to date, the NES (June 2007), and the NES Supplement (August 2008).

2.3.3.1 Regulatory Setting

The USFWS and the CDFG share regulatory responsibility for the protection of special-status plant species. These 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 species are formally listed or proposed for listing as endangered or threatened under the FESA and/or the California Endangered Species Act (CESA). Species listed or proposed for listing as threatened or endangered are discussed in detail in Section 2.3.5 (Threatened and Endangered Species).

This section discusses other special-status plant species, including CDFG fully protected species and species of special concern, USFWS candidate species, and nonlisted California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at United States Code (USC) 16, Section 1531 et seq. See also 50 CFR Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050 et seq. Department projects also are subject to the Native Plant Protection Act, found at Fish and Game Code Sections 1900–1913, and CEQA Public Resources Code Sections 2100–21177.

2.3.3.2 Affected Environment

Special status plant species are considered absent from the BSA. This conclusion is based on the following: (1) the lack of observations of such species during the field surveys, including focused plant surveys conducted during the spring of 2008; (2) the lack of reports of such species from within the greater study area; and (3) the absence of suitable habitat for such species (i.e., the disturbed conditions and associated absence of natural plant communities in the BSA).

Though not considered a special-status plant species, oak trees are protected by the CDFG when they occur in CDFG jurisdictional areas. A linear swath of 8 coast live

oak *(Quercus agrifolia)* trees is found along the property fence at the southeastern portion of the BSA in upland areas. These oaks are not within CDFG jurisdictional areas, but will be subject to the City's Tree Preservation Ordinance. The understory of these oak trees is composed of non-native grasses and trees in containers on "The Oaks" property (28650 Ortega Highway).

Tatsumi and Partners, Inc. (Tatsumi) conducted an inventory of the trees within the project area in 2007, concurrently with the City and the Department, to survey trees that would require removal as a result of project activities. It was determined that 111 trees were located within the BSA, including two oak trees, are anticipated to require removal. Temporary impacts may also occur within the dripline of an additional six oak trees.

2.3.3.3 Environmental Consequences

Tatsumi conducted an inventory of the trees within the project area in 2007, concurrently with the City and the Department, and it was estimated that 111 trees in the BSA would require removal as a result of project activities associated with Build Alternatives 1 and 2. This determination was based on the location of the trees relative to the project footprint, as well as the nature of activities to be conducted. For trees where only minimal grading (e.g., fill of less than 3 ft) is proposed, if the tree was otherwise in good health, it was assumed that removal would not be required. With the exception of western sycamore *(Platanus racemosa)* and coast live oak trees, the species to be removed are not native. None of the nonnative tree species are on the City's list of "recommended" species for landscaping, and two species, eucalyptus (*Eucalyptus* sp.) and Peruvian pepper *(Schinus molle)* are on the City's "not recommended" list.

Temporary Impacts

No Build Alternative

The No Build Alternative proposes no construction or other disturbance in the project area. Therefore, the No Build Alternative will not result in temporary impacts related to special-status plant species or oak trees.

Build Alternatives 1 and 2

There are no special-status plant species on the project site. Therefore, the Build Alternatives would not result in temporary impacts on special-status plant species. However, temporary effects may occur as ground disturbance activities occur within or near the drip line of the oak trees at "The Oaks" property; however, with

application of the avoidance measures outlined in Section 2.3.3.5, temporary oak impacts are considered less than significant.

Permanent Impacts

No Build Alternative

The No Build Alternative proposes no construction or other disturbance in the project area. Therefore, the No Build Alternative will not result in impacts related to special-status plant species or oak trees.

Build Alternatives 1 and 2

Eight coast live oak trees may be impacted by ground disturbance activities within the dripline of the trees, associated with roadway widening. Two of these coast live oak trees are anticipated to require removal. Direct effects may also occur as ground disturbance activities occur within the drip line of the other six coast live oak trees at "The Oaks" property; however, with implementation of the compensation measures outlined in Section 2.3.3.5 permanent oak tree impacts are considered less than significant.

There are no special-status plant species on the project site. Therefore, the Build Alternatives would not result in permanent impacts on special-status plant species.

Build Alternatives 1 and 2 would result in impacts to 111 trees. Most of these trees are part of maintained ornamental landscaping along the public right-of-way and on private property; some occur in unmaintained areas along the highway. Table 2.3.3-1 lists the number of trees that will be removed by species. It is anticipated that impacts will include the direct removal of the 111 trees from within the permanent impact area. It was determined that there are no species with any listing status (CNPS, USFWS, or CDFG) within the BSA. Additionally, there are many oak trees within and adjacent to the BSA that would not be impacted by the proposed project. A Tree Removal Permit will be obtained from the City prior to tree removal. Removal of these trees is considered less than significant impact for both the Build Alternatives.

With the exception of two coast live oaks and six western sycamores, trees to be removed consist of nonnative species that are not on the City's list of "recommended" species for landscaping. Of the trees to be removed, 44 trees are eucalyptus or Peruvian pepper trees, which are on the City's list of "not recommended" species for landscaping. Removal of these trees may be considered beneficial in preventing the spread of these species in the area. Impacts to all trees will be replaced in accordance with the City's Tree Preservation Ordinance.

Table 2.3.3-1 Trees to be Removed

Scientific Name	Common Name	Number of Trees to be Removed[1]
Phoenix canariensis	Canary Island date palm	5
Ulmus parvifolia	Chinese elm	11
Quercus agrifolia	Coast live oak	2
Eucalyptus spp.	Eucalyptus	14
Olea europaea	European olive	1
Schinus molle	Peruvian pepper tree	30
Schinus terebinthefolius	Brazilian pepper tree	4
Platanus racemosa	Western sycamore	6
Platanus x acerfolia	London plane	10
Phoenix roebelenii	Pygmy date palm	1
Syagrus romanzoffianum	Queen palm	5
Yucca gloriosa	Spanish dagger yucca	2
Liquidambar styraciflua	Sweetgum	9
Myoporum insulare	Myoporum	3
Washingtonia robusta	Mexican fan palm	8
TOTAL		111

Source: Tatsumi (2007)
[1] Number of trees to be removed as determined in the field during a site visit conducted by Tatsumi, the City, and the Department

In addition to the removal of trees, ground-disturbing activities within and along the edge of the impact area may adversely affect trees through impacts to canopy and roots. For trees in proximity to or within the project impact limits, these impacts may result in the loss of tree viability and may require eventual removal of trees and will be potentially significant.

2.3.3.4 Avoidance, Minimization, and/or Mitigation Measures

Impacts to coast live oak trees will be compensated at a minimum 1:1 ratio. Impacts to trees will be minimized through the implementation of the following minimization and compensation measures.

Protective fencing shall be placed around the dripline of oaks not identified for removal to prevent compaction of the root zone and designated as an environmentally sensitive area (ESA). In addition, trees that occur in containers will be relocated prior to the start of construction.

Any impacts to coast live oak trees will be mitigated in proximity to the BSA, consistent with the City Tree Removal Permit process. In accordance with the City Tree Removal Permit process, the Department will provide replacement trees at a

City-approved ratio for removed trees. Coast live oak trees shall be replaced at a minimum 1:1 ratio;

If any special status plants are observed within the BSA during pre-construction surveys, the locations of the populations and an estimation of the population size shall be mapped and shown on construction drawings. This information shall be used for appropriate avoidance during construction. If a species is to be avoided during construction, it shall be shown as an environmentally sensitive area (ESA) on the construction plans. If the population cannot be avoided during construction, this information shall be used for appropriate seed collection and salvage measures.

2.3.3.5 Level of Significance

The No Build Alternative will not have an impact on plant species.

The Build Alternatives would have a less than significant temporary, permanent, or direct impact to plant species with the incorporation of compensation and avoidance measures, and no temporary, permanent, or indirect impacts to plant species.

2.3.4 Animal Species

This section of the document discusses animal species with the potential to occur within the BSA and summarizes the results of research and field work conducted to date, the NES (June 2007), and the NES Supplement (July 2008).

2.3.4.1 Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The USFWS, NMFS and CDFG are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the FESA or the CESA. Species listed or proposed for listing as threatened or endangered are discussed in detail in 2.3.5 (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 NMFS candidate species.

Federal laws and regulations pertaining to wildlife include the following:

- FESA.
- Migratory Bird Treaty Act (MBTA).
- Fish and Wildlife Coordination Act.

State laws and regulations pertaining to wildlife include the following:

- CESA.
- CEQA.
- Sections 1600 to 1603 of the Fish and Game Code.
- Sections 4150 and 4152 of the Fish and Game Code.

Raptors and many other native bird species are protected during nesting by State law and/or by the federal MBTA. While loss of trees on site is considered minimal given the extensive stands of woodland, grassland, and coastal sage scrub in the region, destruction of active nests for most avian species is legally prohibited.

Refer to Section 2.3.1, Natural Communities, for a discussion of the Southern Orange County Subregional NCCP/MSAA/HCP.

2.3.4.2 Affected Environment

Special-status animal species are endangered or rare as defined by CEQA and its Guidelines, or are of current local, regional, or state concern. Animal species are deemed to be of special-status based on (1) federal, state, or local laws regulating their survival, (2) limited distribution, and/or (3) habitat requirements.

According to the NES and the NES Supplement, no special-status animal species are considered present within the BSA based on lack of suitable habitat within the BSA for these species and lack of direct observation of these species during field surveys. However, raptors and other birds protected by the MBTA and the California Fish and Game Code may use the ornamental trees and shrubs in the BSA for nesting habitat.

Department Biologists and Environmental Staff visited the project site on several occasions in the summer and fall of 2006. Animal and plant species typical of urban areas were present such as the cabbage white butterfly *(Pieris rapae),* swallowtail *(Papilio rutulus rutulus),* house finch *(Carpodacus mexicanus),* common raven *(Corvus corax),* American crow *(Corvus brachyrhynchos),* black phoebe *(Sayornis nigricans),* western fence lizard *(Sceloporus occidentalis),* and red-winged blackbird *(Agelaius phoeniceus).* Additional surveys were conducted in the spring and summer of 2008 in support of the NES Supplement (August 2008). Species observed included American crow, mourning dove *(Zenaida macroura),* Anna's hummingbird *(Calypte anna),* Nuttall's woodpecker *(Picoides nuttallii),* black phoebe, bushtit *(Psaltriparus minimus),* house finch, lesser goldfinch *(Carduelis psaltria),* and western fence lizard, as well as other species commonly found in urban and developed areas. Raptors, including red-tailed hawk *(Buteo jamaicensis),* red-shouldered hawk *(Buteo lineatus),* and Cooper's hawk *(Accipiter cooperii),* were also observed during the 2008 surveys. Other locally common species may also occur and nest within the BSA; however, no special-status bird species are expected to nest within the BSA.

Raptors may utilize the BSA; however, the BSA contains marginal habitat for nesting, and more suitable habitat (tall trees further from the highway and upslope) occurs in the vicinity. Raptors were not found to be nesting in the BSA. Raptors observed in the BSA are identified on Table 2.3.4-1.

Table 2.3.4-1 Raptors Observed in the Biological Study Area

Common Name	Scientific Name	Status[1]	Year Observed[2]
Red-tailed hawk	*Buteo jamaicensis*	None*	2006, 2008
Red-shouldered hawk	*Buteo lineatus*	None*	2006
Cooper's hawk	*Accipiter cooperii*	None*	2008

[1] Species subject to protection when nesting pursuant to the MBTA and California Fish and Game Code
[2] Based on surveys conducted for this project by Department biologists in 2006 and LSA biologists in 2008

The BSA contains primarily disturbed vegetation and developed areas along SR-74 along with landscaped areas. As discussed above, raptors have the potential to occur in the BSA including red-shouldered hawk and red-tailed hawk. Other raptors, such as American kestrel *(Falco sparverius)* and nocturnal raptors such as barn owls *(Tyto alba)* and great horned owl *(Bubo virginianus),* are known to forage in urban conditions similar to those in the BSA, and may also occur within the BSA. Raptors tend to use and forage over a variety of habitats including grassland, scrub, and woodland. It is unlikely that the raptors observed during the surveys nest in the BSA due to the marginal quality of habitat on site and the presence of preferable nesting sites further from the highway.

The BSA does not contain areas with hydrology suitable to be utilized by fish. The BSA contains box culverts, corrugated metal pipes, and concrete-lined ditch structures; however, these do not contain suitable hydrology to provide Essential Fish Habitat and/or serve as major wildlife corridors.

2.3.4.3 Environmental Consequences

Temporary Impacts

No Build Alternative

The No Build Alternative proposes no construction or other disturbance in the project area. Therefore, the No Build Alternative will not result in temporary impacts related to special-status animal species.

Build Alternatives 1 and 2

As discussed earlier, there are no special-status animal species on the project site. Therefore, the Build Alternatives would not result in impacts on special-status animal species.

Raptors and other birds protected by the MBTA may nest in existing trees and shrubs within and adjacent to the BSA. Impacts to these species can occur as a result of direct removal of nests (e.g., during vegetation clearing) or nest failure caused by excessive disturbance of the nesting birds (e.g., from excessive noise and disruption from increased human activities). Within the BSA, construction noise may affect nesting birds in the following ways: (1) reduce communication distance; (2) distort sounds; and/or (3) cause an avoidance pattern due to annoyance. Construction activities may result in a temporary noise impact to nesting birds. Temporary impacts to birds nesting within or adjacent to the BSA may occur if construction, particularly vegetation clearing, occurs during the nesting season. The measures outlined in Section 2.3.4.4 will ensure that the Build Alternatives avoid impacts to nesting raptors and other birds protected by the MBTA during construction activities, and temporary impacts are considered less than significant.

Small mammals, reptiles, and amphibians and other animals of slower mobility that live in the BSA may be temporarily affected as habitat is altered or removed. More mobile wildlife species may be able to vacate the areas and move into adjacent areas of open space. Any displacement of wildlife into adjacent areas of open space is anticipated to occur only during construction. Lighting may be installed during night work that may temporarily disrupt animal behavior (including foraging and nesting); however, lighting will be shielded away from natural areas. Any displacement of wildlife into adjacent areas of open space (primarily at RMV) is anticipated to be temporary and less than significant.

During construction, there may be indirect effects to riparian-dependent species downstream of the BSA, including minimal increases to sediment levels in tributary drainages to San Juan Creek, minimal changes in water temperature, flow velocity, chemistry, or associated terrestrial/aquatic vegetation that would reduce the habitat quality for riparian-dependent species. Any of these indirect effects would be limited to the construction time period and considered less than significant. Although project work will occur in tributaries to San Juan Creek, fish do not use these areas due to lack of suitable hydrology. Implementation of the BMPs in the SWPPP and measures included in Section 2.3.2, Wetlands and Other Waters, would avoid and minimize these effects during construction.

Permanent Impacts

No Build Alternative

The No Build Alternative proposes no construction or other disturbance in the project area. Therefore, the No Build Alternative will not result in permanent impacts related to special-status animal species.

Build Alternatives 1 and 2

As discussed earlier, there are no special-status animal species on the project site. Therefore, the Lower SR-74 Widening project will not result in impacts on special-status animal species.

Direct effects involve the physical loss of habitat, possibly used by wildlife, due to site clearing, tree removal, grubbing, culvert improvements, and road widening. Construction of the Build Alternatives would result in the removal of habitat that may provide nesting and foraging opportunities for a variety of species. It is estimated that 111 trees, including two coast live oaks will be removed during construction. Six additional coast live oak trees may be impacted by work proposed within the dripline of the trees. Trees within the BSA provide nesting and foraging habitat. However, these resources are less suitable for nesting than other resources throughout the region, due to their proximity to the roadway and the resulting noise and human disturbance. Potential impacts from tree removal will be minimized and avoided through the planting of replacement trees. Therefore, impacts to nesting and foraging habitat are considered less than significant.

The proposed project does not include the construction of median barriers and is not anticipated to affect long-term wildlife movement. SR-74 is an existing roadway, and no increase in raptor-vehicle collisions is anticipated once construction is complete.

With implementation of the project noise barriers, noise levels pre- and post-construction would remain similar to existing conditions. There will be no long-term, permanent impacts from noise.

2.3.4.4 Avoidance, Minimization, and/or Mitigation Measures

The following measures would be implemented in addition to those listed in Section 2.2.2, Water Quality; 2.3.1, Natural Communities; 2.3.2, Wetlands and Other Waters; and 2.3.3, Plant Species.

If feasible, vegetation removal would be avoided during the primary nesting season for local birds (February 15 through September 1) and most raptors, which are

protected by the Migratory Bird Treaty Act and Section 3503.5 of the California Fish and Game Code. If vegetation removal must occur during this period, then pre-construction surveys shall be conducted surveyed by a qualified biologist in the appropriate habitats no more than 7 days prior to clearing within and up to approximately 50 ft (15.2 meters [m]) from the project boundary or an area coordinated with the resource agencies, in order to identify nesting birds and/or raptors within or adjacent to the proposed project. In the event of discovery of active nests in the areas to be cleared, protective measures as outlined by the qualified Biologist shall be taken, as coordinated with the resource agencies. Clearing and grubbing limits may be established up to approximately 500 ft (150 m) in any direction of nests, or other buffer distance coordinated with the resource agencies as directed by the project engineer.

Lighting may be installed during night work that may temporarily disrupt animal behavior (including foraging and nesting); however, lighting will be shielded away from natural areas. Any displacement of wildlife into adjacent areas of open space (primarily at RMV) is anticipated to be temporary and less than significant.

To reduce impacts to wildlife, all construction-related activities shall be confined to the proposed impact boundaries by installing fencing along the boundary in locations where the impact area abuts vegetated areas to prevent any construction activities from encroaching into adjacent habitat areas. In addition, construction access points shall be limited in proximity to the potential habitat for wildlife to the maximum extent feasible as directed by the project engineer.

2.3.4.5 Level of Significance

The No Build Alternative will have no impact to animal species.

With implementation of minimization measures, temporary permanent, direct, or indirect impacts to animal species are considered less than significant.

2.3.5 Threatened and Endangered Species

This section of the document discusses T/E species as well as designated critical habitat with the potential to occur within the BSA, and it summarizes agency consultation conducted to date, the NES (June 2007), and the NES Supplement (August 2008).

2.3.5.1 Regulatory Setting

The primary federal law protecting threatened and endangered species is the FESA (United States Code [USC], Section 1531, et seq. and 50 Code of CFR Part 402). FESA and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems on which they depend. Under Section 7 of the FESA, federal agencies are required to consult with the USFWS and the NMFS 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 T/E species. For projects where no federal action is involved, project proponents are required to consult with the USFWS and NMFS pursuant to Section 10 of the FESA. The outcome of consultation under Sections 7 or 10 is a Biological Opinion or an incidental take permit. Section 3 of FESA defines take as to "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. The CDFG is the agency responsible for implementing CESA. Section 2081 of the Fish and Game Code prohibits take of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions, an incidental take permit is issued by CDFG. For projects requiring a Biological Opinion under Section 7 of FESA, CDFG also may authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

2.3.5.2 Affected Environment

During preparation of the NES, the USFWS was contacted to provide a species list for the proposed project, which was provided on August 7, 2006. During the subsequent preparation of the 2008 NES Supplement, the USFWS was contacted to determine whether an update to the species list was required. On April 8, 2008, the USFWS indicated that coastal California gnatcatcher *(Polioptila californica californica)* critical habitat no longer is designated within the BSA, and no other revisions to the list are necessary.

Of the 11 possible federal or State T/E species that may occur in the BSA according to the USFWS list, none were observed during surveys of the BSA, and no suitable habitat was observed. USFWS protocol surveys were not conducted based on the lack of suitable habitat in the BSA and based on the Rancho Mission Viejo (RMV) T/E species survey results indicating absence in areas abutting the BSA. Due to the urbanized nature of the project area, federally and/or State-listed T/E species are not anticipated to occur in the BSA. Special status species with the potential to occur in the vicinity of the biological resources project study area are identified on Table 2.3.5-1.

As confirmed in the NES and the NES Supplement, no federal- or State-listed T/E species are present in the BSA for the SR-74 Widening project. This conclusion is based on (1) the lack of observation of such species during the field surveys, (2) the lack of reports of such species near the BSA from within the greater study area, and (3) the absence of suitable habitat for such species (i.e., the disturbed conditions and associated absence of natural plant communities in the BSA).

2.3.5.3 Environmental Consequences

Temporary Impacts

No Build Alternative

The No Build Alternative proposes no construction or other disturbance in the project area. Therefore, the No Build Alternative will not result in impacts related to T/E species.

Build Alternatives 1 and 2

There are no State or federal T/E-listed species in the BSA; therefore, no temporary impacts to T/E species are anticipated as a result of the Lower SR-74 Widening project. There is no critical habitat in the BSA.

Table 2.3.5-1 Project Study Area T/E Species

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/ Absent	Rationale
Amphibians					
Arroyo toad	*Bufo californicus*	FE	Flood terraces, sandy pools	A	Lack of suitable habitat
Birds					
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE	Low-elevation riparian habitats	A	Lack of suitable habitat
Bald eagle	*Haliaeetus leucocephalus*	FT	Lakes, reservoirs	A	Lack of suitable habitat
Coastal California gnatcatcher	*Polioptila californica californica*	FT	Coastal sage scrub	A	Lack of suitable habitat
Least Bell's vireo	*Vireo bellii pusillus*	FE	Riparian	A	Lack of suitable habitat
Crustaceans					
San Diego fairy shrimp	*Branchinecta sandiegonensis*	FE	Vernal Pools	A	Lack of suitable habitat
Riverside fairy shrimp	*Streptocephalus woottoni*	FE	Vernal Pools	A	Lack of suitable habitat
Fish					
Southern steelhead	*Oncorhynchus mykiss*	FE	Freshwater streams, coastal lagoons, drainages	A	Lack of suitable habitat
Plants					
Thread-leaved brodiaea	*Brodiaea filifolia*	FT, SE	Chaparral, woodlands, coastal scrub	A	Lack of suitable habitat
Laguna Beach live-forever	*Dudleya stolonifera*	FT, ST	Chaparral, woodlands, coastal scrub	A	Lack of suitable habitat
Big-leaved crownbeard	*Verbesina dissita*	FT, ST	Chaparral, woodlands, coastal scrub	A	Lack of suitable habitat

Source: USFWS Species List for the State Route 74 Widening Project in the City of San Juan Capistrano, Orange County, California (August 7, 2006)

Notes:

Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC), Federal Species of Concern (FSC); State Endangered (SE); State Threatened (ST); Fully Protected (FP); State Rare (SR); California Species of Special Concern (SSC); California Native Plant Society (CNPS).

Habitat Present/Absent: Absent [A] means no further work needed. Present [P] means general habitat present and species may be present.

Permanent Impacts

No Build Alternative

The No Build Alternative does not propose any construction or other disturbance in the project area. Therefore, the No Build Alternative will not result in impacts related to T/E species.

Build Alternatives 1 and 2

There are no State or federal T/E-listed species in the BSA; therefore, no long-term or permanent impacts to T/E species are anticipated as a result of the Lower SR-74 Widening project. There is no critical habitat in the BSA.

2.3.5.4 Avoidance, Minimization, and/or Mitigation Measures

There are no federal or State T/E species within the BSA. The project is not anticipated to permanently, temporarily, directly or indirectly affect T/E species; therefore, no avoidance, minimization, and/or mitigation measures are proposed.

2.3.5.5 Level of Significance

The No Build and Build Alternatives would have no temporary permanent direct or indirect impacts to T/E species.

2.3.6 Invasive Species

This section of the document discusses invasive species with the potential to occur within the BSA and summarizes the results of field work conducted to date, the NES (June 2007), and the NES Supplement (August 2008).

2.3.6.1 Regulatory Setting

On February 3, 1999, President Clinton signed Executive Order (EO) 13112, requiring federal agencies to combat the introduction or spread of invasive species in the United States. This EO 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."

The California Invasive Plant Inventory updates the 1999 *Exotic Pest Plants of Greatest Ecological Concern in California*. Each plant on the list received an overall rating of High, Moderate or Limited based on a distinct criteria system of evaluation. The meaning of these overall ratings is described below. In addition to the overall ratings, specific combinations of section scores that indicate significant potential for invading new ecosystems trigger an Alert designation so that land managers may watch for range expansions. Some plants were categorized as Evaluated but Not Listed because either we lack sufficient information to assign a rating, or the available information indicates that the species does not have significant impacts at present (Cal-IPC 2008).

- **High:** These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
- **Moderate:** These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.
- **Limited:** These species are invasive but their ecological impacts are minor on a statewide level, or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of

invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

2.3.6.2 Affected Environment

According to the NES and the NES Supplement, the Lower SR-74 Widening project is located in an area that predominantly supports nonnative species, which are found in the ornamental and ruderal vegetation along the alignment.

Observed plants within the BSA included in the CalEPPC 1999 *Exotic Pest Plants of Greatest Ecological Concern in California* A-1 list include iceplant (*Carpobrotus edulis*, also known as Hottentot fig), pampas grass (*Cortaderia* sp.), eucalyptus (*Eucalyptus* sp., also known as gum tree or Tasmanian blue gum), wild fennel *(Foeniculum vulgare),* and African fountain grass *(Pennisetum setaceum).* The area of ice plant is approximately 30 ft. by 30 ft.; is located on the north side of SR-74, next to the roadway. The following observed plants are CalEPPC A-2: Australian saltbush *(Atriplex semibaccata),* mustard (*Brassica* sp.),[1] and myoporum *(Myoporum laetum).* The following observed plants are included in CalEPPC list B: black mustard *(Brassica nigra),*[2] olive *(Olea europaea),* castor bean *(Ricinus communis),* Peruvian pepper tree *(Schinus molle),* and Brazilian pepper tree *(Schinus terebinthifolius).* No plants observed in the project area are included on the Red Alert list. Observed annual grasses listed by CalEPPC included oat (*Avena* sp.). Observed plants considered but not listed by CalEPPC included bristly ox-tongue *(Picris echioides).*

A species of sowthistle (*Sonchus* sp.) observed on site may be an A-list CDFA noxious species. The listed species is perennial sowthistle *(Sonchus arvensis).* One species found on site is listed in the CDFA noxious species list as "B": knotweed (*Polygonum* sp.). Two species found on the site are listed in the CDFA noxious species list as "C": Russian thistle *(Salsola tragus)* and Bermuda grass *(Cynodon dactylon).*

As mentioned above, the California Invasive Plant Inventory updates the 1999 *Exotic Pest Plants of Greatest Ecological Concern in California*. Observed plants with a "High" status include iceplant, pampas grass, and wild fennel. Observed plants with a

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1 *Brassica tournefortii* is included on list A-2.

2 Brassica (mustard) includes several species that are listed as "High," "Moderate," and "Limited." See footnote 1.

"Moderate" status include Australian saltbush, eucalyptus,[1] black mustard, garland chrysanthemum *(Chrysanthemum coronarium),* Bermuda grass, redstem stork's bill *(Erodium cicutarium),* wild barley (*Hordeum* sp.), and African fountain grass. Observed plants with a "Limited" status include eucalyptus, olive, Canary Island date palm *(Phoenix canariensis),* bristly ox-tongue, English plantain *(Plantago lanceolata),* wild radish *(Raphanus sativus),* castor bean, Peruvian pepper tree, and Brazilian pepper tree. The common dandelion *(Taraxacum officinale)* was evaluated but not listed by CalEPPC.

No substantial populations of invasive wildlife have been documented in the BSA. House sparrows *(Passer domesticus),* rock pigeons *(Columba livia),* and European starlings *(Sturnus vulgaris),* as well as Virginia opossums *(Didelphis virginiana)* and feral dogs *(Canis lupus familiaris)* and cats *(Felis catus)* are known to occur in urban areas, and they occur throughout Southern California.

2.3.6.3 Environmental Consequences

Temporary Impacts

No Build Alternative

The No Build Alternative proposes no construction or other disturbance in the project area. Therefore, the No Build Alternative would result in no temporary impacts related to invasive species.

Build Alternatives 1 and 2

The implementation of the Build Alternatives has the potential to spread invasive species by the entering and exiting of construction equipment contaminated by invasives, the inclusion of invasive species in seed mixtures and mulch, and the improper removal and disposal of invasive species so that seed is spread along the highway. In accordance with the measures listed in Section 2.3.6.4, invasive species and noxious weeds listed by CalEPPC and CDFA will not be used in landscaping or erosion control efforts. With implementation of the measures described below, potential temporary invasive species impacts are considered less than significant.

[1] *Eucalyptus globulus* has a "Moderate" status and *E. camadulensis* has "Limited" status.

Permanent Impacts

No Build Alternative

The No Build Alternative proposes no construction or other disturbance in the project area. Therefore, the No Build Alternative would result in no permanent impacts related to invasive species.

Build Alternatives 1 and 2

Invasive species, including ice plant and pampas grass, would be removed by the proposed project. Invasive species have the potential to be imported to the project area by contaminated construction equipment or imported materials such as soils. The dispersal of invasive species propagules in the BSA may be furthered by roadway vehicles, with inadvertent mixing of invasive species in seed mixes applied adjacent to the highway and the spread of invasive species during weed-control programs such as mowing. The increased risk of introduction or spread of invasive species would occur only during construction. The risks would be avoided or minimized with the application of the measures discussed in Section 2.3.6.4 below. In addition, areas of plant species that are non-native to the area will be removed by the proposed project and not re-planted in the BSA once construction is complete.

Eradication of these species from the BSA is expected to have little or no effect on their distribution locally or in the region. With implementation of the measures outlined below, permanent impacts to invasive species from the Build Alternatives are considered less than significant.

2.3.6.4 Avoidance, Minimization, and/or Mitigation Measures

The following measures would be implemented in addition to those listed in Section 2.3.1 Natural Communities, 2.3.2 Wetlands and Other Waters, and 2.3.3 Plant Species. The following measures will avoid and minimize the potential spread of invasive species from spreading from or into the project area:

Bare soil will be landscaped with California Department of Transportation-recommended seed mix from locally adopted species to preclude the invasion of noxious weeds. In compliance with the Executive Order on Invasive Species, EO 13112, and subsequent guidance from FHWA, the landscaping and erosion control included in the project will not use species listed as noxious weeds, and no invasive species will be planted within the state right-of-way or in areas where the species may enter a drainage area.

In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment, and eradication strategies to be implemented should an invasion occur. Before mobilizing to arrive at the site and before leaving the site, construction equipment will be cleaned of mud or debris that may contain invasive plants and/or seeds, and inspected to reduce the potential of spreading noxious weeds. To ensure implementation of these measures, the project contractor shall provide a weed abatement program to be approved by the Department engineer prior to the start of ground disturbance.

The Department will use site-specific plant materials (e.g., propagules and seed) adapted to local conditions in order to increase the likelihood that revegetation will be successful, and to maintain the genetic integrity of the local ecosystem.

Seed purity will be certified by planting seed labeled under the California Food and Agricultural Code or seed tested within a year by a seed laboratory certified by the Association of Official Seed Analysts or by a seed technologist certified by the Society of Commercial Seed Technologists.

Trucks with loads carrying vegetation will be covered, and vegetative materials removed from the site will be disposed of, in accordance with all applicable laws and regulations.

2.3.6.5 Level of Significance

The No Build Alternative will have no impacts from invasive species.

With implementation of minimization measures, temporary, permanent, direct, or indirect impacts from invasive species are considered less than significant.

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2.4 Cumulative Impacts

2.4.1 Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of a 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, traffic patterns, housing availability, and employment.

California Environmental Quality Act (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.

Construction and operation of any of the Build Alternatives would result in direct and indirect impacts that could contribute to cumulative effects to the built and natural environment when combined with other related past, present, and reasonably foreseeable future actions.

2.4.2 Methodology

Cumulative impacts were identified by comparing the impacts of the proposed project and other past, current, or proposed actions in the area to establish whether, in the aggregate, they could result in cumulative environmental impacts. Both direct and indirect impacts are assessed. The cumulative effects analysis focuses on those issues

and resources that would be affected by the aggregation of stress factors on the environment and does not address in detail those topics that would not have additional environmental effects from the cumulative condition. The analysis provided in this section considered the effects of the other projects and the Build Alternatives in assessing whether a particular environmental parameter would experience cumulative adverse impacts. Specific geographic boundaries for cumulative effects are determined for each environmental topic analyzed and may vary accordingly.

Future actions anticipated to occur include further growth within the City and County. The growth would require continued expansion of supporting infrastructure such as roadways, commercial uses, public services, and utilities. The anticipated growth is reflected in the regionally adopted growth projections and is planned for in the City and County General Plans.

The following eight steps serve as guidelines for identifying and assessing cumulative impacts and are based on the *Caltrans Standard Environmental Reference – Cumulative Impacts* (Caltrans, April 2008).[1]

- Identify the resources to consider in the cumulative impact analysis by gathering input from knowledgeable individuals and reliable information sources. This process is initiated during project scoping and continues throughout the CEQA analysis.
- Define the geographic boundary or Resource Study Area (RSA) for each resource to be addressed in the cumulative impact analysis.
- Describe the current health and historical context of each resource.
- Identify the direct and indirect impacts of the proposed project that might contribute to a cumulative impact on the identified resources.
- Identify a set of other current and reasonably foreseeable future actions or projects and their associated environmental impacts to include in the cumulative impact analysis.
- Assess cumulative impacts.
- Report the results of the cumulative impact analysis.
- Assess the need for mitigation and/or recommendations for actions by other agencies to address a cumulative impact.

[1] http://www.dot.ca.gov/ser/forms.htm; accessed in June 2008.

2.4.3 Affected Environment

For the consideration of impacts associated with projections, the Orange County Projections-2006 (OCP-2006) (Center for Demographic Research [CDR], 2006) was used. The local General Plans are consistent with the OCP-2006 projections. In addition, there are two regional planning documents that influence the potential for cumulative impacts: the Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan (NCCP/MSAA/HCP) and the SAMP. These regional planning programs also factored in growth and cumulative impacts to sensitive resources in the area. These planning documents were undertaken at a watershed level; therefore, they included areas beyond the City and adjacent unincorporated Orange County.

Not all projects would contribute to cumulative impacts for each topical area. For example, not all projects would have impacts on biological resources. Not all impacts associated with each cumulative project would contribute to a cumulative impact. Some of the impacts are very site-specific and would not compound the impacts associated with the proposed project. In other cases, short-term impacts would not contribute to cumulative impacts because the construction of the cumulative project and the road widening would not occur in the same time period or be proximate to each other.

It is important to note that a quantification of cumulative impacts is not feasible for some impact topics and would be speculative. In some cases, no environmental document has been prepared and impacts are unknown. In other instances, the impacts have not been quantified. Therefore, much of the cumulative evaluation is a qualitative judgment regarding the combined effects of the relationship among the projects included in the Resource Study Area (RSA) for each resource. In some cases, application of the identified project mitigation and/or minimization program may reduce the cumulative impacts as well as the project impact.

The cumulative analysis is limited to the resources that require avoidance, minimization, and mitigation measures to analyze whether the impact contribution to the resources, when considered with the proposed project and other cumulative projects, could be cumulatively considerable. In addition, temporary construction impacts of the project are not considered contributory to cumulative impacts, given the limited duration, localization, and small scale of these impacts as well as the avoidance and minimization measures applied to them. Therefore, the cumulative

analysis only considers potential cumulative long-term impacts of the proposed project and the other cumulative projects.

As discussed in Chapter 2 of this EIR, the proposed project would cause direct or indirect impacts to a number of resources in the human, physical, and natural environment; therefore, many of the resources discussed in the previous sections were considered in the analysis of cumulative impacts, including:

- Community—minor acquisition of land.
- Visual/Aesthetics—changes in views.
- Cultural Resources—discovery of unknown resources during construction.
- Water Quality—discharge of motor vehicles related pollutants.
- Paleontology—discovery of unknown resources during construction.
- Climate Change.
- Biological Resources—removal of minor amount of wetlands, impact to oak trees, removal of vegetation that has the potential to support nesting birds.

Those resources for which cumulative effects are not anticipated or for which the impacts were already analyzed in a cumulative context are briefly discussed below. Discussion of cumulative impacts to the resources listed above are provided later in Section 2.4.5.

- **Land Use.** It is anticipated that future development would be implemented in a manner that is consistent with adopted land use and resource plans. The evaluation of plan consistency is considered a project-related evaluation and is discussed in Section 2.1.1 of this EIR. The State, regional, and local plans reviewed for this evaluation provide a broader planning context for the proposed project.
- **Growth.** As discussed in Section 2.1.2, the SR-74 widening is proposed in a location where development has already occurred, and where additional development is planned for in the adopted land use plans of the local jurisdictions. The proposed project is meeting the purpose and need of the area by reducing existing and projected 2035 traffic congestion. The proposed project's contribution to cumulative growth impacts is less than significant.
- **Environmental Justice.** As discussed in Section 2.1.3 of this EIR, no disproportionate low-income and/or minority populations are located within the study area or immediate vicinity. The effects of other transportation and public infrastructure projects on low income and/or minority populations would be

assessed as part of the environmental review of those projects. Based on the census data reviewed for the proposed project, it would appear that any adverse effects on these populations would be offset by beneficial effects of the projects in terms of improved mobility or other public services.

- **Utilities/Emergency Services.** As discussed in Section 2.1.4 of this EIR, two new Capistrano Valley Water District (CVWD) water lines are proposed on the north side of SR-74. The addition is needed by the City, separate from the proposed project. However, it is anticipated that these water lines will be installed within the existing right-of-way and at the time of construction as not to cause additional ground disturbance within the project limits. A separate IS (Proposed MND) was signed on December 24, 2007, for this project, and all avoidance and minimization measures have been addressed as part of that document. Therefore, the proposed project would not result in adverse effects to utilities and emergency services, except for short-term effects during construction.
- **Hydrology and Floodplains.** As discussed in Section 2.2.1 of this EIR, the proposed project would not encroach on floodplains and would construct additional drainage systems consisting of new inlets with bicycle-proof grates and pipes and replace an existing trapezoidal channel with a reinforced concrete box culvert.
- **Traffic and Transportation.** As discussed in Section 2.1.5 of this EIR, the proposed project would not result in adverse effects to traffic circulation in the study area, except for short-term effects during construction. The proposed project would have a beneficial effect by improving regional and local mobility. The analysis of future traffic conditions in the 2035 design year is a cumulative analysis in that it considers traffic generated by future planned land uses and the effect of future planned transportation improvements.
- **Geology/Soils/Seismic/Topography.** As discussed in Section 2.2.3 of this EIR, any adverse effects of the proposed project to geology, soils, etc., is localized and limited to the grading limits of the project. While other projects would impact the geology at their project sites, the impacts would be localized and not impact regional geology; therefore, impacts of other projects are not considered important cumulative impacts.
- **Hazardous Waste and Materials.** As discussed in Section 2.2.5 of this EIR, implementation of the proposed project would not result in a substantial permanent adverse impact related to hazardous waste and materials. Future land use and transportation projects would comply with the City and County Hazardous Waste Management Plan and the General Plan policies related to

hazardous materials, which would ensure that there would be no adverse hazardous material impacts resulting from future development in the City and County.

- **Air Quality.** The analysis of air quality provided in Section 2.2.6 of this EIR is a cumulative analysis in that it considers the emissions of traffic generated by future planned land uses and the effects of other future planned transportation improvements.
- **Energy.** When balancing energy used during construction and operation against energy saved by relieving congestion and other transportation efficiencies, the project would not have substantial energy impacts. This would be the case for other projects considered in this cumulative impacts analysis.

Orange County Projections-2006

One component of the cumulative analysis is the growth projected in the OCP-2006. The CDR at California State University, Fullerton (CSUF) developed the OCP-2006 for incorporation into SCAG's growth forecast for the 2004 and 2008 RTP and the South Coast Air Quality Management District (SCAQMD) AQMP (SCAG 2004 and 2008; SCAQMD 2007). These projections generally reflect the growth anticipated by the local General Plans for the various Orange County jurisdictions. These projections are used as part of the cumulative analysis because they are the basis for the evaluation of long-term growth and are incorporated into the traffic modeling effort which, in turn, is used for the noise and air quality analyses.

Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan

The County of Orange has prepared the Southern Subregion NCCP/MSAA/HCP, Draft Implementation Agreement (IA), and the associated Draft EIR/EIS. The Draft NCCP/MSAA/HCP sets forth a proposed Conservation Strategy to be implemented by the County in cooperation with State and federal agencies and participating landowners in southern Orange County. The proposed Conservation Strategy focuses on long-term protection and management of multiple natural communities that provide habitat essential to the survival of a broad array of wildlife and plant species. The NCCP/MSAA/HCP was approved by the Board of Supervisors in November 2006. USFWS issued a permit in January 2007. According to CDFG, the final plan does not meet the NCCP standards, so any State-listed species take would be permitted under the California Endangered Species Act. The plan encompasses 91,000 ac, with 57,000 ac of natural habitat, including coastal sage scrub, chaparral,

grassland, riparian, and oak woodlands. State-listed species covered by the plan include least Bell's vireo *(Vireo bellii pusillus),* southwestern willow flycatcher *(Empidonax traillii extimus),* and thread-leaved brodiaea *(Brodiaea filifolia).*

Special Area Management Plan (SAMP)

A SAMP is a voluntary watershed-level planning and permitting process that involves local landowners and public agencies that seek permit coverage under Section 404 of the federal Clean Water Act (CWA) for future actions that affect jurisdictional Waters of the United States (U.S.). The purpose of a SAMP is to provide for reasonable economic development, protection, and long-term management of sensitive aquatic resources (biological and hydrological). The ACOE has prepared a SAMP for the San Juan Creek and Western San Mateo Creek watershed, which covers permits for drainage activities within the BSA for this project. The SAMP study area includes the 22,815 ac RMV Ranch Plan area, which is identified as a cumulative project discussed below.

ACOE has prepared an EIS (November 2005) for the San Juan Creek and Western San Mateo Creek watersheds SAMP. The SAMP was prepared as part of two other major planning and regulatory components: (1) The RMV Ranch Plan FEIR 589 and (2) the NCCP/MSAA/HCP and its associated EIR/EIS.

Cumulative Land Development Projects

The proposed project traverses through the City. The identification of cumulative impacts was based upon a search of projects within the City, as well as areas in the adjacent areas of unincorporated Orange County. This geographic area is considered appropriate because it would capture the key projects that have the potential of contributing similar impacts on resources affected by the proposed project. A list of past, present, and reasonably foreseeable future development projects is provided in Table 2.4-1. Table 2.4-2 identifies roadway projects.

Table 2.4-1 Cumulative Development Projects

Project Title	Project Description	Lead Agency	Project Status
CUSD Offices	Construction of government offices (125,000 gross square feet) at the southerly terminus of Valle Road from San Juan Creek Road.	CUSD	Complete
Pacifica San Juan (SunCal)	Surrounding McCracken Hill and extending south to Camino Las Ramblas. Residential. 411 single-family and multifamily units.	San Juan Capistrano	Under construction
San Juan Meadows	La Novia Avenue. Residential. 196 single-family detached units, 79 single-family attached units, and 165 multifamily units.	San Juan Capistrano	Approved; not constructed
Serra Plaza	Del Obispo Street at Paseo Adelanto. Offices. 45,500 gross square feet.	San Juan Capistrano	Complete
Whispering Hills Estates Planned Community	Single-family dwelling units on the eastern edge of the City by La Pata Avenue.	San Juan Capistrano	Under construction
San Juan Hills High School	West of La Pata Road (Antonio Parkway) and north of San Juan Creek Road. Public high school. 2,000 students.	CUSD	Complete
Villa Montana Apartment Homes	10 ac of the Whispering Hills Estates site. 163-unit apartment development.	San Juan Capistrano	Under review
Junipero Serra Catholic High School	Junipero Serra Road and Camino Capistrano. Private high school. 2,200 students.	San Juan Capistrano	Complete
Honeyman Ranch: Rancho Madrina	Rancho Viejo Road. Residential estate homes. 119 single-family detached units.	San Juan Capistrano	Under construction
Ortega Ranch Offices	Rancho Viejo Road and Ortega Highway. 11-building office complex. 151,272 gross square feet.	San Juan Capistrano	Complete
Mammoth Offices	Rancho Viejo Road at Via Escolar. 2-building office complex. 103,832 gross square feet.	San Juan Capistrano	Complete
Ortega Animal Hospital	Ortega Highway between Rancho Viejo Road and La Novia Avenue. Veterinary clinic and animal boarding. 7,767 gross square feet.	San Juan Capistrano	Complete
Reising Law Offices	Ortega Highway between Rancho Viejo Road and La Novia Avenue. Law offices. 5,963 gross square feet.	San Juan Capistrano	Complete
Rancho Viejo Office Park	Rancho Viejo Road north of Spotted Bull Lane (east side). 47 percent medical office, 53 percent commercial office. 67,720 gross square feet.	San Juan Capistrano	Under review
Valle Ranch	South terminus of Valle Road. Offices. 44,400 gross square feet.	San Juan Capistrano	Complete

Table 2.4-1 Cumulative Development Projects (Continued)

Project Title	Project Description	Lead Agency	Project Status
Belladonna Estates	Del Obispo Street. Residential custom lots (31).	San Juan Capistrano	Approved; not constructed
St. Margaret's Episcopal School Master Plan	Ortega Highway and La Novia Avenue. Church: 18,455 gross square feet. Performing arts center: 450 seats. Private school: 151 students.	San Juan Capistrano	Under review
M&M Petroleum	Ortega Highway and I-5 northbound on-ramp. Service station: 9 pumps. Convenience store: 5,940 gross square feet. Auto wash.	San Juan Capistrano	Under construction
Rancho Mission Viejo Plan	RMV Planning Area (The Ranch Plan project) is a 22,815 ac property immediately east of the Cities of Mission Viejo and San Juan Capistrano in unincorporated Orange County. 14,000 dwelling units and 5.2 million square feet of retail and business uses on 5,842 gross acres; golf course uses on 25 gross acres, and open space on 16,942 ac Widening SR-74 from 2 lanes to 4 lanes within Planning Area 1.	County of Orange	Approved project; not constructed
Prima Deshecha Landfill Expansion	Increase disturbance area from 800 to 1,078 ac for landslide remediation features; redesign desilting system; supplement water supply in the Prima Deshecha Cañada stream channel; modify excavation- phasing limits for landslide remediation.	County of Orange	Approved June 2007 by County
San Juan Capistrano Ortega Highway Pipeline Project	Construction of approximately 5,287 linear feet of 12-inch diameter potable water main pipeline within the Ortega Highway right-of-way.	City of San Juan Capistrano	Initial Study/Negative Declaration approved 12/24/07

Sources: City of San Juan Capistrano, 2008; County of Orange, 2008.
ac = acre
CUSD = Capistrano Unified School District
I-5 = Interstate 5
RMV = Rancho Mission Viejo
SR-74 = State Route 74

Table 2.4-2 Cumulative Road Projects

The Department	Route	Post Mile	Location	Description	Lead Agency	Project Status
0G940	5	1.2 to 1.7	El Camino Real to Avenue Ramona	Sound walls (approximately 660 ft [201 m] long) are proposed along southbound I-5 from El Camino Real to Avenue Ramona in San Clemente.	the Department	PA/ED approved in 2004; construction anticipated to begin in 2010
0E570	5	8.58/9.35	I-5/Camino Capistrano Interchange Improvement Project	Install auxiliary lane and widen the I-5/Camino Capistrano southbound off-ramp. Widen Camino Capistrano in the vicinity of the ramp intersection in San Juan Capistrano.	OCTA	Final design to be determined; PA/ED approved
0E310	74	9.36/9.88	I-5/Ortega Highway Interchange Project	Interchange improvements, including reconfiguring Del Obispo Street intersection and widening Diamond interchange; relocated Del Obispo Street intersection and single Cloverleaf; and providing double Cloverleaf Interchange	the Department	Under review
0G630	74	5.2/13.1	Middle Ortega Safety Project	Restore eroded and damaged shoulder; replace all existing traffic stripes with inverted thermoplastic traffic strips; and, where conditions allow, create a 1 ft soft barrier on SR-74 from Postmile 5.2 to 13.1. All work would be within the existing State right-of-way.	the Department	PA/ED was approved in 2006; construction is complete
0F510	5	8.63	San Juan Creek Scour Project	Repair of streambed scouring that is exposing and endangering existing I-5 support columns.	the Department	Construction scheduled for September 2007
04321	74	13.30/16.28	Upper Ortega Highway	Widening of Ortega Highway (SR-74) from Trabuco Road to Orange/Riverside County line. Widen the roadway for safety purposes along portions of the highway in the Cleveland National Forest.	the Department	PA/ED was approved in 2005; currently in construction
N/A	74	2.4	SR-74 and Antonio/La Pata	SR-74/Antonio Pkwy/La Pata Avenue Intersection Improvements.	County of Orange	In construction

ft = foot
I-5 = Interstate 5
m = meter
N/A = not applicable
OCTA = Orange County Transit Authority
PA/ED = Project Approval/Environmental Document
SR-74 = State Route 74/Ortega Highway

2.4.4 Environmental Consequences

2.4.5.1 Community

The RSA for community impacts is SR-74 between I-5 and La Pata Avenue and includes any project that uses this segment of SR-74. The RSA includes Whispering Hills Estates (including Villa Montana Apartment Homes), San Juan Hills High School, Ortega Ranch Offices, Ortega Animal Hospital, Reising Law Offices, St. Margaret's Episcopal School Master Plan, M&M Petroleum, RMV Plan, Prima Deshecha Landfill Expansion, I-5/Ortega Highway Interchange project, Upper Ortega Highway project, and SR-74 and the Antonio/La Pata project.

The City of San Juan Capistrano was incorporated in 1961 and experienced a substantial amount of development between 1983 and 1995. The City has experienced a substantial increase in population over the past three decades; however, there has only been a gradual increase since 1995. The population has increased almost tenfold since 1970, but has only increased 2 percent annually (at most) since 1995. The Orange County Facts and Figures anticipate this lower growth rate through 2035. These numbers reflect the fact that much of the City is developed.

No Build Alternative

The No Build Alternative would involve construction and improvement of the projects listed in Tables 2.4-1 and 2.4-2 without the proposed project and constitutes the future baseline conditions.

Build Alternatives 1 and 2

Neither of the Build Alternatives would affect population/housing figures for the area in relation to growth, composition, or demographics. Since the Build Alternatives do not displace any businesses and no loss of employment, loss of tax revenue, or reduction in income level is expected, the Build Alternatives would not have a substantial impact on tax revenue. Improvement in traffic conditions is not expected to result in a decrease in property values, since there would be no change in the remaining land uses within the study area and its surroundings. Additionally, because the project would result in sliver acquisitions only and neither of the Build Alternatives would result in any residential or nonresidential displacements, the amount of tax revenue lost from the small number of partial acquisitions would not substantially alter the tax base. Property owners would be compensated with fair-market value for property acquisitions.

Build Alternative 1 would necessitate the removal of 1,056 ft of sidewalk on the north side of SR-74 from Calle Entradero and Via Cordova. Based on the subjective human perception of this resource, removal of the sidewalk in this area is a potentially significant impact. However, under both Alternatives 1 and 2, a new sidewalk would be constructed east of Avenida Siega and would connect to the County sidewalk system to provide continuity. This would be a beneficial effect of the project.

Build Alternatives 1 and 2 would not have an impact on community cohesion since SR-74 is an existing highway traversing the study area. However, Build Alternatives 1 and 2 propose to widen the existing SR-74, moving the road closer to residences adjacent to the highway. Therefore, based on the subjective human perception of community character, the widening of SR-74 in this area is a potentially significant impact.

The projects included in this cumulative impacts analysis would mitigate their own impacts to community resources. The proposed project's contribution to these impacts would be minimal; therefore, it would not result in a cumulative community impact.

2.4.5.2 Visual/Aesthetics

The RSA for visual and aesthetics is the SR-74 study area and includes the Ortega Ranch offices, Ortega Animal Hospital, Reising Law Offices, St. Margaret's Episcopal School Master Plan, RMV Ranch Plan, Middle Ortega Safety project, and SR-74 and the Antonio/La Pata project. Historically, visual resources in the cumulative study area have been characterized by the conversion of agricultural and rural uses followed by residential development. As mentioned previously, this area experienced a substantial amount of development between 1983 and 1995. Currently, the health of this resource continues to be a semi-rural/urban setting with no vacant land uses. Low-density land uses are mixed with meandering sidewalk and an equestrian trail on the north side of SR-74. Ornamental vegetation is present on the north side of SR-74, with native and nonnative vegetation interspersed. Stands of oak trees are present on the south side of SR-74. There are limited background views and no distant views along SR-74 within the project limits due to large trees. The current and reasonably foreseeable future actions or projects that may affect this resource are the projects identified above as well as continued development and open space preservation in accordance with adopted City and County General Plans and the NCCP/MSAA/HCP and SAMP.

No Build Alternative

The No Build Alternative would not change the visual setting and would not create visual impacts in the RSA. Although the RMV Ranch Plan would change the visual character in the RSA, the effect would not be considered cumulatively significant, as it is will minimize and mitigate its own visual impacts. Therefore, the projects within this RSA, without the proposed project, would not have a significant visual impact, as they are not adding features that would adversely affect the visual character of the RSA.

Build Alternatives 1 and 2

The Build Alternatives would have an effect on visual/aesthetics for travelers, residents, and pedestrians, as it adds noise barriers and retaining walls to the existing viewshed. The Build Alternatives have incorporated minimization and mitigation measures to address potential project-related aesthetic impacts. This is accomplished through the use of landscaping, roadway alignment, wall treatments, and placing utilities underground. Although impacts would be considered significant for Key Views 1, 4 and 5, even with implementation of these measures, the Build Alternatives are not expected to contribute to cumulative aesthetic impacts, as the elements of the Build Alternatives are minor in comparison to SR-74 as a corridor.

The effects of the cumulative transportation and development projects listed above include impacts to the immediate study area. When evaluating cumulative aesthetic impacts, a number of factors must be considered. In order for a cumulative aesthetic impact to occur, the proposed elements of the cumulative projects would need to be seen together or in proximity to each other. If the projects were not in proximity to each other, the viewer would not perceive them in the same scene. Although the RMV Ranch Plan, St. Margaret's Episcopal School Master Plan, the Middle Ortega Highway Safety project, and SR-74 and the Antonio/La Pata project are within the same scene of the proposed project, these projects will minimize and mitigate their own impacts and will thus be considered a less than significant cumulative impact. Additionally, the proposed project traverses a developed portion of SR-74, and its contribution to cumulative visual impacts, when considered in conjunction with the other projects mentioned above, is considered less than significant.

2.4.5.3 Cultural Resources

The RSA for cultural resources is the proposed project's area of potential effects (APE), which encompasses the existing paved roadway and the maximum limit of any potential disturbances that may result from construction activities. The RSA

includes the Ortega Ranch offices, Ortega Animal Hospital, Reising Law Offices, St. Margaret's Episcopal School Master Plan, RMV Ranch Plan, Middle Ortega Safety project, and SR-74 and the Antonio/La Pata project.

Historically, the RSA contained farmstead homes from the early era of agricultural development that followed the introduction of irrigation to the area. Currently, there are three resources located in the RSA, the Hankey-Rowse House, Errecarte House, and the Manriquez Adobe archaeological site. The Hankey-Rowse House is an example of one of the last remaining farmstead homes from the early era of agricultural development that followed the introduction of irrigation to the area. No surface manifestations of the Manriquez Adobe site were identified during the field survey. However, archival research suggested that information-bearing archaeological deposits may have survived.

No Build Alternative

The RMV Ranch Plan, Middle Ortega Safety project, and SR-74 and the Antonio/La Pata project, without the proposed project, have a potential to encounter sensitive cultural resources. Standard conditions of approval and mitigation measures required for these projects would avoid and minimize potential impacts.

Build Alternatives 1 and 2

The site-specific nature of cultural resources reduces the potential for cumulative impacts. A determination of No Historic Properties Affected has been made for the Hankey-Rowse house and the Errecarte House. For the Manriquez Adobe site, it was determined that since portions of the site within the proposed ADI are not expected to contain information-bearing deposits and, therefore, are noncontributing elements to the larger property, the project's finding is No Adverse Effect with Standard Conditions (Environmentally Sensitive Area [ESA]). Through the establishment of an ESA Action Plan, potentially significant subsurface deposits would not be impacted. Additionally, the proposed project includes minimization measures to address unknown resources discovered during construction activities.

None of the projects in the RSA would directly or indirectly affect any of the cultural resources related to the proposed project, and the proposed project would not have a direct or indirect effect on cultural or historic resources related to the projects listed above. Standard conditions of approval and avoidance and minimization measures required for each of the cumulative projects would minimize impacts associated with unknown resources discovered during construction. With inclusion of the avoidance

and minimization measures identified, the proposed project's contribution to cumulative cultural resource impacts, when considered in conjunction with the projects within the RSA, is considered less than significant.

2.4.5.4 Paleontological Resources

The RSA for paleontological resources is San Juan Canyon and includes all projects listed in Tables 2.4-1 and 2.4-2. The RSA contains Quaternary alluvium and colluvium formations, Pleistocene nonmarine terrace deposits, Upper Miocene Capistrano, and Miocene Monterey formations. All of these geologic units with the exception of the Quaternary Alluvium and colluvium have a high potential for containing paleontological resources.

No Build Alternative

Because the development projects within the RSA (listed in Tables 2.4-1 and 2.4-2) contain Quaternary alluvium and colluvium formations, Pleistocene nonmarine terrace deposits, Upper Miocene Capistrano, and Miocene Monterey formations, it is likely that these projects would affect their paleontological resources. Standard conditions of approval and mitigation measures required for each of the cumulative projects would minimize impacts, and no permanent impacts to nonrenewable paleontological resources would be anticipated as a result of the No Build Alternative.

Build Alternatives 1 and 2

With the implementation of the ESA, permanent impacts to paleontological resources would be minimized to a level that is considered less than significant. In addition, as long as mitigation measures are developed and implemented, to collect paleontological resources during grading, adverse impacts to nonrenewable paleontological resources would not be anticipated.

As a result, the proposed project's contribution to cumulative paleontological resources, considered in conjunction with projects in the RSA, are considered less than significant. Although the potential to encounter paleontological resources is considered high, standard conditions for monitoring and resource recovery pertaining to paleontological resources that may be unearthed during construction of any of the cumulative projects would minimize potential cumulative impacts to a level that is considered less than significant.

2.4.5.5 Water Quality

The RSA for water quality includes the San Juan Creek watershed and includes all the projects listed in Tables 2.4-1 and 2.4-2. Currently, San Juan Creek has a drainage area of approximately 176 square miles. The creek contains six reaches and originates in the Santa Ana Mountains of the Cleveland National Forest; it flows approximately 6 miles to the Pacific Ocean. The proposed project is located within Reach 5 of San Juan Creek. The surrounding area within the project limits consists primarily of developed land with extensive areas of impervious surface and has few remaining natural drainage features. San Juan Creek has been documented as having poor surface water quality and is primarily influenced by nonpoint sources of nonstorm water runoff from urban and residential developments. Contaminants affecting the watershed include various vehicle-related pollutants such as oil, grease, heavy metals, and other petroleum products from roadways. Other pollutants that also affect the watershed include illicit dumping, pesticides, herbicides, and fertilizers from parks, residential homes, and golf courses. Contaminated runoff from irrigated agricultural lands in the watershed also contributes to the poor surface water quality in San Juan Creek. Currently, wastewater treatment facilities do not contribute pollutants to the watershed because all effluents from these facilities are discharged directly into the Pacific Ocean. The State Water Resources Control Board (SWRCB) designated the lower portion of San Juan Creek, including the creek mouth, as impaired for bacteriological indicators under Section 303(d) of the CWA.

Groundwater in the San Juan Creek watershed exists unconfined in a generally narrow, shallow, alluvium-filled valley in the San Juan Canyon area and its tributaries. Groundwater in the San Juan Basin contains high levels of dissolved solids and salt. Local water agencies tend to favor the use of imported water for domestic needs, with pumped groundwater as the supplemental source.

No Build Alternative

The development and transportation projects within the RSA, without the proposed project, would not have a cumulative impact since each project is required to incorporate structural and maintenance best management practices (BMPs) consistent with State and/or local Drainage Area Management Plan (DAMP) requirements to reduce potential construction and operational water quality impacts. Therefore, the quality of runoff from these projects would remain the same, and no cumulative impact to water quality would result.

Build Alternatives 1 and 2

Each of the cumulative projects would be required to incorporate structural and maintenance BMPs that would reduce their cumulative operational impact to water quality. Therefore, even if projects are being implemented simultaneously, sufficient measures would be in place to minimize construction-related erosion and siltation. During construction, Build Alternatives 1 and 2 would require approximately 4.54 ac of soil disturbance. Erosion and siltation in the drainage area may temporarily increase during project construction. The amount of sediments entering the San Juan Creek watershed in the project area is expected to be minimal with implementation of the SWPPP and temporary construction site BMPs (Department Storm Water Quality Handbooks, Construction Site Best Management Practices Manual, March 2003).

Dewatering discharge could adversely impact surface water quality if the effluent is rich in sediment or contaminated with chemicals. Dewatering is not anticipated as part of the proposed project. However, if dewatering is required for the project, it would only be temporary from construction activities and would comply with the Department's National Pollution Discharge Elimination System (NPDES) permit. If construction-related dewatering is required, the project would be subject to the *General Waste Discharge Requirements for Groundwater Extraction Waste Discharges from Construction, Remediation, and Permanent Groundwater Extraction Projects to Surface Waters within the San Diego Region except for San Diego Bay* (Order No. 2001-96, NPDES No. CAG919002) or any subsequent permit/order at time of construction. The Regional Water Quality Control Board (RWQCB) also has waste discharge requirements for this type of activity to ensure that the discharge of this activity does not adversely impact the receiving water. Therefore, the proposed project would only minimally contribute to the temporary cumulative (negative) effect on the water quality of the San Juan Creek watershed.

The proposed project could result in a contribution to the regional (or cumulative) effect of the impacts to hydrologic function, water quality, and erosion/sedimentation potential downstream of the RSA in San Juan Creek's main channel. Indirect impacts can affect low-quality wetlands (atypical) and riparian habitat through changes in velocity, inundation, or water quality. However, with application of the BMPs mentioned in the SWPPP, the proposed project would only minimally contribute to the cumulative (negative) effect on the water quality and hydraulic function of the San Juan Creek watershed.

2.4.5.6 Noise

Because the proposed project is a highway improvement associated with traffic noise, the RSA for noise analysis includes the reasonably foreseeable actions along SR-74 within the project segment, including future roadways in south Orange County and MPAH additions such as La Pata Avenue and a southward extension of SR-241 along the recently adopted alignment. Noise is localized and decreases rapidly with geographic distance. The traffic projections used in the noise analysis conducted for the proposed project took into consideration growth in the project area, including the developments identified in Tables 2.4-1 and 2.4-2 and thus the potential cumulative effect of the proposed project.

Existing land uses in the vicinity of the project area include single-family residential and recreational uses. The majority of the sensitive receptor locations in the project vicinity include low-density residential uses. The primary source of noise in the project area is traffic on SR-74.

No Build Alternative

The No Build Alternative would result in increased noise levels at many of the same receptors under the future projected 2035 traffic conditions. The increases at these receptors are approximately 1 to 2 dBA from existing conditions and there would not be a significant noise increase. Therefore, the noise increase under the No Build Alternative is considered less than significant.

Build Alternatives 1 and 2

The noise analysis is based on the traffic data provided in the Traffic Impact Analysis for this project. Potentially significant noise increases (Receptor No. 31 K5) were reduced to below a level of significance with implementation of the Department's standard specifications and interior noise mitigation. The traffic projections included growth that is consistent with the project identified in Tables 2.4-1 and 2.4-2 and development of the City and County General Plans predicted in the project vicinity through 2035. Therefore, project impacts include the cumulative projects through 2035. The proposed project would not generate groundborne vibration impacts and therefore would not contribute to cumulative groundborne vibration.

Like the proposed project, future projects along SR-74 within the RSA (i.e., RMV Ranch Plan, Middle Ortega Safety project, and SR-74 and the Antonio/La Pata project) would be required to analyze noise impacts and identify appropriate

avoidance, minimization, and/or mitigation measures to protect sensitive receptors to see if they are reasonable and feasible and would be implemented as required.

The proposed project's contribution to cumulative roadway noise impacts, in consideration of cumulative development within the RSA, is considered less than significant.

Like the proposed project, future State transportation projects along SR-74 (i.e., Middle Ortega Safety project and SR-74 and the Antonio/La Pata project) within the study area would be required to comply with Caltrans Standard Specifications, Section 7-1.01I, "Sound Control Requirements," and Caltrans Standard Provisions, S5-310, during construction activities. Local roadways and future development projects would comply with the appropriate local noise ordinance. The proposed project's contribution to cumulative construction noise effects, in consideration of other projects within the RSA (primarily the RMV Ranch Plan, Middle Ortega Safety project, and SR-74 and the Antonio/La Pata project), is considered less than significant.

2.4.5.7 Biology

Natural Communities

The RSA for Natural Communities includes the projects listed in Tables 2.4-1 and 2.4-2 located along SR-74. Projects included within the RSA are Ortega Ranch Offices, Ortega Animal Hospital, Reising Law Offices, St. Margaret's Episcopal School Master Plan, M&M Petroleum, RMV Plan, Prima Deshecha Landfill Expansion, I-5/Ortega Highway Interchange project, Middle Ortega Safety project, and SR-74 and the Antonio/La Pata project.

No Build Alternative

The RMV Ranch Plan would impact 2,413.6 ac of grassland, 2,024.8 ac of coastal sage scrub, 89.51 ac of ACOE jurisdiction, 195.55 of CDFG jurisdiction riparian and wetland areas, 95.8 ac of woodland, 127.1 ac of forest, and 711.8 ac of chaparral. Impacts to riparian and wetland areas are addressed below. With implementation of avoidance, minimization, and/or mitigation measures, as well as its Conservation Strategy in relation to the NCCP/HCP, impacts to natural communities as a result of the RMV Ranch Plan will be reduced to a level below significance.

Additionally, the Prima Deshecha Landfill Expansion would result in the removal of coastal sage scrub, southern needlegrass, and riparian resources. Consultations and

mitigation plans developed with the USFWS and CDFG would reduce impacts considered to be less than significant.

Therefore, the RMV Ranch Plan and the Prima Deshecha Landfill Expansion projects will not have a cumulative impact on Natural Communities.

Build Alternatives 1 and 2

The Lower SR-74 Widening project would not result in any impacts related to natural communities; therefore, the project would not contribute to cumulative impacts to natural communities.

Since SR-74 is an existing roadway and no median barriers are proposed, the proposed project would not result in further habitat fragmentation or wildlife movement beyond existing conditions. The additional roadway area (limited to one lane in each direction) may incrementally limit wildlife movement across the roadway or increase road kill (particularly of smaller animals); therefore, the proposed project's contribution to the regional (or cumulative) effect of habitat fragmentation or wildlife movement, when considered in light of the project impacts and open space preservation within the RSA, is considered less than significant.

Wetlands

The RSA for wetlands includes the San Juan Creek watershed. From a biological perspective, this geographic area is considered appropriate because: (1) effects to water quality downstream may be compounded; (2) the presence of riparian vegetation in the BSA; and (3) the presence of CDFG and ACOE jurisdictional areas. The closest project to the RSA includes improvements to SR-74, just east of the RSA, in RMV Planning Area 1. However, the other development and transportation projects in Tables 2.4-1 and 2.4-2 are also included in the RSA.

The RSA occurs within the SAMP and NCCP/MSAA/HCP study areas for southern Orange County. Compliance with these regional efforts would help to ensure that any regional losses of sensitive plant and/or animal species by future development covered by the SAMP and NCCP/MSAA/HCP are not substantial.

Historically, the RSA was mainly agricultural. Currently, the northern side of SR-74 contains disturbed conditions typical of roadside shoulders, and the southern side of SR-74 contains landscaped areas within City right-of-way. The surrounding areas are primarily low-density residential and rural. The project area and areas adjacent to SR-74 are highly disturbed, and vegetated areas are comprised primarily of nonnative and

invasive species, with scattered ornamental and occasional native species. Three potential jurisdictional features (Features A, B, and C) were identified within the study area during a delineation of wetlands and other jurisdictional waters within the study area. There are also potential jurisdictional nonwetland waters of the United States subject to ACOE jurisdiction totaling 0.057 ac. Of this area, 0.035 ac is potential wetland waters of the United States, and 0.022 ac is potential nonwetland waters of the United States. Potentially jurisdictional portions of Feature A are approximately 113 ft long. The project area contains also 0.087 ac of streambed potentially subject to CDFG jurisdiction.

No Build Alternative

Many of the development and transportation projects in the RSA do not have impacts to wetlands. However, the RMV Ranch Plan (which includes the Upper SR-74 Widening) would impact 89.51 ac of ACOE jurisdiction and 195.55 ac of CDFG jurisdiction, including both temporary and permanent impacts. Additionally, San Juan Meadows and Junipero Serra Catholic High School would also result in permanent impacts to wetlands. Mitigation programs required by Section 404 Permits and 1602 Streambed Alteration Agreements would reduce the cumulative wetland impacts of these projects as well as the proposed project.

Build Alternatives 1 and 2

The proposed project would directly and permanently affect 0.056 ac of potential jurisdictional waters subject to ACOE jurisdiction. Approximately 0.021 ac of nonwetland waters of the United States would be directly and permanently impacted by the proposed project. Approximately 0.035 ac of wetland waters of the United States would be directly and permanently impacted by the proposed project.

Build Alternatives 1 and 2 would directly and permanently affect 0.085 ac of streambed potentially subject to CDFG jurisdiction. This area is not considered a riparian area due to the isolated nature of the single willow tree located within this feature. The area does not function as riparian habitat.

The impacts to low-quality habitat of atypical wetlands would occur during construction. Application of the BMPs in the SWPPP would minimize potential effects on wetlands (atypical wetlands) in the region.

The proposed project could result in a minimal contribution to the regional (or cumulative) effect of impacts to wetland areas. With the mitigation for wetlands identified in Section 2.3.2.4, the Build Alternatives would result in no net loss to

existing wetlands. Given the limited acreage of wetlands impacted and the mitigation identified, the Build Alternatives' contribution to cumulative wetland impacts, in consideration of the projects within the RSA, would be reduced to less than significant.

Plant Species

The RSA for Plant Species includes the projects listed in Tables 2.4-1 and 2.4-2 located along SR-74. Projects included within the RSA are Ortega Ranch Offices, Ortega Animal Hospital, Reising Law Offices, St. Margaret's Episcopal School Master Plan, M&M Petroleum, RMV Plan, Prima Deshecha Landfill Expansion, I-5/ Ortega Highway Interchange project, Middle Ortega Safety project, and SR-74 and the Antonio/La Pata project.

No Build Alternative

Many of the development and transportation projects in the RSA have limited to no impacts to plant species. However, the RMV Ranch Plan would significantly impact a variety of plant species, including the southern tarplant, many-stemmed dudleya, mud nama, Catalina mariposa lily, vernal barley, and small-flowered Microseris. However, these impacts will not have a significant cumulative effect on the RSA without the proposed project since the RMV Ranch Plan is setting aside a substantial amount of open space (RMV open space) to mitigate impacts to a less than significant level.

Additionally, the Prima Deshecha Landfill Expansion would result in the removal of many plant species, including plants associated with riparian vegetation. Mitigation plans would reduce impacts and are considered to be less than significant.

Build Alternatives 1 and 2

Eight coast live oak trees may be impacted by ground disturbance activities within the dripline of the trees associated with roadway widening. Two of these coast live oak trees are anticipated to require removal. However, with implementation of the avoidance measures outlined in Section 2.3.3.5, permanent oak tree impacts are considered less than significant with mitigation incorporated. Since the RMV Ranch Plan and the Prima Deschecha Landfill Expansion projects are mitigating their own impacts and since the proposed project has a less than significant impact on plant species, the cumulative impact to plant species is considered less than significant with mitigation incorporated.

Threatened and Endangered Species

The RSA for T/E species includes the projects listed in Tables 2.4-1 and 2.4-2 located along SR-74. Projects included within the RSA are Ortega Ranch Offices, Ortega Animal Hospital, Reising Law Offices, St. Margaret's Episcopal School Master Plan, M&M Petroleum, RMV Plan, Prima Deshecha Landfill Expansion, I-5/Ortega Highway Interchange project, Middle Ortega Safety project, and SR-74 and the Antonio/La Pata project.

No Build Alternative

Many of the development and transportation projects in the RSA have limited to no impacts to T/E Species. However, the RMV Ranch Plan would impact a variety of T/E species, including the thread-leaved brodiaea, San Diego ferry shrimp, Riverside ferry shrimp, arroyo toad, California gnatcatcher, least Bell's vireo, Swainson's hawk, and the American Peregrine falcon. However, these impacts will not have a significant cumulative effect on the RSA without the proposed project since the RMV Ranch Plan will avoid, minimize, and mitigate its own impacts.

Additionally, the Prima Deshecha Landfill Expansion would result in the removal of coastal sage scrub, riparian resources, and potentially impact special-status habitats and special-status species. Vegetation removal and habitat disturbance of landfilling uses could affect nesting sites for listed bird species and raptors, as well as dens for coyotes, bobcats, and mountain lions. Consultations and mitigation plans developed with the USFWS and CDFG would reduce impacts, which are considered to be less than significant.

Build Alternatives 1 and 2

There are no Threatened and/or Endangered Species (T/E) within the BSA for the proposed project. As the project does not affect Threatened or Endangered Species, it would not contribute to cumulative losses to sensitive species.

Invasive Species

The RSA for Invasive Species includes the projects listed in Tables 2.4-1 and 2.4-2 located along SR-74. Projects included within the RSA are Ortega Ranch Offices, Ortega Animal Hospital, Reising Law Offices, St. Margaret's Episcopal School Master Plan, M&M Petroleum, RMV Plan, Prima Deshecha Landfill Expansion, I-5/Ortega Highway Interchange project, Middle Ortega Safety project, and SR-74 and the Antonio/La Pata project.

No Build Alternative

In the RSA, the RMV Plan would result in potentially significant impacts from invasive exotic species. However, this project plans to ensure the long-term protection of habitat values through a Conservation Strategy that addresses the elements of the NCCP/HCP strategy. The RMV Plan intends to mitigate impacts that cannot be avoided or minimized to below a level of significance. Therefore, the RMV Plan would not have a cumulative impact on Invasive Species.

The other projects within the RSA would use avoidance and minimization measures to ensure a less significant impact to Invasive Species and therefore would not contribute to a cumulative impact.

Build Alternatives 1 and 2

The Build Alternatives provide the benefit of removal of existing Invasive Species within the study area to the extent practicable. The introduction of invasive plant species may degrade sensitive habitat. With implementation of the avoidance, minimization, and/or mitigation measures for invasive species discussed in Section 2.3, the proposed project's contribution to cumulative Invasive Species impacts, in consideration of the projects with the projects in the RSA, would be a minimal contribution to the regional (or cumulative) risk of the introduction and spread of invasive plant material and has been reduced to less than significant.. No invasive species would be planted in the BSA upon completion of project work, in accordance with Executive Order 13112, "Invasive Species."

2.4.5 Avoidance, Minimization, and/or Mitigation Measures

No Build Alternative

The No Build Alternative may result in cumulative impacts. Avoidance, minimization, and/or mitigation measures outlined in the respective documents for the projects listed in Tables 2.4-1 and 2.4-2 would address potential cumulative impacts of the No Build Alternative.

Build Alternatives 1 and 2

The Build Alternatives could result in cumulative impacts. Avoidance, minimization, and/or mitigation measures outlined in Chapter 2.0 would address potential cumulative impacts of the Build Alternatives. No additional measures, beyond those

identified in Chapter 2, have been identified to address cumulative impacts of the Build Alternatives.

2.4.6 Level of Significance

With implementation of avoidance, minimization, and/or mitigation measures outlined in the respective documents for the projects listed in Tables 2.4-1 and 2.4-2, the No Build Alternatives contribution to cumulative impacts may be reduced to less than significant.

Avoidance, minimization, and/or mitigation measures outlined throughout Chapter 2, the Build Alternatives' contribution to cumulative impacts, when considered in light of the project within each respective topical RSA, would be reduced to less than significant.

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2.5 Climate Change

2.5.1 Regulatory Setting

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned with the emissions of GHGs related to human activity that include carbon dioxide (CO_2), methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, hydroflourocarbon (HFC)-23 (fluoroform), HFC-134a (s, s, s, 2 – tetrafluoroethane), and HFC-152a (difluoroethane).

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and proactive approach to dealing with GHG emissions and climate change at the state level. Assembly Bill 1493 requires the California Air Resources Board (CARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009 model year; however, in order to enact the standards, California needed a waiver from the EPA. The waiver was denied by EPA in December 2007, and efforts to overturn the decision have been unsuccessful. See *California v. Environmental Protection Agency*, 9th Cir. Jul. 25, 2008, No. 08-70011.

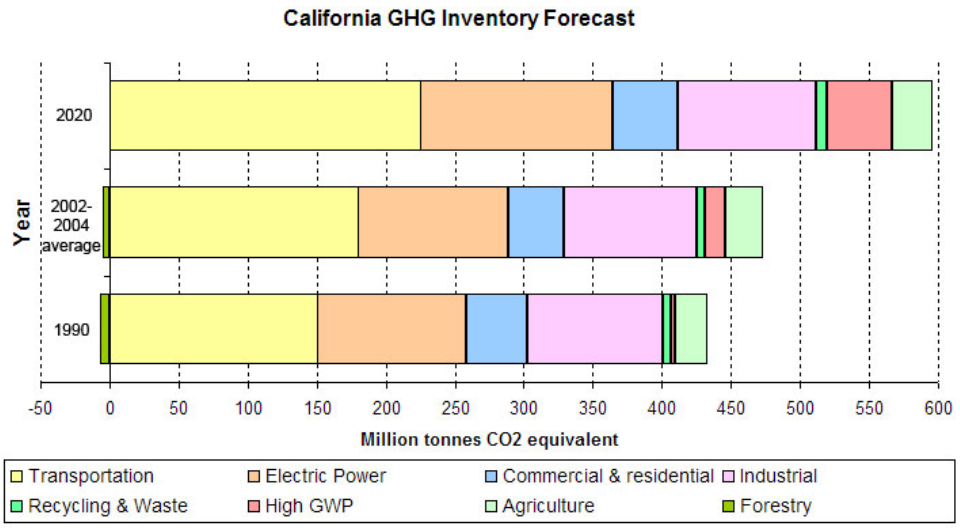
On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: (1) 2000 levels by 2010, (2) 1990 levels by 2020, and (3) 80 percent below the 1990 levels by 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that CARB create a plan that includes market mechanisms and implement rules to achieve "real, quantifiable, cost-effective reductions of GHGs." 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.

With 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 10 percent by 2020.

Climate change and GHG reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change. California, in conjunction with several environmental organizations and several other states, sued to force the EPA to regulate GHG as a pollutant under the Clean Air Act (*Massachusetts vs. Environmental Protection Agency et al.,* 549 U.S. 497 (2007). The court ruled that GHGs do fit within the Clean Air Act's (CAA) definition of a pollutant, and that the EPA does have the authority to regulate GHGs. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting GHG emissions.

According to *Recommendations by the Association of Environmental Professionals on How to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), an individual project does not generate sufficient 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 GHGs. In assessing cumulative impacts, it must be determined whether a project's incremental effect is "cumulatively considerable." See CEQA Guidelines Sections 15064(i)(1) and 15130. To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. As discussed in the "Limitations and Uncertainties with Modeling" and the "Limitations and Uncertainties with Impact Assessment" sections below, to gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

As part of its supporting documentation for the Draft Scoping Plan, the CARB recently released an updated version of the GHG inventory for California (June 26, 2008). Shown below is a graph from that update that shows the total GHG emissions for California for 1990, 2002–2004 average, and 2020 projected if no action is taken.



Source: CARB, 2008

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 is from the burning of fossil fuels and 40 percent of all humanmade GHG emissions are from transportation (see *Climate Action Program at Caltrans* (December 2006), Caltrans has created and is implementing the *Climate Action Program at Caltrans*, which was published in December 2006.[1]

One of the main strategies in the Department's Climate Action Program to reduce GHG emissions is to make California's transportation system more efficient.

Transportation's contribution to GHG emissions is dependent on three factors: the types of vehicles on the road, the type of fuel the vehicles use, and the time/distance the vehicles travel. The highest levels of carbon dioxide CO_2 from mobile sources, such as automobiles, occur at stop-and-go speeds (0–25 miles per hour). Optimum speeds are between 45 and 55 mph (see Figure 3-2). Looking at the state transportation system as a whole, enhancing operations, and improving travel times in high congestion travel corridors will lead to an overall reduction in GHG emissions.

[1] http://www.dot.ca.gov/docs/ClimateReport.pdf.

2.5.2 Environmental Consequences

Long-Term Global Warming Impact

The purpose of the proposed project is to alleviate existing and future traffic congestion along SR-74 during peak hours. The proposed project will not generate new vehicular traffic trips since it will not construct new homes or businesses. However, there is a possibility that some traffic currently utilizing other routes would be attracted to use the improved facility, thus resulting in slight increases in VMT. The impact of GHG emissions is a global rather than a local issue. Therefore, the impact of the Build Alternative on GHG emissions was calculated using traffic data for the SCAG region.

As shown in Table 2.5.2-1, the proposed project would result in an increase in VMT and VHT in 2035.

Table 2.5.2-1 Change in Regional VMT and VHT

Year	Regional VMT	Regional VHT
2035 Regional No Build	344,523,122	10,453,545
2035 Regional Build	344,527,419	10,454,259

Source: Austin-Foust Associates, Inc., October 2008.
VHT = vehicle hours traveled VMT = vehicle miles traveled

The VMT and VHT data listed in Table 2.5.2-1, along with the EMFAC2007 emission rates, were used to calculate the CO_2 and CH_4 emissions for the 2035 regional conditions. The Build Alternatives would not substantially change the regional VMT. The results of the modeling were used to calculate the CO_2 equivalent (CO_{2eq}) emissions listed in Table 2.5.2-2. Emissions of CO_2 and City are combined to develop the CO_{2eq} emissions in Table 2.5.2-2. As shown in Table 2.5.2-2, the proposed project would increase the CO_{2eq} emissions within the region. However, the percentage increase in emissions of 0.004 percent is very small.

Table 2.5.2-2 Change in $CO_{2\ eq}$ Emissions

Alternative	Daily CO_{2eq} Emissions (lbs/day)	Increase from No Build (lbs/day)	Percent Increase from No Build
2035 No Build	339,303,325	-	-
2035 Build	339,318,068	14,743	0.004

Source: LSA Associates, Inc., October 2008.
CO_{2eq} = carbon dioxide equivalent lbs/day = pounds per day

Based on the *Traffic Study* (May 2008), the Build Alternatives would reduce congestion and improve LOS. Relieving congestion by enhancing operations and improving travel times in high-congestion travel corridors would lead, in general, to an overall reduction in GHG emissions; the modeling output in Table 2.5.2-2 focuses on VMT, but does not include the beneficial effect of improving traffic flow and speed.

Limitations and Uncertainties with Modeling

EMFAC

Although EMFAC can calculate CO_2 emissions from mobile sources, the model does have limitations when it comes to accurately reflecting CO_2 emissions. According to the National Cooperative Highway Research Program report, *Development of a Comprehensive Modal Emission Model* (April 2008), studies have revealed that brief but rapid accelerations can contribute significantly to a vehicle's carbon monoxide and hydrocarbon emissions during a typical urban trip. Current emission-factor models are insensitive to the distribution of such modal events (i.e., cruise, acceleration, deceleration, and idle) in the operation of a vehicle and instead estimate emissions by average trip speed. This limitation creates an uncertainty in the model's results when compared to the estimated emissions of the various alternatives with baseline in an attempt to determine impacts. Although work by EPA and the CARB is underway on modal-emission models, neither agency has yet approved a modal emissions model that can be used to conduct this more accurate modeling. In addition, EMFAC does not include speed corrections for most vehicle classes for CO_2; for most vehicle classes, emission factors are held constant, which means that EMFAC is not sensitive to the decreased emissions associated with improved traffic flows for most vehicle classes. Therefore, unless a project involves a large number of heavy-duty vehicles, the difference in modeled CO_2 emissions due to speed change will be slight.

It is interesting to note that CARB is currently not using EMFAC to create its inventory of GHG emissions, and is unclear why the CARB has made this decision. Its Web site only states:

> "REVISION: Both the EMFAC and OFFROAD Models develop CO_2 and CH_4 [methane] emission estimates; however, they are not currently used as the basis for [CARB's] official [GHG] inventory which is based on fuel usage information. However, CARB is working towards

reconciling the emission estimates from the fuel usage approach and the models."

Other Variables

With the current science, project-level analysis of GHG emissions is limited. Although a GHG analysis is included for this project, there are numerous key GHG variables that are likely to change dramatically during the design life of the proposed project and would thus dramatically change the projected CO_2 emissions.

First, vehicle fuel economy is increasing. The EPA's annual report, "Light-Duty Automotive Technology and Fuel Economy Trends: 1975 through 2008 (http://www.epa.gov/oms/fetrends.htm)," which provides data on the fuel economy and technology characteristics of new light-duty vehicles, including cars, minivans, sports utility vehicles, and pickup trucks, confirms that average fuel economy has improved each year beginning in 2005 and is now the highest since 1993. Most of the increase since 2004 is due to higher fuel economy for light trucks, following a long-term trend of slightly declining overall fuel economy that peaked in 1987. These vehicles also have a slightly lower market share, peaking at 52 percent in 2004, with projections at 48 percent in 2008. Table 2.5.2-3 shows the alternatives for vehicle fuel economy increases currently being studied by the National Highway Traffic Safety Administration in its Draft EIS for New Corporate Average Fuel Economy (CAFE) Standards (June 2008).

Table 2.5.2-3 Model Year 2015 Required Miles Per Gallon (mpg) by Alternative

No Action		25% Below Optimized	Optimized (Preferred)	25% Above Optimized	50% Above Optimized	Total Costs Equal Total Benefits	Technology Exhaustion
Cars	27.5	33.9	35.7	37.5	39.5	43.3	52.6
Trucks	23.5	27.5	28.6	29.8	30.9	33.1	34.7

Source: National Highway Traffic Administration, 2008.

Second, near-zero carbon vehicles will come into the market during the design life of this project. According to a March 2008 report released by University of California Davis (UC Davis), Institute of Transportation Studies:

> "Large advancements have occurred in fuel cell vehicle and hydrogen infrastructure technology over the past 15 years. Fuel cell technology has progressed substantially resulting in power density, efficiency, range, cost, and durability all improving each year. In another sign of progress, automotive developers are now demonstrating over 100 fuel cell vehicles (FCVs) in California – several in the hands of the general public – with configurations designed to be attractive to buyers. Cold-weather operation and vehicle range challenges are close to being solved, although vehicle cost and durability improvements are required before a commercial vehicle can be successful without incentives. The pace of development is on track to approach pre-commercialization within the next decade.
>
> "A number of the United States Department of Energy (DOE) 2010 milestones for FCV development and commercialization are expected to be met by 2010. Accounting for a five to six year production development cycle, the scenarios developed by the U.S. DOE suggest that 10,000s of vehicles per year from 2015 to 2017 would be possible in a federal demonstration program, assuming large cost share grants by the government and industry are available to reduce the cost of production vehicles."[1]

Third, and as previously stated, California has recently adopted a low-carbon transportation fuel standard. The CARB is scheduled to present draft regulations for low-carbon fuels in late 2008, with implementation of the standard to begin in 2010.

Fourth, driver behavior has been changing as the U.S. economy and oil prices have changed. In its January 2008 report, "Effects of Gasoline Prices on Driving Behavior and Vehicle Market,"[2] the Congressional Budget Office found the following results based on data collected from California: (1) freeway motorists have adjusted to higher gas prices by making fewer trips and driving more slowly; (2) the market share of sports utility vehicles is declining; and (3) the average prices for larger, less-fuel-

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1 Cunningham, Joshua, Sig Cronich, Michael A. Nicholas. March 2008. Why Hydrogen and Fuel Cells are Needed to Support California Climate Policy, UC Davis, Institute of Transportation Studies, pp. 9–10.

2 http://www.cbo.gov/ftpdocs/88xx/doc8893/01-14-GasolinePrices.pdf.

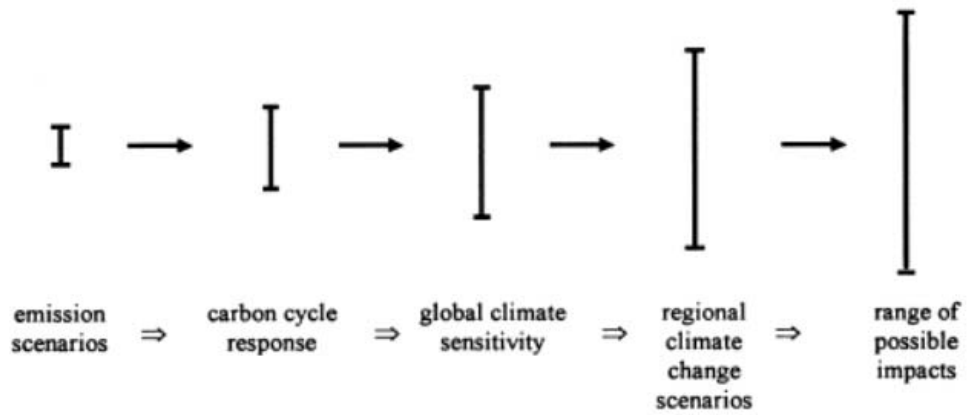
efficient models have declined over the past five years as average prices for the most-fuel-efficient automobiles have risen, showing an increase in demand for the more fuel efficient vehicles.

Limitations and Uncertainties with Impact Assessment

Figure 3-3[1] is taken from the National Highway Traffic Safety Administration Draft Environmental Impact Statement for New CAFÉ Standards and illustrates how the range of uncertainties in assessing GHG impacts grows with each step of the analysis:

> "Cascade of uncertainties typical in impact assessments showing the "uncertainty explosion" as these ranges are multiplied to encompass a comprehensive range of future consequences, including physical, economic, social, and political impacts and policy responses."

Figure 3-3 Cascade of Uncertainties



Source: National Highway Traffic Safety Administration, 2008.

Much of the uncertainty in assessing an individual project's impact on climate change surrounds the global nature of the climate change. Even assuming that the target of meeting the 1990 levels of emissions is met, there is no regulatory or other framework in place that would allow for a ready assessment of what the modeled 11.4–20.9-ton increase in CO_2 emissions would mean for climate change given the overall California GHG emissions inventory of approximately 430 million tons of $C0_2$ equivalent. This uncertainty only increases when viewed globally. The IPCC has created multiple scenarios to project potential future global GHG emissions as well as

[1] National Highway Traffic Safety Administration Draft EIS for New CAFE Standards (June 2008, pp. 3-48 and 3-49.)

to evaluate potential changes in global temperature, other climate changes, and their effect on human and natural systems. These scenarios vary in terms of the type of economic development, the amount of overall growth, and the steps taken to reduce GHG emissions. Non-mitigation IPCC scenarios project an increase in global GHG emissions by 9.7 up to 36.7 billion metric tons of CO_2 from 2000 to 2030, which represents an increase of between 25 and 90 percent.[1]

The assessment is further complicated by the fact that changes in GHG emissions can be difficult to attribute to a particular project because the projects often cause shifts in the locale for some types of GHG emissions, rather than causing "new" GHG emissions. The extent to which the modeled 11.4–20.9-ton increase in CO_2 emissions represents a net global increase, reduction, or no change, is uncertain, and there are no models approved by regulatory agencies that operate at the global or even statewide scale.

The complexities and uncertainties associated with project level impact analysis are further borne out in the recently released Draft EIS completed by the National Highway Traffic Safety Administration CAFE standards (June 2008). As the text quoted below shows, even when dealing with GHG emission scenarios on a national scale for the entire passenger car and light truck fleet, the numerical differences among alternatives is very small and well within the error of sensitivity of the model.

> "In analyzing across the CAFE 30 alternatives, the mean change in the global mean surface temperature, as a ratio of the increase in warming between the B1 (low) to A1B (medium) scenarios, ranges from 0.5 percent to 1.1 percent. The resulting change in sea level rise (compared to the No Action Alternative) ranges, across the alternatives, from 0.04 centimeter to 0.07 centimeter. In summary, the impacts of the Model Year 2011-2015 CAFE alternatives on global mean surface temperature, sea level rise, and precipitation are relatively small in the context of the expected changes associated with the emission trajectories. This is due primarily to the global and multi-sectoral nature of the climate problem. Emissions of CO_2, the primary gas driving the climate effects, from the United States automobile and light truck fleet represented about 2.5 percent of total global emissions

[1] Intergovernmental Panel on Climate Change (IPCC). February 2007. Climate Change 2007: The Physical Science Basis: Summary for Policy Makers. http://www.ipcc.ch/SPM2feb07.pdf.

of all GHGs in the year 2000 (EPA, 2008; CAIT, 2008). While a significant source, this is a still small percentage of global emissions, and the relative contribution of CO_2 emissions from the United States light vehicle fleet is expected to decline in the future, due primarily to rapid growth of emissions from developing economies (which are due in part to growth in global transportation sector emissions).[1]"

Conclusion

Based on the above, 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 determination regarding the project's direct impact and its contribution on the cumulative scale to climate change. However, Caltrans is firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the following section.

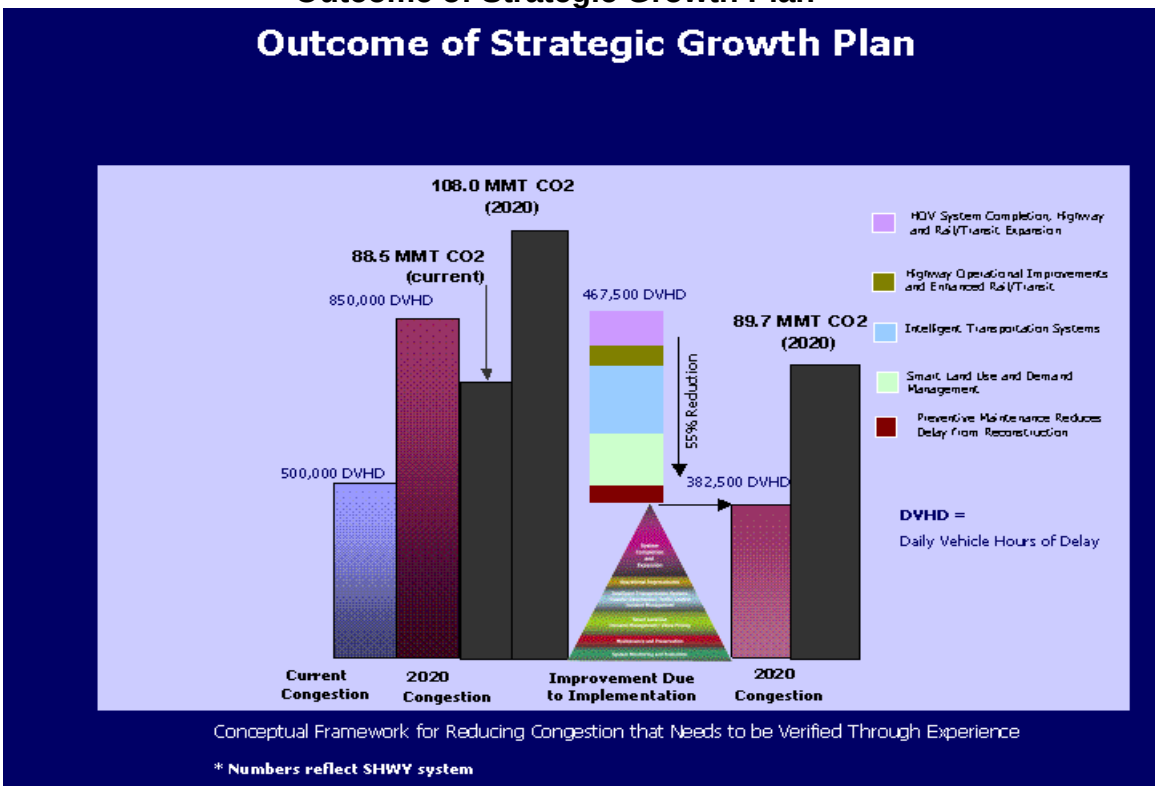
2.5.3 AB 32 Compliance

Caltrans continues to be actively involved on the Governor's Climate Action Team as CARB works to implement the Governor's Executive Orders and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Governor Arnold Schwarzenegger's Strategic Growth Plan calls for a $222 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including $107 billion in transportation funding during the next decade. As shown on the figure below, the Strategic Growth Plan targets a significant decrease in traffic congestion below current levels 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, yield the promised reduction in congestion. The Strategic Growth Plan relies on a complete systems approach of a variety of strategies: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements.

[1] NHTSA Draft EIS for New CAFE Standards, June 2008, pp.3-77 to 3-78.

As part of the Climate Action Program at Caltrans,[1] Caltrans is supporting efforts to reduce VMT 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 and light- and heavy-duty trucks; Caltrans is doing this by (1) supporting on-going research efforts at universities, (2) supporting legislative efforts to increase fuel economy, and (3) its participation on the Climate Action Team. It is important to note, however, that control of the fuel economy standards is held by the EPA and CARB.

Outcome of Strategic Growth Plan



Source: Office of the Governor, 2006.

Lastly, the use of alternative fuels is also being considered; the Department is participating in funding for alternative fuel research at the University of California, Davis.

[1] http://www.dot.ca.gov/docs/ClimateReport.pdf, December 2006.

2.5.4 Avoidance, Minimization, and/or Mitigation Measures

Table 2.5.2-4 summarizes the Department and statewide efforts that Caltrans is implementing in order to reduce GHG emissions. For more detailed information about each strategy, please see the Climate Action Program at Caltrans.[1]

To the extent that it is applicable or feasible for the project and through coordination with the project development team, the following measures will also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

Landscaping will use reclaimed water, where possible. Currently 30 percent of the electricity used in California is used for the treatment and delivery of water. Use of reclaimed water helps conserve this energy, which reduces GHG emissions from electricity production.

Landscaping reduces surface warming and through photosynthesis decreases CO_2. During the design phase, the Department will work with the City of San Juan Capistrano and comply with Section 9-2:349 Municipal Code and plant trees above and beyond what the project is impacting.

The use of lighter color surfaces such as Portland cement helps to reduce the albedo effect and cool the surface; in addition, the Department has been a leader in the effort to add fly ash to Portland cement mixes. Adding fly ash reduces the GHG emissions associated with cement production. Use of this would be in accordance with the Departments specifications and design standards and could be used in areas such as curb/gutter, retaining walls, driveways, and sidewalks.

According to Caltrans Standard Specification Provisions, idling time for lane closure during construction is restricted to ten minutes in each direction; in addition, the

[1] http://www.dot.ca.gov/docs/ClimateReport.pdf, December 2006.

Table 2.5.2-4 Climate Change Strategies

Strategy	Program	Partnership		Method/Process	Estimated CO2 Savings (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local Governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies & other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	0.975	7.8
Operational Improvements & Intelligent Trans. System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	.007	2.17
Mainstream Energy & Greenhouse Gas 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	0.0045	0.0065 0.45 .0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	0.117	.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries		2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 .36	3.6
Goods Movement	Office of Goods Movement	Cal EPA, CARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
Total					2.72	18.67

contractor must comply with Air Quality Management District's rules, ordinances, and regulations in regards to air quality restrictions.

Caltrans and the California Highway Patrol are working with regional agencies to implement Intelligent Transportation Systems (ITS) to help manage the efficiency of the existing highway system. ITS is commonly referred to as electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.

Chapter 3 Comments and Coordination

Early and continuing coordination with the general public and appropriate public agencies involved in the Lower 74 Widening project (project) has 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 has been accomplished through a variety of formal and informal methods, including: monthly PDT meetings, interagency coordination meetings, and consultation with interested parties. This chapter, as well as Table 3.1, summarizes the results of the Department efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

Table 3.1 Summary of Consultation and Coordination Activities

Timing	Activity
February 2000	Scoping Document
Post-June 2000	The California Department of Transportation (Department) consulted with the United State Army Corps of Engineering (ACOE) and California Department of Fish and Game (CDFG) regarding project drainage features.
July 19, 2000	Informal Agency Scoping Meeting at Ambuehl Elementary School
May 2001	The Department staff coordinated with ACOE and conducted field meetings.
July 2001	The Department staff consulted with the Native American Heritage Commission (NAHC) and requested a search of the sacred lands file and a list of individuals/organizations that may have knowledge of cultural resources in the area.
August 16, 2001	The NAHC response identified no Native American cultural resources or sacred sites within the project area and provided a list of individuals with tribal associations. The Department contacted these individuals, and some requested to be kept informed about the project.
September 27, 2001	The Department updated consultation with the NAHC. An NAHC response letter to the Department stated that a search of the sacred lands file failed to identify the presence of Native American cultural resources within the project area. A list of individuals to contact for more information was also provided.
October 2001	The Department staff consulted with the San Juan Capistrano Historical Society.
2001 to 2005	The Department staff consulted with ACOE, CDFG, United States Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS).
Early 2004	The City of San Juan Capistrano Historic Preservation Manager was consulted.

Table 3.1 Summary of Consultation and Coordination Activities (continued)

Timing	Activity
May 30, 2006	The City Council and the Planning Commission held a public workshop to discuss sound walls, retaining walls, and landscaping.
September 11, 2006	The Department sent an updated letter with amended project information to Alfred Cruz, a tribal representative for the Juaneño Band of Mission Indians.
September 11, 2006	The Department sent an updated letter with amended project information to Anita Espinoza, a tribal representative for the Juaneño Band of Mission Indians.
September 11, 2006	The Department sent an updated letter with amended project information to Kristen Rivers, a tribal representative for the Juaneño Band of Mission Indians.
September 11, 2006	The Department sent an updated letter with amended project information to Mike Aguilar, a tribal representative for the Juaneño Band of Mission Indians.
September 11, 2006	The Department sent an updated letter with amended project information to Sonia Johnston, a tribal representative for the Juaneño Band of Mission Indians.
September 11, 2006	The Department sent an updated letter with amended project information to Anthony Rivera, a tribal representative for the Juaneño Band of Mission Indians.
September 11, 2006	The Department sent an updated letter with amended project information to David Belardes and Joyce Perry, tribal representatives for the Juaneño Band of Mission Indians Acjachemen Nation.
September 12, 2006	The Department sent an updated letter to the NAHC with amended project information.
September 12, 2006	The Department sent a letter notifying the San Juan Capistrano Historical Society regarding amended project information.
September 21, 2006	The Department conducted a field meeting with CDFG.
September 27, 2006	The Department updated consultation with the NAHC. An NAHC response letter to the Department stated that a search of the sacred lands file failed to identify the presence of Native American cultural resources in the immediate project area. A list of individuals to contact for more information was also provided.
September 27, 2006	The Department sent an updated letter with amended project information to Joe Ocampo, the Environmental Coordinator for the Juaneño Band of Mission Indians.
September 27, 2006	The Department sent an updated letter with amended project information to Anthony Madrigal, Jr., the Interim-Chairperson for the Cahuilla Band of Indians.
September 27, 2006	The Department sent an updated letter with amended project information to Maurice Chacon, the Cultural Resources representative for the Cahuilla Band of Indians.
October 11, 2006	The Department sent letters to each Native American contact provided in the September 27, 2006, NAHC letter.
October 24, 2006	Follow-up phone calls were made to each Native American contact.

Table 3.1 Summary of Consultation and Coordination Activities (continued)

Timing	Activity
October 24, 2006	The City held a public workshop to discuss noise impacts, sidewalk elimination, tree removal, and pedestrian safety.
January 22, 2007	The City held a public workshop to discuss the widening of SR-74, a safe and attractive project, traffic signal/pedestrian crossing, and sound walls.
March 1, 2007	The Department issued a letter to Mr. Milford Wayne Donaldson, the State Historic Preservation Officer, regarding determinations of eligibility and notification of Finding of No Adverse Effect with standard conditions for the the Lower 74 (Ortega Highway) Widening Project.
June 13, 2007	The Department issued a letter to the Office of Historic Preservation regarding the first round of the Section 106 Consultation for the Lower 74 (Ortega Highway) Widening Project.
June 20, 2007	The Department issued a letter to Mr. Milford Wayne Donaldson, a State Historic Preservation Officer, indicating that they concur with SHPOs determination that the Hankey-Rowse House is not eligible for listing on the National Register. In addition, the Department also provided additional information for SHPO to evaluate the eligibility of the Manriquez Adobe site.
July 11, 2007	The Department issued a letter to Ms. Susan Stratton, a Supervisor for the Section 106 Review Unit for the Office of Historic Preservation, regarding the termination of the Section 106 compliance process.
July 24, 2007	A public information meeting was held during the public review period for the Initial Study with Proposed Mitigated Negative Declaration (IS [Proposed MND]).
August 3, 2007	The Department issued a letter to Mr. Milford Wayne Donaldson, the State Historic Preservation Officer, regarding the PRC 5024.
November 2007	The Department made the decision to prepare an Environmental Impact Report (EIR) due to the nature of the comments received during the public comment period.
Spring 2008	Monthly Project Development Team (PDT) meetings are held to coordinate preparation of the EIR for the proposed project.
May 6, 2008	The Department continued consultation with a letter to Robert Dorame, Gabrielino Tongva Indians of California Tribal Council.
May 6, 2008	The Department continued consultation with a letter to Mercedes Dorame, Gabrielino Tongva Indians of California Tribal Council.
May 6, 2008	The Department continued consultation with a letter to Aldoph Sepuleveda, Juaneño Band of Mission Indians.
May 13, 2008	The Department held a Focused Community Meeting to discuss the proposed project and build alternatives, and receive community input on the proposed project.
September 3, 2008	The Office of Historic Preservation Department of Parks and Recreation response letter to the Department stated that the segment of SR-74 affected by the proposed project does not meet the criteria for listing on the NRHP or for registration as a California Historical Landmark and will not be added to the Master List of State-owned Historical Resources.

3.1 Consultation and Coordination with Agencies

3.1.1 Project Team Coordination

3.1.1.1 Project Development Team (PDT) Meetings

PDT meetings have been scheduled on a monthly basis from inception of this project November (2005). In November 2005, the County brought together the City and the Department in anticipation of moving ahead with their plans to widen SR-74 within unincorporated Orange County (SR-74 within County limits). The purpose of these meetings was to discuss project-specific issues and work together to ensure that the proposed project met the purpose and need and that these issues did not conflict with any plans, policies, or regulations.

Environmental Coordination Meetings

Environmental coordination meetings were held on a biweekly basis beginning in April 2006 between the Department and its consultants, HDR Engineering (HDR) and BonTerra Consulting. Discussions regarding the environmental process and coordination between the involved parties were held. In January 2008, LSA Associates, Inc. was contracted by the Department to prepare the EIR for the project and began attending the PDT meetings.

Value Analysis Workshops

Value Analysis (VA) Workshops were conducted on October 5, 2006, and October 10 through October 13, 2006. The purpose of the workshops was to focus on alternatives that would improve operations and safety, minimize impacts, reduce costs if possible, and satisfy the local stakeholders. Participants included Department staff from Design, Environmental Planning, Construction, Traffic Operations, Maintenance, Geotechnical Services, and other functional units. The VA Workshops provided guidance and recommendations for project management and decision-making.

The VA Workshop participants also recommended removal of wrap-around noise barriers for the sound walls. On December 6, 2006, the Department's Noise Unit sent survey letters to six homeowners where wrap-around noise barriers were being considered. The results of the survey were that three homeowners were in favor of and three were against wrap-arounds. The VA Workshop participants recommended installation of precast panels at the bottom of the Plexiglas® sound walls. This recommendation has been adopted and will be reflected in the 95 percent Plans, Specifications, and Estimates (PS&E) package. The VA Workshop participants also

recommended rehabilitating the existing pavement sections. The 95 percent PS&E will reflect appropriate pavement rehabilitation design.

3.1.2 Native American Consultation

In July 2001, Department staff consulted with the Native American Heritage Commission (NAHC) and requested a search of the sacred lands file and a list of individuals/organizations that may have knowledge of cultural resources in the area. In its August 16, 2001 correspondence, the NAHC listed no Native American cultural resources or sacred sites within the project area. The NAHC identified the following individuals and tribal associations: David Belardes, Chairperson for the Juaneño Band of Mission Indians − Acjachemen Nation; Sonia Johnston, Chairperson for the Juaneño Band of Mission Indians; and Anita Espinoza, Most Likely Descendent (MLD) for the Juaneño Band of Mission Indians. Subsequently, letters were mailed to each contact on the list with project information. A response letter from Mr. Belardes, dated September 19, 2001, requested to be kept informed about any project developments and offered monitoring assistance. Ms. Johnston and Ms. Espinoza did not respond.

On September 12, 2006, given the time that had elapsed from the original consultation, an updated request letter was submitted to the NAHC. NAHC responded on September 27, 2006, in a letter indicating that a search of the sacred lands file failed to identify the presence of Native American cultural resources within the project area. The response identified the following individuals to contact for more information:

- Anthony Madrigal, Jr. − Interim Chairperson for the Cahuilla Band of Indians.
- Maurice Chacon − Cultural Resources Coordinator for the Cahuilla Band of Indians.
- Sonia Johnston − Chairperson for the Juaneño Band of Indians.
- Anita Espinoza − Juaneño Band of Mission Indians.
- Alfred Cruz − Cultural Resources Coordinator for the Juaneño Band of Mission Indians.
- Joe Ocampo − Environmental Coordinator for the Juaneño Band of Mission Indians.
- Anthony Rivera − Chairperson for the Juaneño Band of Mission Indians, Acjachemen Nation.

- David Belardes − Chairperson for the Juaneño Band of Mission Indians, Acjachemen Nation.
- Joyce Perry − Tribal Manager and Cultural Resources Coordinator for the Juaneño Band of Mission Indians, Acjachemen Nation.

On October 11, 2006, the Department mailed letters to each contact on this list with the proposed project information. No letter responses were received. On October 24, 2006, follow-up phone calls were placed to each contact on the list. Mr. Chacon responded by phone indicating the Cahuilla Band of Indians would be interested in monitoring in the event of a construction discovery. Ms. Espinoza responded by phone indicating that the Juaneño Band of Mission Indians would like to be kept informed of the project and any discoveries. She also offered monitoring assistance. No additional responses were received.

On May 6, 2008, the Department received an updated NAHC contact list following the Draft EIR NOP and mailed letters to Robert Dorame, Tribal Chair/Cultural Resources - Gabrielino Tongva Indians of California Tribal Council, Mercedes Dorame, Tribal Administrator - Gabrielino Tongva Indians of California Tribal Council, and Adolph "Bud" Sepulveda, Chairperson - Juaneño Band of Mission Indians.

Mr. Robert Dorame and Ms. Mercedes Dorame did not respond. On June 4, 2008, Mr. Adolph “Bud” Sepulveda stated in a follow-up call that he was familiar with the project area and had no comments at this time.

3.1.3 Historical Resources Consultation

In October 2001, Department staff consulted with the San Juan Capistrano Historical Society regarding historical resources within the project limits. A letter response, dated October 15, 2001, indicated that two historically significant structures are located within the project limits along SR-74: the Hankey/Rowse Cottage and the Errecarte House. Both structures are listed on San Juan Capistrano’s Inventory of Local and Cultural Landmarks. Outside the project limits, additional historic structures (Parra Adobe and Harrison Farmhouse) were also identified.

Additional information pertaining to historical resources within the project area was obtained from the following sources:

- City Planning Department − Principal Planner, William Ramsey provided information on the City's local landmark inventory in November 2001.
- City Historian − Ilse Byrnes has been providing information since November 2001 regarding trees of concern (the poplar tree at Hunt Club Drive and trees at the fruit stand/produce market), local historically significant structures on the City's inventory, and an undocumented adobe structure (Manriquez Adobe). Ms. Byrnes was provided a copy of the cultural technical study prepared for this project to review on January 23, 2007.
- City Planning Department Historic Preservation Manager − Erin Gettis was consulted at the beginning of 2004 when Ilse Byrnes first mentioned the undocumented adobe. In 2006, Terri Delcamp replaced Erin Gettis as Historic Preservation Manager for the City. Ms. Delcamp was provided a copy of the cultural technical study prepared for this project to review on January 23, 2007.

3.1.4 Public Agency Consultation and Coordination

3.1.4.1 Informal Agency Scoping Meeting

A scoping document was prepared by the Department and was sent to interested agencies in 2000. The Department District 12 hosted an informal Agency Scoping Meeting on July 19, 2000, from 6:00 p.m. to 8:00 p.m., in the multipurpose room of Ambuehl Elementary School, at 28001 San Juan Creek Road, San Juan Capistrano. The meeting was attended by both agency representatives and stakeholders. The purpose of the meeting was to discuss the need, type, and scopes of studies planned for the proposed project, and hear the public's concerns. Major issues identified at the scoping meeting (and included in the scoping documents) are as follows:

- How will noise levels from the widened SR-74 be mitigated?
- How will noise levels from construction vehicles and big rigs be mitigated?
- Will sound barrier walls be constructed to lessen the noise?
- How will Palm Hill Drive be sloped to accommodate the existing private road? To the extent that retaining walls need to be constructed, will grading and slopes jeopardize the structural integrity of four houses on top of Palm Hill Drive?
- What is the amount of property to be acquired for this project?
- How will safety be ensured while accessing the existing trail at Avenue Siega? An equestrian/pedestrian signal should be installed at this intersection.
- Will the work be done at night and will traffic be re-routed?
- How will the IS/Environmental Assessment (IS/EA) mitigate the impacts to the existing wetland mitigation site, traffic, water quality, bikeways, trails, and

unresolved issues of United States Army Corps of Engineers' (ACOE) notice of violation?

Consultation with Resource Agencies

Department staff consulted with USFWS, National Marine Fisheries Service (NOAA Fisheries), CDFG, and ACOE in regard to project issues involving T/E species, wetlands and other waters, project drainage features, and loss of habitat. Some of the field meetings and coordination are mentioned in this Chapter. Additionally, the Natural Environment Study (NES) contains a detailed record of correspondence, consultation, and a summary of meeting findings.

Starting in 2001, Department staff consulted with ACOE, CDFG, USFWS, and NOAA Fisheries regarding project drainage features and construction for the widening of the Lower San Juan Creek Bridge (located outside of the limits for this project, within the limits of the County portions). The Department initiated sensitive species surveys in 2001. The Department continued this resource agency coordination from 2001 to June 2005 until the SR-74 project was split into City and County portions, with the Department retaining environmental review for the City portion of the project.

Once the project was split, Department staff continued in coordinating with ACOE and CDFG, specifically on issues involving project drainage features. A field meeting was conducted between Department staff and CDFG on September 21, 2006, and the Department, ACOE, and CDFG staff met on October 5, 2006. The Department and the various resource agencies also worked to quantify the number of oak trees that would be impacted by project construction. They also determined areas subject to resource agency jurisdiction and discussed resource agency concerns regarding the project.

Department staff notified USFWS of the proposed project in June 2006. A *Species List for the State Route 74 Widening Project in the City of San Juan Capistrano, Orange County, California*, was received from USFWS on August 7, 2006. Due to the urbanized nature of the project area, federally and/or State-listed T/E species are not anticipated within the BSA. As a result, a Biological Assessment (BA) was not prepared for the proposed project. It was also determined that project drainage features do not contain the potential to support Essential Fish Habitat; as such, the NOAA Fisheries was not consulted. In addition, the CDFG Natural Diversity

Database was referenced for the San Juan Capistrano United States Geological Survey (USGS) topographic quadrangle.

The following permits, reviews, and approvals will be required prior to the construction of the proposed project:

Agency	Permit/Approval	Status
ACOE	Section 404 Letter of Permission (LOP) or Nationwide Permit (NWP) 14	The Department is to obtain letter or permit.
CDFG	Section 1602 Streambed Alteration Agreement EIR/EIS	The Department is to obtain Agreement.
RWQCB	401 Water Quality Certification	The Department is to obtain Certification.
City of San Juan Capistrano	Tree Removal Permit	The Department is to obtain permit.

3.1.5 Public Participation

The City Council and the Planning Commission held three public workshops and one public meeting. The workshops were held on May 30, 2006, at City Hall to provide responses to the Department's May 4, 2006, letter to the City; October 24, 2006; and January 22, 2007. A Focused Community Meeting was held on May 13, 2008, to hear the community's concerns regarding the project, discuss the status of the project since the IS (Proposed MND) was circulated for public review in July 2007, and to inform the public regarding the status of the anticipated schedule for the EIR.

3.1.5.1 Noise Survey

The Department conducted a noise survey on May 12, 2006, of potentially affected property owners to determine their preferences with respect to sound barrier heights and treatments. The residents were also given a choice as to the type of sound barrier: decorative masonry sound-absorbing barriers or opaque Plexiglas® sound-blocking barrier. The Department concluded that sound barriers would be needed along the south side of SR-74 per the noise study, which identified increased ambient noise levels in this area. It is the Department's policy that if the majority (51 percent or more) of the impacted residents are in favor of constructing sound barriers, the Department will support the proposed Plexiglas® or decorative masonry sound walls, provided the barriers meet all Department noise attenuation, stability, and safety standards. The results of the survey indicated that 84 percent of the respondents were in favor of sound barriers. Regarding the type of sound walls, 13 percent preferred Plexiglas® barriers, 19 percent preferred decorative masonry walls, and 68 percent indicated no preference (Department's August 21, 2006, Letter, Appendix C).

May 30, 2006, Public Workshop

The City mailed a public workshop notice to all owners of real property (as listed on the latest Orange County Real Property Tax Assessment rolls) situated within 500 ft of the project. At the workshop held in the City Council Chambers, the City presented the proposed project to the community. The agenda items covered during this workshop included conceptual design alternatives, alternatives with respect to sound walls, and landscaping simulations. Agenda items of the public workshop are presented in Appendix C.

October 24, 2006, Public Workshop

Another public workshop was held by the City at the City offices (32400 Paseo Adelanto, San Juan Capistrano) on October 24, 2006. Agenda items discussed during this public workshop included reflective noise for the residents located north of SR-74 that could potentially be generated from the proposed sound wall on the south side of SR-74; the elimination of the sidewalk and some trees on the north side of SR-74 between the two entrances to the Hunt Club; and concerns regarding safe access to SR-74 from Belford Terrace and the Hunt Club. Two issues that were important to the community were the need for a stop light somewhere near or east of the Hunt Club entrance, as well as sidewalks for students to use in going to the new high school scheduled to open in fall 2007.

January 22, 2007, Public Workshop

A third public meeting was held by the City at the City offices (32400 Paseo Adelanto, San Juan Capistrano) on January 22, 2007. The meeting was a working group of 12 to 13 people. The agenda items were generally grouped into three main topics. The first topic covered “no widening for this section of Ortega Highway. The second topic covered mostly safety issues for the Build Alternatives for the project. Such as, a safe and attractive project, traffic signal/pedestrian crossing, and sound walls. The third topic covered a variety of issues for the Build Alternatives, including but not limited to the following: air pollution, the height and location of retaining walls, landscaping/loss of trees, sidewalks on the north side, a right-turn lane (deceleration lanes) into side streets, coordination with the Ortega Interchange Project, and trash trucks on SR-74.

July 24, 2007, Public Meeting

A public meeting was held by the Department during circulation of the IS (Proposed MND) to give the public an opportunity to comment and provide input. This meeting was held on July 24, 2007, at 26501 Camino Del Avion, San Juan Capistrano,

between 6:00 p.m. and 8:00 p.m, with approximately 200 to 250 people in attendance. Comments from the public included: the need for a signal, opposition to noise barriers, removal of the meandering sidewalk, emergency access, effects of the Ranch Plan, alternative routes, community character, and visual impacts.

As a result of the previous meetings, consultations, and the nature of the public comments received on the IS (Proposed MND), the Department decided that an EIR would be prepared to analyze the environmental impacts for the proposed SR-74 widening from Calle Entradero (PM 1.0) to the City/County limits. A copy of the IS (Proposed MND) is on file and available for review at the Department District 12 offices.

An NOP was circulated for public review for a 30-day period from January 18 to February 19, 2008 (Appendix A). Due to the responses and nature of the comments received, a focused community meeting was held for the proposed project on May 13, 2008. Details of the focused communty meeting for the SR-74 widening project are discussed below.

May 13, 2008, Focused Community Meeting

A fourth Focused Community Meeting was held by the Department at the San Juan Capistrano Community Center on May 13, 2008 with approximately 40 to 50 people in attendance. The agenda items discussed during this public meeting were (1) an update regarding the project status, (2) The Department's decision to prepare an EIR for the project and the anticipated project schedule for the proposed project, (3) presentation of the proposed project and discussion of the build alternatives, and (4) a working session with input from the community regarding the proposed project.

Upcoming Public Meeting

Upon public circulation of this Draft EIR, a public meeting will be held to discuss the proposed project and to receive public input. No additional public meetings are scheduled at this time.

Comments regarding the project and the EIR may be submitted to the Department during the public review period for the EIR. Comments received during the EIR public review period will be addressed, and comments and responses will be published in the final environmental document. The deadline for submitting comments is January 30, 2009. Submit comments via postal mail to:

California Department of Transportation, District 12
Smita Deshpande
Chief, Branch A, Environmental Planning
3337 Michelson Drive, Suite 380
Irvine, California 92612-8894
Attention: Scott Shelley

Comments may also be submitted via e-mail to: lower74EIR_D12@dot.ca.gov.

Chapter 4 List of Preparers

This document has been prepared by the Department as the lead agency under CEQA. The following staff prepared this EIR:

4.1 Consultants

Beazley, Adrianne, Senior Biologist. B.S. Environmental Biology and Management, University of California, Davis. 8 years experience.

Contribution: Preparation of the Natural Environmental Study, Jurisdictional Delineation, and Biology sections of the EIR.

Bogue, Kristen, CEI, Environmental Analyst. B.A., 2005, Environmental Analysis and Design, University of California, Irvine. 3 years experience.

Contribution: Oversight and Preparation of the Visual Impact Assessment technical report for the EIR.

Bosseler, Jennette, Editor. B.A. English, University of California, Santa Barbara. 5 years experience.

Contribution: Editing and preparation of environmental documents.

Dillon, Jane, Assistant Environmental Planner. B.A. Anthropology, California State University, Fullerton. 2 years experience.

Contribution: Assisted with preparation of EIR sections including Cumulative Impact Assessment and general document preparation.

Dow, Gary, Graphics Designer. A.A. Architectural Drafting, Mt. San Antonio College. 31 years experience.

Contribution: Management of graphics for the environmental documents.

Goodman, Jayna, Senior Environmental Planner. B.A. Geography, California State University, Fullerton. 7 years experience.

Contribution: Environmental document preparation and task management.

Homrighausen, Art, Principal Biologist. M.S. Environmental Studies, California State University, Fullerton. 26 years experience.

Contribution: Management of the Natural Environmental Study and Biology sections of the EIR.

Jacobus, David, GIS Analyst. B.A., 2003, Geography, California State University, Long Beach. 4 years experience.

Contribution: Preparation of the Visual Impact Assessment technical report for the EIR.

Johnson, Cathy, RLA, Associate and Landscape Architect. B.S., 1978, Ornamental Horticulture, Washington State University, Pullman. 16 years experience.

Contribution: Preparation of the Visual Impact Assessment technical report for the EIR.

Johnston, Richard, Visual Simulations Specialist. B.A. The Kansas City Art Institute, Kansas City, Missouri. 25 years experience.

Contribution: Preparation of the Visual Impact Assessment technical report for the EIR.

Kung, Angie, Environmental Planner. B.A. Biological-Anthropology, University of California, San Diego. 6 years experience.

Contribution: Preparation of Geology, Hazardous Waste, and Land Use sections of the EIR.

Lay, Keith, Associate, Air Quality Specialist. B.S. Civil Engineering (Transportation and Environmental Engineering emphasis). 11 years experience.

Contribution: Preparation of the Air Quality Analysis technical report and EIR Air Quality section.

LeBron, Danette, Word Processor. A.S. Computer Science. 22 years experience.

Contribution: Word processing and preparation of the document.

Lo, Carmen, Assistant Environmental Planner. B.A. Environmental Analysis and Design, University of California, Irvine. 3 years experience.

Contribution: Preparation of Geology Section and general assistance preparing sections of the EIR.

Lui, Jason, Noise Specialist. B.A. Environmental Analysis and Design, University of California, Irvine. 7 years experience.

Contribution: Noise Study. Preparation of the Noise Analysis technical study supplement and the Noise Section for the EIR.

McLean, Debbie, Principal, Archaeology. M.A. Anthropology, California State University, Fullerton. 33 years experience.

Contribution: Preparation of the Cultural Resources of the EIR.

Pracilio, Deborah, Principal in Charge. B.A. Social Ecology, University of California, Irvine. 22 years experience.

Contribution: Project management and document review.

Roos, Justin, Geographic Information Systems (GIS) Specialist. B.S. Geography, California State Polytechnic University, Pomona. 4 years experience.

Contribution: Coordination and production of GIS aspects for the documents.

Smith, Brooks, Senior Field Crew, Paleontology. B.S. Earth Science (Geology), University of California, Santa Cruz. 19 years experience.

Contribution: Preparation of the Paleontology Report and Paleontology Section of the EIR.

Stanakis, Jan, Editor. B.S. Human Services, University of Scranton, M.A. Theology, Catholic University of America, Washington D.C. 20 years experience.

Contribution: Editing and preparation of environmental document.

Thomas, King, Associate Project Manager. B.A. Social Ecology, University of California, Irvine. 18 years experience in environmental and transportation planning.

Contribution: Project management and document review.

Torres, Edward, INCE, Associate/Project Director. B.A., 2000, Environmental Analysis and Design, University of California, Irvine; B.S., 2000, Mechanical Engineering, University of California, Irvine; M.S., 2005, Mechanical Engineering, University of Southern California. 9 years experience.

Contribution: Preparation of the Visual Impact Assessment technical report for the EIR.

Trotta, Mike, Principal Biologist. B.A. Biological Sciences, University of California, Santa Barbara. 14 years experience.

Contribution: Management of the Natural Environmental Study, Jurisdictional Delineation, Biological Studies, and Biology sections of the EIR.

West, Nicole, Environmental Engineer, Water Quality Specialist. M.S. Civil and Environmental Engineering, University of California, Berkeley. 12 years experience.
Contribution: Preparation of the EIR.

Williams, Lisa, Senior Environmental Specialist. M.S. Environmental Studies, California State University, Fullerton. 25 years experience.
Contribution: Cumulative Impact Assessment.

Wood, Brianna, Environmental Planner. B.S. General Biology (Emphasis in Marine Biology), San Diego State University. 4 years experience.
Contribution: Natural Environmental Study and Jurisdictional Delineation.

4.2 California Department of Transportation

Abou-Abdou, Ahmed, Project Manager. M.S. Civil Engineering, California State University, Fresno. 22 years experience.
Contribution: Project management.

Army, Alison, Associate Environmental Planner. B.S. Environmental Sciences, University of California, Riverside. 8 years experience.
Contribution: Environmental document preparation and environmental project management.

Aurasteh, Reza, Senior Environmental Engineer. Ph.D. Engineering, Utah State University. 28 years experience in consulting engineering, academic, transportation engineering, and environmental engineering.
Contribution: Senior review of environmental documents and technical editing.

Barker, Kristopher, C.E.G., Engineering Geologist. B.S. Geology, University of Southern California. 8 years experience.
Contribution: Preliminary Geotechnical Report

Behtash, Arman, Environmental Engineer, B.S. Civil and Environmental Engineering, University of Wisconsin, Madison. 14 years experience in subsurface investigation and remediation.
Contribution: Air Quality Report Preparation/review.

Calpo, Janice, Headquarters Staff Architectural Historian, M.S. Historic Preservation, University of Oregon, Eugene. 13 years experience in Cultural Resources Management.

Contribution: Historic Resources Report.

Deshpande, Smita, Senior Environmental Planner. B.A. Geography, University of Pune, India; M.S., Regional Planning, Indiana University of Pennsylvania, Indiana, PA. (Aug 1991). 16 years experience.

Contribution: Senior management of environmental documents and technical editing.

Flynn, Chris, Senior Environmental Planner. M.S. Environmental Science, San Jose State University, 2001, PMP 2004. 26 years experience in environmental, project management, and construction.

Contribution: Senior review of environmental document, technical reports, and technical editing.

Gupta, Praveen, Senior Environmental Planner. B.S. Architecture, University of Roorkee, Roorkee, India; M.S. Architecture, School of Planning and Architecture, New Delhi, India. 32 years experience.

Contribution: Senior Management of environmental documents.

Gupta, Sunil, P.E., G.E., PMP. M.S. Civil Engineering, Texas Technical University, Lubbock, Texas. 22 Years Experience in Civil Engineering.

Contribution: Hydrology Study Preparation/review.

Halabi, Marta, Environmental Engineer, M.S. Civil and Environmental Engineering, Polytechnical University, Poland, 1976, 33 years experience in engineering.

Contribution: First Stage ISA.

Lim, Mili, Senior Transportation Engineer. B.S. Civil Engineering, University of California, Irvine. 20 years experience.

Contribution: Supervising and managing the preparation of the Project Report.

Medin, Anmarie, Headquarters Historical Archaeologist. M.A., Cultural Resources Management; Sonoma State University, California. 18 years experience.

Contribution: Section 106 compliance documents review.

Mills, Wayne W., Transportation Engineer. B.A. Social Science, San Diego State University, B.A. Earth Science, California State University Fullerton. 24 years experience.

Contribution: Paleontology Report.

Moussa, Raouf, Senior Transportation Engineer, M.S. Civil Engineering, California State University, Long Beach. 29 years Transportation Engineering experience

Contribution: Review of the Traffic & Circulation Section of the Environmental Document.

Priete, Arianne, Associate Environmental Planner (Natural Sciences). B.S. Biological Sciences, California State University, Fullerton; M.S. Environmental Studies, California State University, Fullerton. 7 years experience.

Contribution: Environmental document preparation (Biological Resources section).

Qamar, Iffat, Associate Environmental Planner. Ph.D. Environmental Planning and Management, Macquarie University, Sydney, Australia. 14 years experience in Planning & Environmental management.

Contribution: Environmental document preparation and project management.

Ridley, Robin, Environmental Planner. J.D. Law, Southwestern University School of Law, Los Angeles. 3.6 years experience.

Contribution: Document Preparation.

Rothenberg, Scott, Environmental Planner. B.A. Environmental Policy, Bowling Green State University, Bowling Green, Ohio. 3.5 years experience with environmental planning.

Contribution: Environmental document and technical study preparation (Water Quality Resources Section).

Salas, Hector B., Associate Environmental Planner. B.A. Environmental Analysis and Design, University of California, Irvine. 9 years experience.

Contribution: Water Quality Technical Report

Shelley, Scott, Associate Environmental Planner. B.E.S. Urban and Regional Planning, University of Waterloo, Waterloo, Canada. 8 years experience.

Contribution: Environmental document preparation and community impact.

Sinopoli, Cheryl, Associate Environmental Planner (Archaeology). B.A. Anthropology, California State University, Bakersfield. 13 years experience.

Contribution: Preparation of the Historical Property Survey Report.

Stroud, Cynthia, Associate Right of Way Agent. The Department District 07 – Los Angeles, CA.

Contribution: Right of Way Relocation Impact Report.

Tran, Le-ha, Project Engineer. B.S. Chemical Engineering, Cal Poly Pomona. P.E. Civil Engineer. 19 years experience.

Contribution: Preparation of Project Report.

Trinh, Quan, Project Engineer, B.S. Civil Engineering, California State Polytechnic University, Pomona, 14 years experience.

Contribution: Preparation of project plans and specifications.

Vega, Sylvia, Office Chief of Environmental Planning; B.S., California, Polytechnic State University, San Luis Obispo, CA. 27 years of experience in transportation and environmental planning.

Contribution: Supervisory review of environmental documents and technical documents.

Wong, Ronald, Landscape Associate. B.Sc. Landscape Architecture, California State Polytechnic University, Pomona. 32 years experience.

Contribution: Visual Impact Assessment

Yaghoubi, David, Environmental Engineer, B.S. Civil Engineering, California State University, Los Angeles, 28 years experience.

Contribution: Noise Technical Report and ISA.

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Chapter 5 Distribution List

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The Honorable Barbara Boxer
United States Senator
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Los Angeles, CA 90012

44th Congressional District
United States House of Representatives
Hon. Ken Calvert, Member
3400 Central Avenue, Suite 200
Riverside, CA 92506

48th Congressional District
United States House of Representatives
Hon. John Campbell, Member
610 Newport Center Drive, Suite 330
Newport Beach, CA 92660

State Agencies

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California Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

38th Senate District
State of California
Hon. Mark Wyland, Member
27126-A Paseo Espada, #1621
San Juan Capistrano, CA 92675

Department of Fish and Game
South Coast Region 5
4949 Viewridge Avenue
San Diego, CA 92123

Office of Historic Preservation
1416 9th Street, Room 1442
Sacramento, CA 95814

73rd Assembly District
State of California
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Attn.: William Cunningham
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San Juan Capistrano, CA 92675

Orange County Public Works
Planning and Regulations/Planning
Attn.: Ronald Tippets
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Community Redevelopment
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City of Mission Viejo
Public Works
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Winter King
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Save Our San Juan
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Appendix A Notice of Preparation

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SCH NO. 20070771038

NOTICE OF PREPARATION

To: Office of Planning and Research
1400 10th Street
Sacramento, CA 95814

From: California Dept. of Transportation
3337 Michelson Drive Suite 380
Irvine, CA 92612

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: Widening of State Route 74 (Ortega Highway) Between Calle Entradero and the Orange County/San Juan Capistrano Boundary

Project Location: State Route 74 from Calle Entradero (postmile 1.0) to the City/County limits (postmile 1.9) refer to Figure 1

Project Description: Add an additional travel lane in each direction for a total of four lanes from Calle Entradero (postmile 1.0) to the City of San Juan Capistrano/Orange County line (postmile 1.9) a distance of approximately 0.9 miles. The proposed additional lanes, shoulders, median, drainages, driveways, and sidewalks have been developed consistent with the Caltrans Highway Design Manual.

The California Department of Transportation (Department) prepared an Initial Study (IS) (with proposed Mitigated Negative Declaration (MND)) for this project. This document was circulated for public review in July 2007 and an open house was held to present the project to the community and receive public input. Based on the comments received Caltrans is now preparing an Environmental Impact Report (EIR). The Draft EIR is anticipated to be circulated in the summer of 2008.

This is to inform you that the California Department of Transportation will be the lead agency and will prepare an EIR 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 location map, the Initial Study and the potential effects of the project are contained in the attached materials.

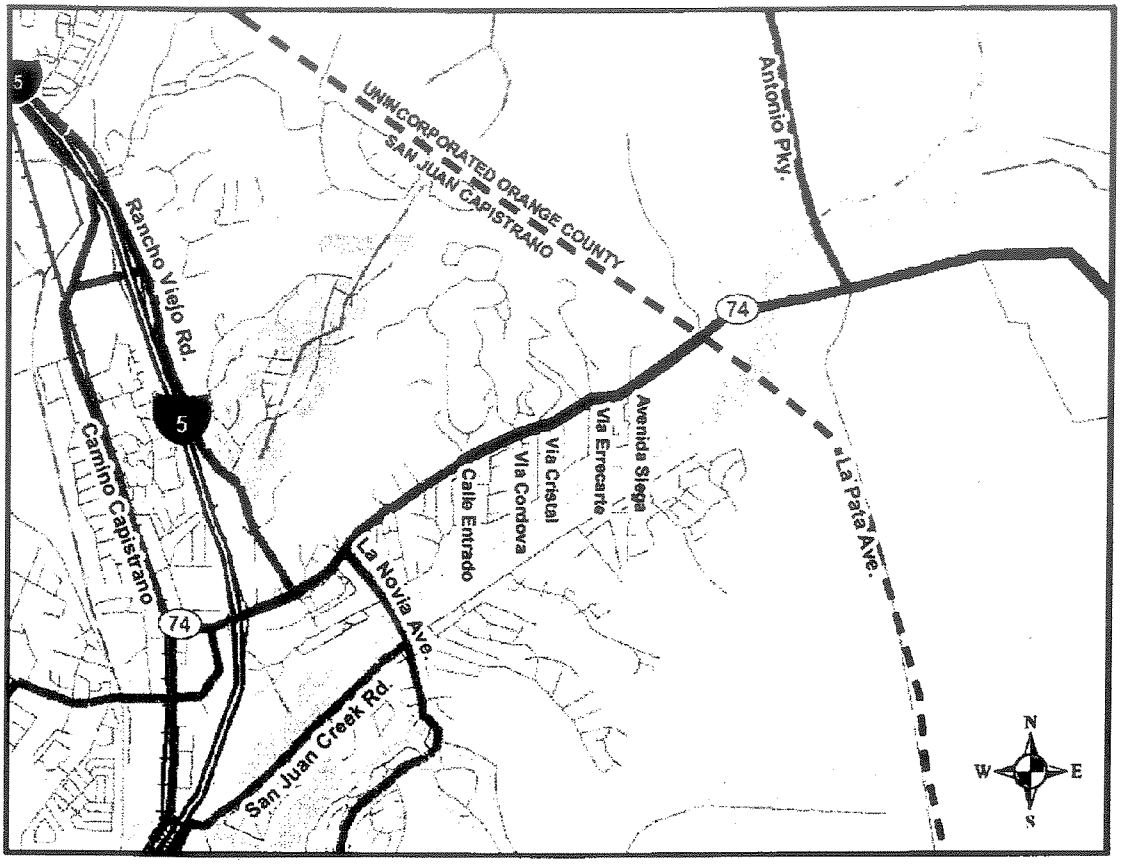
Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice. The Department will accept comments from these Agencies and interested parties regarding this notice through the close of business, **February 18, 2008**

Please direct your response via email to Lower74EIR_D12@dot.ca.gov or:

Mr. Scott Shelley
Environmental Planning Branch
3337 Michelson Drive Suite 380
Irvine, CA 92612

Date January 16, 2008 Signature Smita Deshpande
Title Senior Environmental Planner

Figure 1
Project Location Map



	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
AESTHETICS - Would the project:				
a) Have a substantial adverse effect on a scenic vista?		X		
Less than significant impact with mitigation – The proposed project is located in the City of San Juan Capistrano city limits from Calle Entradero east to the City of San Juan Capistrano/County border. The proposed project is entirely within a semi-rural/urban setting with sensitive visual resources. SR-74 serves as a gateway to the City of San Juan Capistrano from the east. There are no designated scenic vistas within the project limits and long-range views are limited along this segment of SR-74 because of intervening topography and development. However, potential impacts to the scenic quality of the existing roadway corridor will be evaluated in the Draft EIR. Mitigation measures will be identified, as necessary.				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a State scenic highway?	X			
Potentially significant impact – SR-74 is designated as a scenic highway on the City's General Plan Scenic Highway Element (1994) and is eligible to be designated as a state scenic highway. However, this portion of the roadway is not currently designated as state scenic highway designation. Implementation of the proposed project would require removal of mature vegetation and a substantial number of trees along the approximately one mile segment of SR-74. This has the potential to change the visual characteristics and character of the project site. The Draft EIR will evaluate potential impacts related to the project's effect on a scenic resources including tree removal and introduction of the soundwalls and retaining walls. Mitigation measures will be identified, as necessary.				
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	X			
Potentially significant impact –The Draft EIR will evaluate the project's potential impacts to the visual character and quality of the site and its surroundings and whether the project would result in substantial changes to the character of the site and surrounding area. The compatibility of the proposed highway improvement with the surrounding area will be evaluated in the Draft EIR and mitigation measures will be identified, as necessary.				
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X
No impact – The proposed project is located on an existing highway and no new sources of light or glare are proposed which would adversely affect day or nighttime views in the area. Lighting may be installed during night work that may effect nearby sensitive receptors; however, lighting will be shielded away from residential uses and no impact would occur. Further evaluation of these issues in the Draft EIR is not required and no mitigation measures are necessary.				
AGRICULTURE RESOURCES - In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X

No impact – The site is developed with an existing highway right-of-way, with only limited property acquisition required. The project site and area adjacent to the roadway does not contain lands designated by the California Resources Agency as Important Farmlands (Prime Farmland, Unique Farmland, or Farmland of Statewide Importance). The proposed project would not convert farmland to non-agricultural use. No portion of the project site is covered by a Williamson Act Contract. No change in land use designation is required to implement the proposed project. No impacts to agricultural resources would result from project implementation. Therefore, no further analysis of this issue will be provided in the Draft EIR.

AIR QUALITY - Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?				X

No impact – The proposed project conforms to the applicable air quality plans adopted by the South Coast Air Quality Management District. The project is listed in the Regional Transportation Plan and the Regional Transportation Implementation Plan. Though the project is consistent with the applicable air quality planning programs, this issue will be discussed in the Draft EIR in the context of the larger air quality evaluation.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d) Expose sensitive receptors to substantial pollutant concentration?			X	

Less than significant impact - The Draft EIR will include a complete discussion of the potential air quality impacts associated with the proposed project. Both short-term construction and long-term operational impacts will be assessed. Long-range the project would be expected to improve air quality because it would reduce congestion, which results in higher emission levels. Standard conditions (associated with the SCAQMD Rule 403) would reduce short-term construction emissions. These issues will be addressed in the Draft EIR and appropriate mitigation measures identified, as necessary.

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
e) Create objectionable odors affecting a substantial number of people?				X

No impact – The proposed project would neither directly nor indirectly create objectionable odors. The project would involve widening of an existing roadway. No changes to the nature of the use or the type of vehicles using the facility would result from the proposed project. No further evaluation of odors will be included in the Draft EIR.

BIOLOGICAL RESOURCES - Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X	

Less than significant impact– The project area contains primarily disturbed conditions along SR-74. Most of the habitat is associated with landscaped areas in the City of San Juan Capistrano. Raptors have the potential to occur in the project area. However, the project area is unlikely to support raptor nesting due to a lack of suitable habitat. Direct effects involve the physical loss of habitat, possibly used by wildlife, due to site clearing, grubbing, culvert improvements, and road widening. Construction of the Build Alternatives would result in the removal of habitat that may provide nesting and foraging opportunities for a variety of species including riparian/atypical wetland, species dependent on tall trees (oaks), and non-native species. However, of the 11 possible federal or state Threatened or Endangered species that may occur in the study area, none were present during prior surveys of the site in 2006. The Draft EIR will evaluate the direct and indirect impacts to animal species including threatened and endangered species, raptors, and nesting birds. Mitigation will be provided, as necessary.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X			
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		X			

Less than significant impact with mitigation – The project area contains culverts/ditch areas that eventually discharge into San Juan Creek, located south and east of the Project Limits. All existing drainages would be modified and extended to intercept at the proposed edge of pavement. Additional drainages would be added on the north side of the highway throughout the Project Limits. Several of the existing drainage systems that would be modified are considered jurisdictional "Atypical wetlands." The drainage areas provide marginal habitat for wildlife and would not be designated wildlife corridors. Impacts to Wetlands and Other Waters are not anticipated to be substantial. Additionally, the project is located within an area with an adopted Special Area Management Plan (SAMP). Widening of SR-74 was assumed as part of the SAMP analysis. The Draft EIR will evaluate the direct and indirect impacts to Waters and Other Waters and evaluate consistency with the provision of the SAMP. Mitigation measures will be provided, as necessary.

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
Less than significant impact – The proposed project provides for improvements to an existing roadway. It would not include the construction of median barriers, modification to San Juan Creek, or traverse a designated wildlife movement corridor. It is not anticipated to affect long-term wildlife movement. Small mammals, reptiles, and amphibians and other animals of slower mobility that live in the project may be temporarily affected as habitat is altered or removed. More mobile wildlife species would be able to vacate the areas and move into adjacent areas of open space. The Draft EIR will address this issue as part of the evaluation of impacts on biological resources.				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		X		
Less than significant impact with mitigation – The project has the potential to impact a number of trees along the segment of roadway. The Draft EIR will evaluate the project alternatives for consistency with the applicable planning policies, including the Southern HCP, the City of San Juan Capistrano General Plan, and the City of San Juan Capistrano Tree Removal Guidelines. Mitigation measures will be developed, as necessary.				
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?			X	
Less than significant impact– The project site occurs within the SAMP and the Southern Habitat Conservation Plan (HCP) study areas for southern Orange County. Improvements to SR-74 was included as an assumption for both of these regional planning programs. The Draft EIR will evaluate the consistency of the project with the applicable provisions of the adopted Southern HCP or SAMP. Mitigation would be provided, as necessary.				
COMMUNITY RESOURCES - Would the project:				
a) Cause disruption of orderly planned development?		X		
Less than significant impact with mitigation - The proposed project would result in minor property acquisition along SR-74. No relocations would be required. Property Owners would be compensated at fair market value for any damages or for property acquired. This is not expected to be a significant constraint on the proposed project; however, this issue will be addressed in the Draft EIR and appropriate mitigation will be identified.				
b) Be inconsistent with a Coastal Zone Management Plan?				X
No impact – The project site is located outside of and is non-contiguous to the Coastal Zone and is not anticipated to have any effects on coastal resources. Therefore, it would not impact coastal resources and no further evaluation of this issue will be provided in the Draft EIR.				
c) Affect lifestyles or neighborhood character or stability?			X	
d) Physically divide an established community?			X	
Less than significant – The proposed project would not result in the relocation of any uses. It would not result in modifications to the existing neighborhoods that would divide or substantially alter the connectivity between neighborhoods. The widening of the roadway would result in visual modifications, which will be evaluated under Aesthetics. Though no significant impact to neighborhood or stability is anticipated, this issue will be addressed in the EIR in response to concerns raised by the community.				
e) Affect minority, low-income, elderly, disabled, transit-dependent, or other specific interest group?				X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
No impact – The study area is predominantly non-minority (90 percent) and has a high median income, (greater than $100,000 per year). This 1990 Census data supports the field review, which did not identify pockets of minority and/or low-income populations. The percent of the population identified as low-income or a minority was less than half that of the City or County. Impacts were distributed throughout the study area and not concentrated in any particular area. Therefore, no minority and/or low-income populations have been identified that would be adversely affected by the proposed project as determined above. Therefore, further evaluation of this issue in the Draft EIR is not required and no mitigation measures are necessary.				
f) Affect employment, industry, or commerce, or require the displacement of businesses or farms?				X
g) Affect property values or the local tax base?				X
No impact – Since the proposed project does not displace any businesses, no loss of employment, or reduction in income level is expected. The proposed project would not have a substantial impact on tax revenue because the project would not result in any residential or non-residential displacements, and property owners would be compensated for property acquisition. The amount of tax revenue lost from the small number of sliver takes would not substantially alter the tax base. The proposed project would have a short-term beneficial effect on employment by generating direct and indirect employment opportunities. Direct temporary employment involves jobs directly created by highway construction activity. These jobs include all on-site laborers, specialists, engineers, and managers involved with the highway improvement project. Indirect jobs are workers in industries, which supply highway construction manufacturers with materials and off-site construction industry workers such as administrative, clerical and managerial workers. Expenditures by these workers on various goods and services stimulate demand for additional employees in many industries, resulting in employment being supported throughout the general economy. Further evaluation of this issue in the Draft EIR is not required and no mitigation measures are necessary.				
h) Affect any community facilities (including medical, educational, scientific, or religious institutions, ceremonial sites or sacred shrines?				X
No impact –The project site is adjacent to residential uses. There are no community facilities within the project limits. Implementation of the project would not require any long-term road closures; therefore, access to community facilities outside of the project limits would not be restricted. Though no impacts are anticipated, as part of the land use discussion the Draft EIR will provide an inventory of community facilities as such government facilities (police and fire), churches, schools, health care, public transit, and parks and recreational facilities in the project vicinity.				
i) Result in alterations to waterborne, rail, or air traffic?				X
No impact – The proposed project provides for improvements to an existing highway facility. The project site is in close proximity to San Juan Creek; however, no alterations to the Creek would be required. The closet rail line is west of I-5 and would not be affected by the proposed project. The two closest aviation facilities are John Wayne Airport and the Marine Corps Base (MCB) Camp Pendleton. Both of these facilities are a substantial distance from the roadway. There are no features that would directly or indirectly influence air traffic. The project will not result in alterations to waterborne, rail, or air traffic. Further evaluation of this issue in the Draft EIR is not required and no mitigation measures are necessary.				
j) Support large commercial or residential development?			X	

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Less than significant impact – The project will support the "Ranch Plan," a 22,815-acre Planned Community east of the project site. The proposed SR-74 improvements would serve the project; however, the need for the improvements was identified substantially before the Ranch Plan was proposed or approved. SR-74 has been identified as a primary arterial highway on the MPAH and the local General Plan for several decades. Though development from the Ranch Plan would utilize the roadway, development of the Ranch Plan is not dependent on the implementation of the SR-74 improvements. Development in western Riverside County also utilizes SR-74. The regional projections for western Riverside County project substantial growth in the region. Similar to the Ranch Plan, none of this development would be conditioned on the implementation of the proposed improvements. The closest development in Riverside County is the City of Lake Elsinore, which is approximately 15 miles to the east of the project limits. Given the limited nature of the improvements (e.g. improvements to 0.9 miles of roadway) the implementation of the proposed project would not be expected to alter development plans in Riverside County or modify commute patterns. There would be over 15 miles of unimproved portions of SR-74 prior to accessing the project location. Surrounding land uses, including the Ranch Plan and development in western Riverside County, will be discussed in the Draft EIR in the context of the land use evaluation and potential growth-inducing affects.				
k) Affect wild or scenic rivers or natural landmarks?				X
No impact – There are no scenic rivers or natural landmarks within or adjacent to the proposed project; therefore, no further evaluation of this issue is the Draft EIR is necessary and no mitigation measures are necessary.				
l) Result in substantial impacts associated with construction activities (e.g., noise, dust, temporary drainage, traffic detours, and temporary access, etc.)?		X		
Less than significant impact with mitigation – The Draft EIR will provide a discussion of the potential impact of the proposed project related to noise, air quality, water quality and hydrology, and transportation and traffic. Mitigation measures will be developed for those topical issues, as necessary.				
CULTURAL RESOURCES - Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?		X		
Less than significant impact with mitigation – A Historic Property Survey Report (HPSR), dated January 2007, was prepared by Department staff and documents cultural resources within the Area of Potential Effects (APE). Based on the results of previous record and literature searches in the project area, at least 20 survey/reports and 11 archeological sites (historic and prehistoric) have been documented within a 1-mile radius of the Project Limits. Because historic resources have been previously identified on site and in the immediate project vicinity, the HPSR will be summarized in the Draft EIR which will document the historic resources in the project vicinity. Potential impacts to historical resources, if any, will be identified in the Draft EIR and appropriate mitigation measures identified, as necessary.				
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		X		

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Less than significant impact with mitigation – The HPSR prepared for the proposed project contains three technical reports: an Archaeological Survey Report (ASR); a Historic Resource Evaluation Report (HRER) for architecture; and a Historical Resource Evaluation Report (HRER) for historic archaeology. The Manriquez Adobe site was identified through archival research and oral history. No surface manifestations of the site were identified during the field survey. However, archival research suggested that information-bearing archaeological deposits may have survived. Draft EIR will summarize the findings of the records search and literature review and will document the archaeological resources in the project vicinity. Potential impacts to archaeological resources, if any, will be identified in the Draft EIR and appropriate mitigation measures identified, as necessary.				
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
Less than significant impact with mitigation – A *Paleontology Report* was prepared by the Department's Central Coast Technical Studies Branch in November 2006. There is low potential for sensitive paleontological resources in the non-marine terrace deposits, as well as the Quaternary alluvium and Colluvium deposits. There is a high potential for encountering sensitive resources within the Miocene Monterey Formation and the Upper Miocene Capistrano Formation. The potential for sensitive resources to be found in the project area varies depending on the formation. The Paleontology Report will be summarized in the Draft EIR and appropriate mitigation will be identified..				
d) Disturb any human remains, including those interred outside of formal cemeteries?			X	
Less than significant impact with mitigation – While no human remains have been identified within the project area, the potential for impacts associated with unknown archeological and historical resources will be addressed in the Draft EIR and standard conditions and mitigation measures will be identified, as appropriate. The Department has coordinated with the Native American Heritage Commission (NAHC) regarding their Sacred Lands File in 2001 and 2006. The NAHC search had failed to identify cultural resources within the project area. This finding will be confirmed in conjunction with the preparation of the Draft EIR.				
GEOLOGY AND SOILS - Would the project:				

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
Less than significant impact – Most of Southern California is subject to some affect from active and potentially active fault zones in the region. A Preliminary Geotechnical Report has been prepared by the Department's Division of Geotechnical Services in August 2006. According to the investigation, no known earthquake faults, including those delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Act (APEFZA) maps, pass through the proposed project site. The closest active fault is Whittier-Elsinore Fault Zone, located approximately 9 miles fro the project site. Portions of the project area are within zones that have been identified as being at an increased risk of liquefaction. The discussion of seismic activity will be included in the Draft EIR in the context of the geotechnical discussion of the project.				
b) Result in substantial soil erosion or the loss of topsoil?			X	
Less than significant – The natural slopes in the project area are covered with material which is granular in nature (i.e., sand and gravel). The slopes are typically covered with vegetation. Consistent with the current conditions of the site, implementation of the proposed project would result in the project site being covered with impervious surfaces associated the roadway. During construction activities, temporary soil erosion may occur. Implementation of standard erosion control Best Management Practices (BMPs) through the development of a Storm Water Pollution Prevention Plan (SWPPP), as required by the Statewide NPDES Storm Water Permit would ensure these impacts would remain less than significant. Soil erosion issues will be addressed in the Water Quality and Hydrology section of the Draft EIR.				
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
No impact – According to the Geotechnical Report prepared for the proposed project, the proposed project is not located on a geological unit or soil that is unstable or would become unstable as a result of the proposed project. No further discussion in the Draft EIR would be required and no mitigation is necessary.				
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.				X
No impact – According to the Geotechnical Report prepared for the proposed project, the proposed project is not located on expansive soil. No further discussion in the Draft EIR would be required and no mitigation is necessary.				

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
No impact – The proposed project would not involve the use of septic tanks or alternative wastewater disposal systems. The project would not generate any wastewater. No impact would occur and no further discussion in the Draft EIR is warranted.				
HAZARDS AND HAZARDOUS MATERIALS - Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
No impact– No routine transport, use or disposal of hazardous materials would occur as part of the proposed project. No further evaluation of this issue will be incorporated into the Draft EIR.				
b) Create a significant hazard to the public or the environment through reasonably forseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
Less than significant impact – An Initial Site Assessment (ISA) was performed in May 2000, updated in April 2003, and further updated in April 2007. No such emissions were identified in the ISA within the Project Limits, and no such materials, waste, or substances would be handled. During construction, there is a small risk of accidental explosion or release of hazardous materials (such as gasoline, oil, and other fluids) used in operating and maintaining construction equipment; however, due to the limited about of materials involved during construction and implementation of adopted procedures for the handling of these materials impacts would be less than significant. No further evaluation of this issue will be incorporated into the Draft EIR.				
c) Emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing or proposed school?				X
No impact – No schools are located within one-quarter mile of the project site. The proposed project does not include the construction of any uses that would involve the use, storage, or transport of hazardous materials resulting in the risk of release or hazardous emissions. Further evaluation of this issue in the Draft EIR is not required and no mitigation measures are necessary.				
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
No impact – According to the ISA prepared for the proposed project the project site is not located on a site which is included on a list of hazardous materials sites. No impact would occur and no further analysis in the Draft EIR is necessary.				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
No impact – The proposed project is not located within an airport land use plan or within two miles of a public airport. Further evaluation of this issue in the Draft EIR is not required and no mitigation measures are necessary.				

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
No impact – The project site is not located near a private airstrip. Further evaluation of this issue in the Draft EIR is not required and no mitigation measures are necessary.				
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
No impact – There are no known emergency response or emergency evacuation plans that would be impacted through implementation of the proposed project. The Transportation Management Plan prepared to address construction traffic does incorporate measures for emergency vehicles need to access the study area during construction.				
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X
No impact– The proposed project site is located in an area designated as a Very High Fire Hazard Area which may contain substantial fire risks. The proposed project consists of improvements to an existing highway, no residences are located on the project site and none are proposed as part of the project. Therefore, the project would not result in a significant risk of loss, injury, or death involving wildland fires. Further evaluation of this issue in the Draft EIR is not required and no mitigation measures are necessary.				
HYDROLOGY AND WATER QUALITY - Would the project:				
a) Violate any water quality standards or waste discharge requirements?		X		
Less than significant impact with mitigation - The project would be required to comply with the current National Pollutant Discharge Elimination System (NPDES) Construction General Permit which requires preparation of a SWPPP. The SWPPP would identify construction-level and post-construction BMPs to reduce or eliminate erosion and sedimentation as well as other non-sediment pollutants. The Draft EIR will summarize the findings of the Water Quality Technical Study. In addition, the Draft EIR will detail the project's compliance with the NPDES permit and identify standard conditions of approval and project design features which would detail any site design feature, routine structural BMPs, and related requirements of the NPDES permit.				
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X
No impact – The proposed project would not draw from groundwater or interfere substantially with groundwater recharge. The project would result in a relative small increase in impervious surfaces. Further evaluation of this issue in the Draft EIR is not required and no mitigation measures are necessary.				
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?		X		

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Less than significant impact with mitigation – A Water Quality Technical Study was prepared by the Department in November 2006. Based on finding of the Water Quality Technical Study, the proposed project would not substantially alter the existing pattern of natural surface drainage in the project area. The limited amount of new impervious surface would not result in substantial increases in the amount of runoff generated from the project site. The project would modify existing storm drains as necessary to ensure proper site drainage. Though the project would not result in substantial changes in volume and composition of runoff the Draft EIR will include a discussion of the potential impacts related to water quality, as well as address compliance with water quality regulations and identify appropriate mitigation measures.				
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			X	
Less than significant impact – Because the project site is currently developed with a highway, implementation of the proposed project would not substantially increase the amount of impervious surface area. The volume and composition of runoff is not anticipated to change substantially from existing conditions. Standard conditions and mitigation measures would potentially further reduce the water quality impacts associated with site runoff. The Draft EIR will address compliance with water quality regulations, potential impacts related to water quality, and identify appropriate mitigation measures.				
f) Otherwise substantially degrade water quality?		X		
Less than significant with mitigation – See the discussion under item (a) above.				
g) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
No impact – The proposed project is not designated as being within a 100-Year Flood Hazard Area. The project site consists of the existing highway and no housing is proposed as part of the project and would not expose people or structures to flooding. Further evaluation of this issue in the Draft EIR is not required and no mitigation measures are necessary.				
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
No impact – The proposed project is not designated as being within a Dam Inundation Area. The project site consists of the existing highway and no housing is proposed as part of the project and would not expose people or structures to flooding. Further evaluation of this issue in the Draft EIR is not required and no mitigation measures are necessary.				
j) Inundation by seiche, tsunami, or mudflow?				X
No impact – There are no water bodies in proximity to the project site that would subject the site to hazards from a seiche or tsunami. There are no hillside areas within the project vicinity that would generate mudflow. Further evaluation of these issues in the Draft EIR is not required and no mitigation measures are necessary.				
LAND USE AND PLANNING - Would the project:				

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
a) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
Less than significant impact – The Draft EIR will evaluate the project's consistency with local planning documents. The Draft EIR will also address consistency with other relevant local and regional planning documents.				
b) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
No impact –The project occurs within the SAMP and Southern HCP boundaries. The proposed project does not traverse an area identified for preservation in the Southern HCP. Though no impact is identified, the Draft EIR will address the applicable components of these planning programs.				
MINERAL RESOURCES - Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
No impact – The project site does not contain any known state or locally designated mineral resources or locally important mineral resources recovery sites. Therefore, implementation of the proposed project would not result in the loss of availability of lands that potentially contain mineral resources. Therefore, further evaluation of this issue in the Draft EIR is not required and no mitigation measures are necessary.				
NOISE - Would the project:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	X			
Potentially significant impact – There are portions of the study area that currently are exposed to noise levels in excess of established standards (State and local standards). With the projected increase in traffic volumes, with or without the project, the number and severity of noise exceedances would increase. The project would incrementally add to the noise exceedances because it would result in traffic being moved closer to the sensitive receptors. Sound barriers, which were identified as reasonable and feasible by the Department guidelines, would be constructed as part of the project improvements. This would result in a beneficial affect compared to existing conditions and the no project scenarios; however, there would still be locations where the cumulative noise impact would exceed State and local standards. The potential project related and cumulative noise impacts will be evaluated in the Draft EIR.				
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
Less than significant impact – There would be temporary exposure of persons to groundborne vibration or groundborne noise during construction, especially associated with pile driving for retaining walls. Though, vibration impacts would be limited in scope and would not result in significant impact, the Draft EIR will include a discussion of the potential impacts associated with vibration. A standard condition for construction activities is to comply with the local noise ordinance.				
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without	X			

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
the project?				
Potentially significant – As indicated above, the project would move the traffic incrementally closer to the sensitive noise receptors, thereby resulting in an increase in noise levels. However, the existing and future conditions both with and without the project would result in ambient noise levels in excess of standards. The Draft EIR will include an evaluation of noise impacts both with and without the project.				
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
Less than significant impact – Construction activities would result in temporary increases in the ambient noise levels. However, based on the standard conditions the contractor would be required to comply with the City of San Juan Capistrano Noise Ordinance, which places restrictions on construction activities to ensure there are no significant impacts. These standards will be summarized and their relevance to the project will be discussed in the Draft EIR.				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X
No impact – As noted previously, the project site is not located within an airport land use plan or located near a public or private airstrip. Further evaluation of this issue in the Draft EIR is not required and no mitigation measures are necessary.				
POPULATION AND HOUSING - Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
Less than significant impact – The proposed project would not directly influence population and housing in the project study area. The immediate study area is generally built-out with residential development. The improvements would provide increased capacity, which would be available to serve the current excess demand (the level of service is deficient in the peak hours) and development that has been approved adjacent to the project site (e.g. the Ranch Plan). Though this would provide improvements that may serve the planned growth, it is not a determining factor as to whether the development is implemented. SR-74 exists and would be available to access future approved development, though with reduced levels of service. The growth-inducing and growth-facilitating aspects of the project will be evaluated in the Draft EIR.				
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
No impact – The project will not displace any homes or people and would not necessitate replacing housing elsewhere. No impact would occur and no further discussion in the Draft EIR is required and no mitigation measures are necessary.				
PUBLIC SERVICES - Would the project:				

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire protection?		X		
Less than significant impact with mitigation measures –There are no fire stations located within the project limits that would be directly or indirectly affected by the proposed project. Emergency access to the study area and surrounding neighborhoods would be maintained during construction. As indicated above, the Transportation Management Plan that is routinely required to address construction detours and staging would address how emergency services would access the area to ensure that impacts in response times during construction are minimal. Long-term, the project would have a beneficial affect on these services by reducing congestion and thereby improving response times. The project would result in modification to several existing driveways on the north side of the road. Many of these driveways are very steep and may exceed the Orange County Fire Authority recommended grade. The Draft EIR will determine if the proposed project would result in the grade of any driveways exceeding OCFA recommended grade or would exacerbate existing exceedances.				
ii. Police protection?			X	
Less than significant impact –There are no police stations located within the project limits that would be directly or indirectly affected by the proposed project. As indicated above, emergency access to the study area and surrounding neighborhoods would be maintained during construction and the Transportation Management Plan would address construction detours and staging. No further evaluation of police services will be provided in the Draft EIR.				
iii. Schools?			X	
Less than significant impact – Though no direct or indirect impacts on schools are anticipated due to the distance of the schools from the project site, in response to public concern the Draft EIR will address potential impacts on student access to neighborhood schools.				
iv. Parks?				X
v. Other public facilities?				X
No impact - There are no parks, libraries, community centers, or other public facilities in the project areas. The proposed project would not result in a population increase or an increase in demand for public services. As such, the proposed project would not result in impacts to parks, or other public facilities. Further evaluation of this issue in the Draft EIR is not required and no mitigation measures are necessary.				
RECREATION -				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
No impact – The proposed project involves improvements to SR-74 highway and would not generate additional population; therefore, it would neither directly increase the demand on existing facilities nor would it require the construction or expansion of recreational facilities. Access to all parks and recreational facilities in the project vicinity would not change as a result of the proposed project. No impact would occur and no further discussion of recreation would be required in the Draft EIR.				
TRANSPORTATION/TRAFFIC - Would the project:				
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the				

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				X
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				X
No impact – The project proposes roadway improvements that would help alleviate traffic congestion along the subject portion of SR-74. The project would not directly or indirectly generate new trips. To document the ability of project to meet the project objectives, the Draft EIR will provide an evaluation of the traffic impacts with and without the project compared to both the existing conditions and long-range cumulative analysis.				
c) Result in a change in air traffic patters, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
No impact – The proposed project does not propose any uses that would affect air traffic patterns either through direct increases in local population or through development of a project element that would create an aviation hazard. No impact would occur and no further evaluation in the Draft EIR is required..				
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incomplete uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X
f) Result in inadequate parking capacity?				X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X
No impact – The proposed project would be designed consistent with the Department's Highway Design Manual, which would ensure that project would not increase hazards due to a design feature. The project study area is currently urbanized; therefore, no conflict with other uses, such as farm equipment would result from the proposed project. The project would enhance local circulation in the project study area, thereby facilitating emergency access as a result of less congestion. Parking is not currently allowed on this portion of SR-74 and the project would not create any new parking demands. The project would not conflict with adopted policies, plans, or programs for alternative transportation. Currently, there are no programs that propose alternative modes of transportation along SR-74. There would be no impact associated with project implementation; therefore, none of these issues warrant further evaluation in the Draft EIR.				
UTILITY AND SERVICE SYSTEMS - Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
No impact – The proposed project involves improvements along an existing highway and no development is planned that would require additional demand for wastewater treatment facilities or systems. No impact would occur and no further evaluation in the Draft EIR is required.				
c) Require or result in the construction of new storm water drainage facilities or expansion of existing			X	

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
facilities, the construction of which could cause significant environmental effects?				
Less than significant impact – The proposed project would require minor modification to existing storm drains to accommodate the new pavement width; however, it would not substantially alter the existing drainage pattern of the area. The project may result in incrementally greater runoff associated with a minor increase in the amount of impervious surface. The additional flow will travel via a new underground storm drain system that would outfall to San Juan Creek outside the Project Limits. Compliance with applicable permits and regulations would reduce the potential impacts to less than significant. The Draft EIR will include an evaluation of the potential environmental impacts associated with the construction of the additional drainage facilities.				
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
No impact – The proposed project involves widening of an existing highway and would not create a new demand for water supplies. No impact related to the sufficiency of available water supplies would occur, and no further analysis in the Draft EIR is required.				
e) Result in determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
No impact – As discussed above under items a) and b), the project would not result in any increased demand for wastewater treatment or impacts to existing facilities. No further evaluation of this topical issue in the Draft EIR is necessary.				
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	
Less than significant impact – The project involves widening an existing highway facility and would not generate solid waste during operation phase of the project. The proposed project would generate solid waste due to demolition activities during construction, thus generating solid waste requiring disposal. Where feasible, construction waste would be recycled and the proposed project would reuse as many of the existing facilities as possible to reduce excess waste. Remaining solid waste would be hauled to and disposed of at Prima Deshecha landfill, which is operated by the Orange County Integrated Waste Management Department (OCIWMD) and is located east of the project site. Due to the short-term nature of demolition activities and the finite amount of solid waste generated by the project, potential impacts to the available capacity of the landfill system would not be significant. No further analysis in the Draft EIR is required.				

MANDATORY FINDINGS OF SIGNIFICANCE -								
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, or cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X					
Less than significant impact with mitigation– The proposed project would not significantly degrade the quality of the environment or cause significant reductions in any native or sensitive habitats or species populations in the project area. There are no threatened or endangered species in the study area that would be adversely affected by the project. The project would not impact any known archaeological or historical resources. All potential impacts that have not been avoided with special measures are localized and mitigated to a level where significant impacts would not result.								
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	X							
Potentially significant impact – The proposed project consists of widening an existing highway facility. Implementation of the proposed project would contribute to cumulative noise for which mitigation may not be considered reasonable or feasible.								
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	X							
Potentially significant impact – Construction and operation of the proposed project could have the potential to generate significant adverse impacts on human beings, either directly or indirectly. The Draft EIR will provide analyses of the potential impacts with respect to issues identified above.								

Appendix B Minimization and Mitigation Summary

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Task and Brief Description	Reference by Section #	Responsible Branch/Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
DESIGN KICK-OFF		Proj Eng_____	Design							
ENVIRONMENTAL PS&E REVIEW		Proj Eng_____	Design							
ENVIRONMENTAL COMPLIANCE REVIEW		Envi Plan_____	Design							
CONSTRUCTION KICK-OFF MEETING		Proj Quality Cont_____	Design							
Transfer Resident Engineer Book		Proj Quality Cont_____	Design							
PRECONSTRUCTION MEETING		Res Eng_____	Construction							
Air Quality										
Compliance with the South Coast Air Quality Management District (SCAQMD) Rule 403 including Best Available Control Measures (BACMs) and the California Department of Transportation's (Department) Standard Specifications for construction will reduce the temporary impacts. All disturbed areas, including storage piles that are not being actively used for construction purposes, shall be effectively stabilized for dust emissions using water, chemical stabilizers/suppressants, or vegetative ground cover, as appropriate.		Proj Eng_____ Envi Plan_____ Res Eng_____	Design Construction							
All construction vehicles and construction equipment shall be required to be equipped with the State-mandated emission control devices pursuant to State emission regulations and standard construction practices. Short-term construction particulate matter less than 10 microns in diameter (PM_{10}) emissions shall be further reduced with the implementation of required dust suppression measures outlined within South Coast Air Quality Management District (SCAQMD) Rule 403. Construction of the proposed project shall also adhere to the Caltrans Standard Specifications for construction [Section 10 and 18 (Dust Control) and Section 39-3.06.		Proj Eng_____ Envi Plan_____ Res Eng_____	Design Construction	No						
Climate Change										
Landscaping will use reclaimed water, where possible. Currently 30 percent of the electricity used in California is used for the treatment and delivery of water. Use of reclaimed water helps conserve this energy, which reduces greenhouse gas (GHG) emissions from electricity production. Landscaping reduces surface warming and through photosynthesis decreases Carbon Dioxide (CO_2). During the design phase, the Department will work with the City of San Juan Capistrano and comply with Section 9-2:349 Municipal Code and plant trees above and beyond what the project is impacting. The use of lighter color surfaces such as Portland cement, helps to reduce the albedo effect and cool the surface; in addition, the Department has been a leader in the effort to add fly ash to Portland cement mixes. Adding fly ash reduces the GHG emissions associated with cement production. Use of this would be in accordance with the Department's specifications and design standards and could be used in areas such as curb/gutter, retaining walls, driveways, and sidewalks.		Proj Eng_____ Envi Plan_____ Envi Plan_____ Res Eng_____	Design Construction	Yes						

Task and Brief Description	Reference by Section #	Responsible Branch/Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
According to Caltrans Standard Specification Provisions, idling time for lane closure during construction is restricted to 10 minutes in each direction; in addition, the contractor must comply with SCAQMD rules, ordinances, and regulations in regards to air quality restrictions. Caltrans and the California Highway Patrol (CHP) are working with regional agencies to implement Intelligent Transportation Systems (ITS) to help manage the efficiency of the existing highway system. ITS is commonly referred to as electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.										
Visual/Landscape										
All landscaping currently maintained by the City of San Juan Capistrano (City) shall be replaced with similar landscaping.		Proj Eng_____ Res Eng_____	Design Construction	No						
The District Landscape Architect shall ensure that the appropriate mix and application strategy for erosion control seed species will be applied for the specific soil composition of the area.		Proj Eng_____	Design	No						
To maintain the context of the adjacent communities (color, form, and texture), the project shall install landscaping along proposed wall features and adjoining hillsides that is compatible with the existing landscaping. Landscape shall include trees (where feasible), shrub/groundcover mass planting, and vines on opaque sound walls and/or retaining walls to soften the hardscape features and reduce the adverse environmental impacts (such as glare and radiant heat). All selected species within California Department of Transportation (Department) right-of-way shall share similar water requirements. The new landscape concept and plant palette shall be determined in consultation with the Department District Landscape Architect during the Project Design Phase.		Proj Eng_____ Res Eng_____	Design Construction	Yes						
All landscaping currently maintained by the City shall be replaced with similar landscaping. Trees that are removed shall be replaced where feasible. Where speeds are posted greater than 35 miles per hour (mph), large trees (trees with trunks over four inches in diameter when mature) shall be placed outside the clear recovery zone (30 feet [ft] from the travel lane). Small trees (trees with trunks four inches in diameter or less when mature) shall be used to replace the trees within the clear recovery zone. Tree spacing for small trees can be adjusted to account for the removal of existing mature trees.		Proj Eng_____ Res Eng_____	Design Construction	No						
All utilities that are to be moved shall be placed underground, where feasible, in coordination with the California Department of Transportation (Department) and the City of San Juan Capistrano (City).		Proj Eng_____ Res Eng_____	Design Construction	Yes						
For trees (including coast live oak trees) that are removed, the California Department of Transportation (Department) will prepare a planting plan for approval by the City of San Juan Capistrano Planning Commission. The planting plan shall be in compliance with Section 9-2:349 of the City of San Juan Capistrano Municipal Code and shall require the replacement of trees at a minimum ratio of 1:1. The plan shall identify trees to be replanted within the State right-of-way (ROW) and those to be planted off site. As part of this planting plan, the Department will recommend that the City of San Juan Capistrano install native tree species. The City Tree Removal Permit process can be referenced in Appendix J of this document.		Proj Eng_____ Res Eng_____	Design Construction	Yes						
To maintain consistency with the existing infrastructure (i.e., walls, sidewalks) in the project area, architectural treatments for the structure elements of the project shall be determined in consultation with the California Department of Transportation (Department) District		Proj Eng_____ Res Eng_____	Design Construction	Yes						

Task and Brief Description	Reference by Section #	Responsible Branch/Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
Landscape Architect and the City of San Juan Capistrano during the Plans, Specifications, and Estimate (PS&E) phase.										
To minimize visual impacts caused by the extensive large-scale walls, wall aesthetic enhancements shall be developed as a theme treatment (i.e., terraced, color treatment, textural treatment, varying materials) for all new retaining walls and sound walls within the proposed project. Structural themes (i.e., walls, sidewalk) shall be similar in character to the surrounding environment. The elements shall be determined in consultation with the Department District Landscape Architect and the City of San Juan Capistrano during the Plans, Specifications, and Estimates (PS&E) phase. The visual simulations included in this Visual Impact Assessment represent standard wall treatments only and are subject to change.	-	Proj Eng_____ Res Eng_____	Design Construction	Yes						
To minimize visual impacts caused by the replacement sidewalk, aesthetic enhancements shall be implemented (i.e., color treatment, textural treatment, varying setbacks from the highway, use of material other than concrete) for the replacement sidewalk.	-	Proj Eng_____ Res Eng_____	Design Construction	Yes						
	-									
Biology	-									
All Best Management Practices (BMPs) would be in place during construction according to the Storm Water Pollution Prevention Plan (SWPPP).	-									
A qualified biologist shall be designated responsible for overseeing biological monitoring, regulatory compliance, and restoration activities associated with the proposed project in accordance with the adopted measures, applicable regulations and laws, and environmental permit conditions.	-	Proj Eng_____ Res Eng_____	Design Construction	Yes						
Biological resources shall be protected during construction. To ensure this protection, a Biological Resources Construction Plan that provides for the protection of the resource and establishes the monitoring requirements will be completed to be reviewed and approved by the resource agencies prior to ground disturbance.	-	Proj Eng_____ Envi Plan_____ Envi Plan_____ Res Eng_____	Design Construction	No						
The Department shall assume responsibility for compensation of impacts to biological resources. The project would result in permanent impacts to Waters of the United States (waters of the U.S.) requiring a Letter of Permission (LOP) from the United States Army Corps of Engineers (ACOE) to authorize the discharge of dredged and/or fill materials into waters of the U.S., pursuant to Section 404 of the Clean Water Act (CWA).	-	Proj Eng_____ Envi Plan_____	Design							
The drainage features shall be replaced by drainage pipes that tie into the existing storm drain system. Impacts to wetland waters of the United States shall be offset by compensation consisting of wetland creation at a minimum 1:1 ratio.	-	Proj Eng_____ Res Eng_____	Design	No						
If any special-status plants are observed within the Biological Study Area (BSA) during preconstruction surveys, the locations of the populations and an estimation of the population size shall be mapped and shown on construction drawings. This information shall be used for appropriate avoidance during construction. If a species is to be avoided during construction, it shall be shown as an environmentally sensitive area (ESA) on the construction plans. If the population cannot be avoided during construction, this information shall be used for appropriate seed collection and salvage measures.	-	Proj Eng_____ Res Eng_____	Design Construction	No						

Task and Brief Description	Reference by Section #	Responsible Branch/Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
Protective fencing shall be placed around the dripline of oaks not identified for removal to prevent compaction of the root zone and designated as an environmentally sensitive area (ESA). In addition, trees in containers will be relocated prior to the start of construction.	-	Proj Eng_____ Envi Plan_____ Envi Plan_____ Res Eng_____	Design Construction	Yes						
Impacts to coast live oak trees will be compensated at a minimum 1:1 ratio. Impacts to all trees will be compensated in accordance with the City of San Juan Capistrano's Tree Preservation Ordinance.	-	Proj Eng_____ Envi Plan_____ Envi Plan_____ Res Eng_____	Design Construction	No						
If feasible, vegetation removal will be avoided during the primary nesting season for local birds (February 15 through September 1) and most raptors. If vegetation removal must occur during this period, then pre-construction surveys shall be conducted surveyed by a qualified biologist in the appropriate habitats no more than 7 days prior to clearing within and up to approximately 50 feet (ft) from the project boundary.	-	Proj Eng_____ Envi Plan_____ Envi Plan_____ Res Eng_____	Design Construction	Yes						
In order to avoid and minimize the effects of lighting on wildlife, construction lighting shall be shielded away from natural areas as directed by the project engineer.	-	Proj Eng_____ Envi Plan_____ Envi Plan_____ Res Eng_____	Design Construction	Yes						
To reduce impacts to wildlife, all construction-related activities shall be confined to the proposed impact boundaries by installing fencing along the boundary in locations where the impact area abuts vegetated areas to prevent any construction activities from encroaching into adjacent habitat areas. In addition, construction access points shall be limited in proximity to the potential habitat for wildlife to the maximum extent feasible as directed by the project engineer.	-	Proj Eng_____ Envi Plan_____ Envi Plan_____ Res Eng_____	Design Construction	Yes						
Impacts to coast live oak trees will be compensated at a minimum 1:1 ratio through off-site replacement. Impacts to all trees will be mitigated in accordance with the City of San Juan Capistrano's (City) Tree Preservation Ordinance.	-	Proj Eng_____ Envi Plan_____ Envi Plan_____ Res Eng_____	Design Construction	Yes						
Bare soil will be landscaped with California Department of Transportation (Department)-recommended seed mix from locally adopted species to preclude the invasion of noxious weeds. In compliance with the Executive Order on Invasive Species, EO 13112, and subsequent guidance from the Federal Highway Administration (FHWA), the landscaping and erosion control measures included in the project will not use species listed as noxious weeds, and no invasive species will be planted within the state right-of-way or in areas where the species may enter a drainage area.	-	Proj Eng_____ Envi Plan_____ Envi Plan_____ Res Eng_____	Design Construction	Yes						
In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment, and eradication strategies to be implemented should an invasion occur. Before mobilizing to arrive at the site and before leaving the site, construction equipment will be cleaned of mud or debris that may contain invasive plants and/or seeds, and inspected to reduce the potential of spreading noxious weeds. To ensure implementation of these measures, the project contractor shall provide a weed abatement program to be approved by the Department engineer prior to the start of ground disturbance.	-	Proj Eng_____ Envi Plan_____ Envi Plan_____ Res Eng_____	Design Construction							
The Department will use site-specific plant materials (e.g., propagules and seed) adapted to local conditions in order to increase the likelihood that revegetation will be successful and to maintain the genetic integrity of the local ecosystem	-	Proj Eng_____ Envi Plan_____ Envi Plan_____ Res Eng_____	Design Construction							

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Seed purity will be certified by planting seed labeled under the California Food and Agricultural Code or seed tested within a year by a seed laboratory certified by the Association of Official Seed Analysts or by a seed technologist certified by the Society of Commercial Seed Technologists.	-	Proj Eng_____ Land Arch_____ Res Eng_____	Design Construction	Yes						
Trucks with loads carrying vegetation will be covered, and vegetative materials removed from the site will be disposed of, in accordance with all applicable laws and regulations.	-	Proj Eng_____ Envi Plan_____ Envi Plan_____ Res Eng_____	Design Construction							
Cultural Resources	-									
Through establishment of an Environmentally Sensitive Area (ESA) Action Plan, potentially significant subsurface deposits at the Manriquez Adobe site will not be impacted.		Proj Eng_____ Envi Plan_____ Envi Plan_____ Res Eng_____	Design Construction	Yes						
If buried cultural materials are discovered during construction, all earth-moving activity in the area will be diverted until a qualified archaeologist can assess the nature and significance of the find.		Proj Eng_____ Envi Plan_____ Res Eng_____	Design Construction	No						
If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities will cease in any area or nearby area suspected to overlie remains, and the County Coroner will be contacted. Pursuant to Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the Coroner will notify the Native American Heritage Commission.		Proj Eng_____ Envi Plan_____ Res Eng_____	Design Construction	No						
Paleontological Resources										
A Paleontological Mitigation Plan (PMP) will be prepared by a qualified Principal Paleontologist.		Proj Eng_____ Envi Plan_____ Envi Plan_____ Res Eng_____	Design Construction	Yes						
Pregrade meeting by a qualified paleontologist to explain the likelihood for encountering paleontological resources, what resources may be discovered, and the methods that will be employed if anything is discovered		Proj Eng_____ Envi Plan_____ Envi Plan_____ Res Eng_____	Design Construction	Yes						
All employees, subcontractors, and Contractor's representatives on the project site involved in subsurface disturbing activities must receive a one-hour paleontological resource awareness training program provided by the Paleontological Salvage Team prior to performing on-site work.		Proj Eng_____ Envi Plan_____ Envi Plan_____ Res Eng_____	Design Construction	Yes						
Monitoring during excavation by a qualified vertebrate paleontologic monitor.		Envi Plan_____	Construction	Yes						
Native sediments occasionally spot-screened through one-eighth to one-twentieth-inch mesh screens to determine whether microfossils are present.		Proj Eng_____ Envi Plan_____ Envi Plan_____ Res Eng_____	Design Construction	No						
Any recovered specimens prepared to the point of identification and permanent preservation.		Envi Plan_____	Construction	No						

Task and Brief Description	Reference by Section #	Responsible Branch/Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
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Specimens identified to the lowest taxonomic level possible and curated into an institutional repository with retrievable storage.		Design_____ Envi Plan_____	Design Construction	No						
Preparation of a report of findings with an appended, itemized inventory of specimens is required following construction. When submitted to the Lead Agency, the report and inventory would signify completion of the program to mitigate impacts to paleontological resources. The report should also be submitted to the museum repository along with the fossil specimens.		Envi Plan_____	Construction	No						
Geology and Soils										
During final design, the California Department of Transportation (Department) shall prepare a Final Geotechnical/Structures Design Report for the project, refining the existing Preliminary Design Report.		Proj Eng_____	Design	No						
Implementation of erosion control Best Management Practices (BMPs) in the Storm Water Pollution Prevention Plan (SWPPP), as discussed in Section 2.2.2, Water Quality and Storm Water Runoff.		Proj Eng_____	Design	No						
Hazardous Waste and Materials	-									
Determine whether yellow thermoplastic and yellow paint traffic stripes exceed hazardous waste concentrations.		Proj Eng_____ Res Eng_____	Design Construction	Yes						
If any transformers are proposed to be disturbed or removed during construction activities, testing for potential PCB hazards conducted and handled in accordance with Caltrans SSP XE 15-300.		Proj Eng_____ Res Eng_____	Design Construction	Yes						
To ensure utility owners mark the locations of underground transmission lines and facilities, the Underground Service Alert of Southern California will be alerted at least two working days prior to subsurface excavation.		Proj Eng_____ Res Eng_____	Design Construction	No						
Develop appropriate health/safety plan to address contact with hazardous waste/materials		Proj Eng_____ Res Eng_____	Design Construction	No						
The procedures outlined in the Department's Unknown Hazards Procedures will be followed.		Proj Eng_____ Res Eng_____	Design Construction	No						
Hydrology and Floodplain										
Maintenance BMPs (Category IA), Design Pollution BMPs (Category IB), and Treatment BMPs (Category III)		Proj Eng_____ Envi Plan_____ Res Eng_____	Design Construction	No						
Water Quality										
National Pollutant Discharge Elimination System (NPDES) Permit for *General Waste Discharge Requirements for Groundwater Extraction Waste Discharges from Construction, Remediation, and Permanent Groundwater Extraction Projects to Surface Waters within the San Diego Region except for San Diego Bay* (Order No. 2001-96, NPDES No. CAG919002).		Proj Eng_____ Envi Plan_____ Res Eng_____	Design Construction	No						
Storm Water Pollution Prevention Plan (SWPPP) will be prepared		Proj Eng_____ Envi Plan_____ Res Eng_____	Design Construction	No						

Task and Brief Description	Reference by Section #	Responsible Branch/Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
Construction Site Best Management Practices (BMPs) (Category II) requirements		Proj Eng_____ Envi Plan_____ Res Eng_____	Design Construction	No						
The completed project plans would incorporate all necessary Maintenance BMPs (Category IA), Design Pollution BMPs (Category IB), and Treatment BMPs (Category III) to meet the Maximum Extent Practical (MEP) requirements.		Proj Eng_____ Envi Plan_____ Res Eng_____	Design Construction	No						
Community Impact	-									
Coordination with property owners regarding the construction schedule and phasing shall be included in the TMP.		Proj Eng_____ Res Eng_____	Design Construction	No						
Compliance with the Department's Right of Way Manual, which requires compensation at fair market value for property acquisitions.		Proj Eng_____ ROW_____	Design	No						
Implementation of Mitigation Measures V-1 through V-4 would reduce impacts (Key Views 2 and 3) due to vegetation/tree removal and construction of walls as a result of both Build Alternatives.		Proj Eng_____	Design	No						
Noise and Vibration	-									
Compliance with the California Department of Transportation's (Department) Standard Specifications, "Sound Control Requirements" will reduce the temporary impacts.		Proj Eng_____ Res Eng_____	Design Construction	No						
Interior noise mitigation measures shall be offered to the property owner of the Receptor 31 K5, such as installation of double-paned windows and a mechanical heating and cooling system (air conditioning).		Proj Eng_____ Res Eng_____	Design Construction	Yes						
Utilities and Emergency Services										
Design, construction, and inspection of utilities that would need to be relocated for the project would be done in accordance with Department requirements. These requirements include coordination with the affected service provider in each instance to ensure that work is during times of low demand and in accordance with the appropriate requirements and criteria. This coordination would be initiated during the preliminary engineering phase of the project and would continue through final design and construction		Proj Eng_____ Res Eng_____	Design Construction	No						
Coordination efforts would include planning utility rerouting, identifying potential conflicts, ensuring that construction of the proposed project minimizes disruption to utility operations, and formulating strategies for any unanticipated problems that may arise during construction.		Proj Eng_____ Res Eng_____	Design Construction	No						
The Department would also coordinate with emergency service providers to avoid emergency service delays by ensuring that all providers are aware well in advance of temporary road closures and detours. Please see Chapter 1, Project Description for details on the TMP.		Proj Eng_____ Res Eng_____	Design Construction	No						
Transportation/Traffic										
The Traffic Management Plan (TMP) will be implemented.		Proj Eng_____ Res Eng_____	Design Construction	Yes						
The project will provide eastbound left-turn lanes at the unsignalized intersections and allow U-turns at these locations to alleviate side street delays. This would facilitate the movement of minor street traffic onto the State Route 74 (SR-74) via a right turn and then a U-turn at the next available intersection.		Proj Eng_____	Design	Yes						

Task and Brief Description	Reference by Section #	Responsible Branch/Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
Permits and Approvals	-									
United States Army Corps of Engineers	-									
Section 404 – Letter of Permission or Nationwide Permit 14		Proj Eng_____ Envi Plan_____ Res Eng_____	Design Construction	Yes						
	-									
CA Department of Fish and Game										
Section 1602		Proj Eng_____ Envi Plan_____ Res Eng_____	Design Construction	No						
Regional Water Quality Control Board										
Section 401 Water Quality Certification		Proj Eng_____ Envi Plan_____ Res Eng_____	Design Construction	No						

Appendix C Agency Correspondence

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Appendix C Agency Correspondence

This appendix includes the following correspondence:

Date	To	From	Regarding
3/10/00	Praveen Gupta, Caltrans District 12	Thomas Tomlington, City of San Juan Capistrano	Comments on Scoping Document
3/21/00	Praveen Gupta, Caltrans District 12	William Tippets, Department of Fish & Game	Comments on Scoping Document
3/28/00	Praveen Gupta, Caltrans District 12	William Huber, City of San Juan Capistrano	Comments on Scoping Document
4/3/00	Praveen Gupta, Caltrans District 12	George Britton, County of Orange	Comments on Scoping Document
4/5/00	Praveen Gupta, Caltrans District 12	Jim Bartel, US Fish & Wildlife Services	Comments on Scoping Document
4/28/00	Praveen Gupta, Caltrans District 12	Senator Bill Morrow, California State Senate	Comments on Scoping Document
5/18/00	Senator Bill Morrow, California State Senate	Praveen Gupta, Caltrans District 12	Response to Inquiries regarding Scoping Document
8/24/04	Joe Soto, City of San Juan Capistrano	Todd Spitzer, Assembly Member, 71st District	Discussion of the Project
5/04/06	Dave Adams, City of San Juan Capistrano	Jim Beil, Caltrans District 12	Discussion of Cooperative Agreement
5/12/06	Home/Property Owner	Reza Aurasteh, Caltrans District 12	Soundwalls & Parkways Design
5/30/06	Dave Adams, City of San Juan Capistrano	Molly Bogh, City of San Juan Capistrano	Sound & Retaining Walls, and Landscaping
6/6/06	Ahmed Abou-Abdou, Caltrans District 12	Molly Bogh, City of San Juan Capistrano	Sound & Retaining Walls, and Landscaping
8/21/06	Ahmed Abou-Abdou, Caltrans District 12	Molly Bogh, City of San Juan Capistrano	Sound Walls
10/03/06	City Council of San Juan Capistrano	Residents of San Juan Capistrano	Petition
10/24/06	All concerned	City of San Juan Capistrano	Recap of Public Meeting
5/12/2006	Affected Residents	Caltrans District 12	Soundwall Surveys
August 2006	SCAG Conformity Working Group	District 12	PM Conformity Hot Spot Analysis
August 2006	Public	SCAG	PM Hot Spot Project Determination Web Page
2/6/2007	Smita Deshpande, Caltrans District 12	Nasser Abbaszadeh, City of San Juan Capistrano	Issue from SJC 1/22/07 Community Meeting
3/7/2007	Smita Deshpande, Caltrans District 12	Harry Persaud, County of Orange	County commitment for Landscaping

32400 PASEO ADELANTO
SAN JUAN CAPISTRANO, CA 92675
(949) 493-1171
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MEMBERS OF THE CITY COUNCIL
COLLENE CAMPBELL
JOHN GREINER
WYATT HART
GIL JONES
DAVID M. SWERDLIN

CITY MANAGER
GEORGE SCARBOROUGH

March 10, 2000

Praveen Gupta, Chief
Environmental Planning
Caltrans District 12
3347 Michelson Drive, Suite 100
Irvine, California 92612-0661

Subject: Operational Improvements on SR-74 (EA 08690K)
(our file: Inter-jurisdictional Project Review 00-01, Ortega Highway Widening).

Dear Mr. Gupta:

We have received a copy of the notice of preparation of an Environmental Assessment for the subject project. As you are probably aware, Ortega Highway, within our City, passes directly by and provides local access to several residential neighborhoods. Consequently, the proposed project will have a direct effect on our residents in those neighborhoods. In order to provide early public involvement in the design process and assure that project impacts are identified and appropriately mitigated, we ask that Caltrans conduct a public scoping meeting on this project.

We would be glad to assist your staff with scheduling either the City Council chambers or Community Center meeting hall to conduct such a meeting. Prior to doing so, we need to be briefed by your staff on the specific plan alternatives for this project. We are concerned with the potential impact of the project on the Ortega/I-5 interchange level of service (LOS). Your traffic impact analysis will need to evaluate that aspect of the project in detail. The proposed project may necessitate improvements to that interchange to accommodate increased traffic.

Please have your project manager contact Bill Ramsey, AICP, Principal Planner at (949) 443-6334 to arrange a staff briefing and for more detailed information on arranging a public workshop. We look forward to working with Caltrans on this important transportation system improvement.

Sincerely,

William R. Ramsey for

Thomas Tomlinson,
Planning Director

TT:WR:hs
C:\WINDOWS\TEMP\IJ0001L1.WPD

cc: George Scarborough, City Manager
William Huber, Engineering & Building Director
Angela Vasconcellos, Associate Environmental Planner

DRUG USE IS LIFE ABUSE

San Juan Capistrano: Preserving the Past to Enhance the Future

STATE OF CALIFORNIA - THE RESOURCES AGENCY GRAY DAVIS, Governor

DEPARTMENT OF FISH AND GAME
South Coast Region
4949 Viewridge Avenue
San Diego, California 92123
(858) 467-4201
(858) 467-4235 FAX

March 21, 2000

Praveen Gupta, Chief of Environmental Planning
Caltrans District 12
3347 Michelson Dr., Suite 100
Irvine, CA 92612-0661
Attn: Angela Vasconcellos

Comments on the Notice of Preparation of a Draft Environmental Impact Report for Plans to Widen State Route 74
Orange County
EA086900

Dear Ms. Vasconcellos:

The Department of Fish and Game (Department) appreciates this opportunity to comment on the above-referenced project, relative to impacts to biological resources. To enable Department staff to adequately review and comment on the proposed project, we recommend the following information be included in the Draft Environmental Impact Report (DEIR):

1. A complete assessment of the flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, and locally unique species and sensitive habitats.

   a. A thorough assessment of rare plants and rare natural communities, following the Department's May 1984 Guidelines (revised August 1997) for Assessing Impacts to Rare Plants and Rare Natural Communities (Attachment 1).

   b. A complete assessment of sensitive fish, wildlife, reptile, and amphibian species. Seasonal variations in use of the project area should also be addressed. Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the Department and the U.S. Fish and Wildlife Service.

   c. Rare, threatened, and endangered species to be addressed should include all those which meet the California Environmental Quality Act (CEQA) definition (see CEQA Guidelines, § 15380).

   d. The Department's California Natural Diversity Data Base in Sacramento should be contacted at (916) 327-5960 to obtain current information on any previously

Ms. Vasconcellos
March 21, 2000
Page 2

reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code.

2. A thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts.

   a. CEQA Guidelines, § 15125(a), direct that knowledge of the regional setting is critical to an assessment of environmental impacts and that special emphasis should be placed on resources that are rare or unique to the region.

   b. Project impacts should be analyzed relative to their effects on off-site habitats. Specifically, this should include nearby public lands, open space, adjacent natural habitats, and riparian ecosystems. Impacts to and maintenance of wildlife corridor/movement areas, including access to undisturbed habitat in adjacent areas, should be fully evaluated and provided.

   c. The zoning of areas for development projects or other uses that are nearby or adjacent to natural areas may inadvertently contribute to wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the environmental document.

   d. A cumulative effects analysis should be developed as described under CEQA Guidelines, § 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

   e. This document should include an analysis of the effect that the project may have on completion and implementation of regional and/or subregional conservation programs. The project site is inside Orange County's proposed Natural Communities Conservation Planning (NCCP) area. The project should conform to the NCCP guidelines in regards to effects on habitat connectivity and habitat movement. Under § 2800-§ 2840 of the Fish and Game Code, the Department, through the NCCP program, is coordinating with local jurisdictions, landowners, and the Federal Government to preserve local and regional biological diversity. Coastal sage scrub is the first natural community to be planned for under the NCCP program. The Department recommends that the lead agency ensure that the development of this and other proposed projects do not preclude long-term preserve planning options and that projects conform with other requirements of the NCCP program. Jurisdictions participating in the NCCP program should assess specific projects for consistency with the NCCP Conservation Guidelines. Additionally, the jurisdictions should quantify and qualify: 1) the amount of

coastal sage scrub within their boundaries; 2) the acreage of coastal sage scrub habitat removed by individual projects; and 3) any acreage set aside for mitigation. This information should be kept in an updated ledger system.

3. A range of alternatives should be analyzed to ensure that alternatives to the proposed project are fully considered and evaluated. A range of alternatives which avoid or otherwise minimize impacts to sensitive biological resources should be included. Specific alternative locations should also be evaluated in areas with lower resource sensitivity where appropriate.

   a. Mitigation measures for project impacts to sensitive plants, animals, and habitats should emphasize evaluation and selection of alternatives which avoid or otherwise minimize project impacts. Off-site compensation for unavoidable impacts through acquisition and protection of high-quality habitat elsewhere should be addressed.

   b. The Department considers Rare Natural Communities as threatened habitats having both regional and local significance. Thus, these communities should be fully avoided and otherwise protected from project-related impacts (Attachment 2).

   c. The Department generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species. Department studies have shown that these efforts are experimental in nature and largely unsuccessful.

4. A California Endangered Species Act (CESA) Permit must be obtained, if the project has the potential to result in "take" of species of plants or animals listed under CESA, either during construction or over the life of the project. CESA Permits are issued to conserve, protect, enhance, and restore State-listed threatened or endangered species and their habitats. Early consultation is encouraged, as significant modification to a project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, may require that the Department issue a separate CEQA document for the issuance of a 2081 permit unless the project CEQA document addresses all project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of a 2081 permit. For these reasons, the following information is requested:

   a. Biological mitigation monitoring and reporting proposals should be of sufficient

Ms. Vasconcellos
March 21, 2000
Page 4

detail and resolution to satisfy the requirements for a CESA Permit.

b. A Department-approved Mitigation Agreement and Mitigation Plan are required for plants listed as rare under the Native Plant Protection Act.

5. The Department has responsibility for wetland and riparian habitats and opposes any

alteration of a natural watercourse that would result in a reduction of wetland acreage or wetland habitat values. Alterations include, but are not limited to: conversion to subsurface drains, placement of fill or building of structures within the wetland and channelization or removal of materials from the streambed. All wetlands and watercourses, whether intermittent or perennial, should be retained and provided with substantial setbacks which preserve the riparian and aquatic values and maintain their value to on-site and off-site wildlife populations. A formal wetland delineation following U.S. Army Corps of Engineers (ACE) protocol may also be necessary prior to any construction in wetland or riparian habitats. Results should be included in the EIR. Please note, however, that wetland and riparian habitats subject to the Department's authority may extend beyond the areas identified in the ACE delineation.

a. The Department may require a Lake or Streambed Alteration Agreement, pursuant to Section 1600 *et seq.* of the Fish and Game Code, with the applicant prior to the applicant's commencement of any activity that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank (which may include associated riparian resources) of a river, stream or lake, or use material from a streambed. The Department's issuance of a Lake or Streambed Alteration Agreement for a project that is subject to CEQA will require CEQA compliance actions by the Department as a responsible agency. The Department as a responsible agency under CEQA, may consider the local jurisdiction's (lead agency) Negative Declaration or EIR for the project. To minimize additional requirements by the Department pursuant to Section 1600 *et seq.* and/or under CEQA, the document should fully identify the potential impacts to the lake, stream or riparian resources and provide adequate avoidance, mitigation, monitoring and reporting commitments for issuance of the agreement. A Streambed Alteration Agreement form may be obtained by writing to The Department of Fish and Game, 4949 Viewridge Ave. San Diego, California 92123 or by calling (858) 636-3160.

Ms. Vasconcellos
March 21, 2000
Page 5

The Department holds regularly scheduled pre-project planning/early consultation meetings. To make an appointment, please call our office at (858) 636-3160.

Thank you for this opportunity to comment. Questions regarding this letter and further coordination on these issues should be directed to Erinn Wilson at (858) 636-3167.

Sincerely,

William E. Tippets
Habitat Conservation Supervisor

cc: Department of Fish and Game
C.F. Raysbrook
San Diego

U.S. Fish and Wildlife Service
Carlsbad

U.S. Army Corps of Engineers
Los Angeles

State Clearinghouse
Sacramento

32400 Paseo Adelanto
San Juan Capistrano, CA 92675
(949) 493-1171
(949) 493-1053 (FAX)

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CITY MANAGER
GEORGE SCARBOROUGH

March 28, 2000

Praveen Gupta, Chief of Environmental Planning
Caltrans District 12
3347 Michelson Drive, Suite 100
Irvine, California 92612-0661

Subject: Operational Improvements on SR-74 (EA 08690K); our file: Inter-jurisdictional Project Review 00-01, *Ortega Highway Widening* (Caltrans).

Dear Mr. Gupta:

We have received a copy of the notice of preparation of an Environmental Assessment for the subject project. As you are probably aware, Ortega Highway, within our City, passes directly by and provides local access to several residential neighborhoods. Consequently, the proposed project will have a direct effect on our residents in those neighborhoods. Also in past meetings with Caltrans, an emphasis was put on improving the I-5 and Ortega Highway interchange in-lieu of this project as a higher priority. Both the City and Caltrans staff believed that to widen Ortega Highway ahead of the interchange improvements would only make it easier for traffic to get to the interchange, thus exacerbating an already congested intersection. The City therefore has the following comments:

1. Extend the response time for 90 days to allow the City time to conduct a traffic analysis on the impacts of the widening on the I-5 interchange and surrounding City road network.

2. Caltrans conduct a local public scoping meeting on this project, to allow for early public input into the project. We would be glad to assist your staff with scheduling either the City Council chambers or Community Center meeting hall to conduct such a meeting. Please have your project manager contact myself at (949) 443-6336 or Bill Ramsey, Principal Planner at (949) 443-6334 for more detailed information.

DRUG USE IS NICE ABUSE

San Juan Capistrano: Preserving the Past to Enhance the Future

Caltrans
Page 2
March 28, 2000

We look forward to working with Caltrans on this important transportation system improvement.

Sincerely,

William M. Huber
Director of Engineering and Building

WMH/jt

cc: George Scarborough, City Manager
Tom Tomlinson, Director of Planning
Bill Ramsey, Principal Planner

County of Orange
Planning & Development Services Department

THOMAS B. MATHEWS
DIRECTOR

300 N. FLOWER ST.
SANTA ANA, CALIFORNIA

MAILING ADDRESS:
P.O. BOX 4048
SANTA ANA, CA 92702-4048

APR 0 3 2000

NCL 00-27

Praveen Gupta, Chief of Environmental Planning Services Division
Attn: Angela Vasconcellos
Caltrans District 12
3347 Michelson Dr., Suite 100
Irvine, CA 92612-0661

SUBJECT: IS/EA for the Operational Improvements on SR-74

Dear Ms. Vasconcellos:

The above referenced item is an Initial Study/Environmental Assessment (IS/EA) for the California Department of Transportation (Caltrans). The proposed project involves the widening of Route 74 from two lanes to four lanes from Kilo Post (KP) 2.09 (Post Mile 1.3) where existing four lanes end, to KP 4.67 (Post Mile 2.9) just past La Pata Avenue. This project also includes the widening of Lower San Juan Creek Bridge, which was re-constructed in the mid 1990's. Upon completion, Route 74 will be a continuous 4-lane highway from Interstate 5 to La Pata Avenue.

The County of Orange has reviewed the IS/EA and offers the following comments:

FLOOD

The following comments are submitted for your consideration:

1. The NOP indicates that the proposed project will have "no impact" on water quality. Since the amount of impervious area will be increased, it is likely that water quality will be affected by the proposed project. Therefore, discussion on impacts to water quality is, we believe, warranted in consultation with our Environmental Resources Section.

2. The project increases impervious area. Consequently, increases in the amount of runoff from the roadway will need to be ascertained and the potential impacts of the increase on downstream flood control facilities should be discussed in future analyses.

00 APR -6 PM 1:08

3. Impacts to San Juan Creek resulting from the proposed bridge widening should be determined and appropriately mitigated in consultation with the Program Development Division with the Public Facilities and Revenue Department.

Several hydrology reports and project reports for San Juan Creek are on file and available for review. Kevin Onuma should be contacted at (714) 834-2425 to review the hydrology reports. Lance Natsuhara should be contacted at (714) 834-5398 to review project reports. Since the U. S. Army Corps of Engineers is currently working on the San Juan Creek Watershed Management Study, Caltrans should also contact Elden Gatwood at (213) 452-3800 or James Adams at (213) 452-3803 regarding the Corp's study.

WATER QUALITY

4. The Initial Study should address how construction sites shall be maintained in such a condition that an anticipated storm does not carry wastes or pollutants off the site. Potential pollutants include but are not limited to:

   A) Solid or liquid chemical spills;
   B) Wastes from paints, stains, sealant, glues, lime, pesticides, herbicides, wood preservatives and solvents;
   C) Asbestos fibers, paint flakes or stucco fragments; fuels, oils, lubricants, and hydraulic, radiator or battery fluids;
   D) Fertilizers, vehicle/equipment wash water and concrete wash water;
   E) Concrete, detergent or floatable wastes;
   F) Wastes from any engine/equipment stream cleaning or chemical degreasing;
   G) Superchlorinated portable water line flushings;

Disposal of such materials during construction should occur in specified and controlled temporary areas that are physically separated from potential storm water run-off. Ultimate disposal should be in accordance with all local, state and federal requirements.

OPEN SPACE/RECREATION

Bikeways:

5. The OCTA Commuter Bikeway Strategic Plan identifies the San Juan Creek Bikeway, a regional Class I (paved off-road) bikeway along San Juan Creek. The bikeway is proposed to undercross SR-74 at San Juan Creek, and continue to La Pata Avenue.

6. The bikeway currently exists between Doheny State Beach and the eastern San Juan Capistrano City limits. The bikeway is used by both bicyclists and pedestrians.

7. The County's Bikeways Plan for the unincorporated areas depicts the continuation of the San Juan Creek Bikeway eastward to Caspers Wilderness Park.

8. We would support a project alternative that would provide an undercrossing for the San Juan Creek Bikeway. A grade-separated undercrossing of SR-74 is essential for the continuation of this regional bikeway.

9. The items within Comments # 5, 6, 7 & 8 above should be addressed within the environmental assessment for the proposed project.

Riding and Hiking Trails:

10. The Master Plan of Regional Riding and Hiking Trails identifies the San Juan Creek Trail along San Juan Creek. This regional trail currently exists between Trabuco Creek and the eastern city limits of San Juan Capistrano, and within Caspers Wilderness Park. The trail is proposed to continue eastward from the city limits to the existing segment in the park.

11. As with the regional bikeway, we should support a project alternative that would provide an undercrossing for the San Juan Creek Trail. A grade-separated undercrossing of SR-74 is essential for the continuation of this regional riding and hiking trail.

12. The items within Comments # 10 & 11 above should be addressed within the environmental assessment for the proposed widening.

13. La Pata Road is the sole access to the Prima Deshecha Landfill, an active County solid waste disposal facility that serves the cities and communities of Orange County. It is permitted to receive 4000 tons per day, and approximately 600 vehicles use the landfill every day.

14. For this reason, construction of the proposed improvements to SR-74 (Ortega Highway) must not block access to La Pata Road, even temporarily. Any temporary access provided during construction must be capable of supporting tractor-trailers that weight up to 40 tons each.

15. The County's Integrated Waste Management Department (IWMD) requests that Caltrans notify the Director of IWMD four weeks prior to the beginning of project construction, and again at least four weeks prior to the onset of the construction phase that will impact the intersection of SR-74 and La Pata Road, so that refuse haulers and the landfill site manager can make adjustments to minimize impacts on the regional impact of refuse and efficient circulation of landfill traffic.

16. These constitute the mitigation measures that IWMD believes should be specifically addressed in the IS/EA for the subject project.

    A) Continuous access to the La Pata Road that will accommodate landfill traffic (including tractor-trailers up to 40 tons).

    B) A six-week advance notice to the Director, IWMD prior to the beginning of project construction.

    C) A six-week advance notice to the Director, IWMD, prior to the beginning of construction of the phase which will impact the SR-74/La Pata Road intersection.

Thank you for the opportunity to respond to the IS/EA. If you have any questions, please contact me or feel free to call Charlotte Harryman directly. Charlotte may be reached at (714) 834-2522.

Very truly yours,

George Britton

George Britton, Manager
Environmental and Project
Planning Services Division

CH

4

United States Department of the Interior
Fish and Wildlife Service
Ecological Services
Carlsbad Fish and Wildlife Office
2730 Loker Avenue West
Carlsbad, California 92008

00 APR 10 PM 1:36

APR 0 5 2000

Praveen Gupta
Chief, Office of Environmental Planning
Caltrans District 12
3347 Michelson Drive Suite 100
Irvine, California 92612-0661

Attn: Angela Vasconcellos

Re: Scoping Document, Caltrans District 12, State Route 74 Operational Improvement Project (Post Miles 1.3 to 2.9)

Dear Mr. Gupta:

This letter responds to your request for comments on a scoping document for operational improvements on State Route 74 (SR 74) dated February 18, 2000, and received by our office on March 6, 2000. According to your letter, the California Department of Transportation (Caltrans) proposes to widen SR 74 from two to four lanes from Kilo Post (KP) 2.09 (Post Mile 1.3) where the existing four lanes end to KP 4.67 (Post Mile 2.9) just past La Pata Avenue. Within the proposed project area, the highway is currently a two-lane roadway. This proposed project also includes the widening of the Lower San Juan Creek bridge, which was reconstructed in the mid-1990's. Upon completion of the proposed project, SR 74 would be a continuous 4-lane highway from Interstate 5 to La Pata Avenue. Caltrans, in cooperation with the Federal Highway Administration, will be the lead agency and will prepare an initial study/environmental assessment (IS/EA) for the proposed project.

Since the information describing the full nature of the project is preliminary, we cannot fully address potential impacts to fish and wildlife resources. Nevertheless, based on our knowledge of sensitive species and habitats within Orange County, we are concerned that the project as proposed could negatively impact wetlands and associated, federally listed species such as the endangered arroyo toad (*Bufo microscaphus californicus*, "toad") and least Bell's vireo (*Vireo belli pusillus*, "vireo").

Based on the preliminary information provided, the proposed widening of the Lower San Juan Creek bridge apparently will, at least, partially impact an existing wetland mitigation site. This approximately 1-acre mitigation and restoration area was required for impacts associated with the SR 74 Lower San Juan Creek bridge replacement in 1994. The IS/EA should address potential impacts to this mitigation area and identify how unavoidable impacts will be mitigated. Typically, higher mitigation ratios are appropriate for impacts to existing mitigation sites due to the temporal loss of habitat function and value.

The IS/EA should disclose what measures are being taken or are proposed to address the unresolved issue of the U.S. Army Corps of Engineers (Corps) notice of violation (Case No. 97-00223-LTM) and restoration order for the unauthorized discharge of dredge material into San Juan Creek, at the lower San Juan Creek bridge. According to this notice of violation issued to Rancho Mission Viejo, L.L.C. on May 1, 1997, "there was approximately 0.5 acre of direct impacts to wetlands, mature riparian habitat, and a Caltrans mitigation site (File No. 95-00110-BH)."

In addition to the above information, and to further facilitate the evaluation of the proposed project from the standpoint of fish and wildlife protection, we recommend that the IS/EA contain the following specific information.

1. A description of the environment in the vicinity of the project from both a local and regional perspective. Include any available aerial photos of the project site that are available.

2. A complete discussion of the purpose and need for the project and each of its alternatives.

3. A complete description of the proposed project, including the limits of the project area. This project description should include all practicable alternatives that have been considered to avoid and minimize project impacts, to the maximum extent practicable, to sensitive habitats (e.g., coastal sage scrub, wetlands) and endangered, threatened, or sensitive species, as well as measures to mitigate unavoidable impacts.

4. Quantitative and qualitative assessments of the biological resources and habitat types that will be impacted by the proposed project and its alternatives. These assessments should address direct, indirect, and cumulative project impacts to fish and wildlife associated habitats, particularly growth-related effects (e.g., increased population, increased development, increased traffic) of all facets of the project (e.g., construction, implementation, operation, maintenance). Proposed developments in the surrounding area should be addressed in the analysis of cumulative impacts.

   This assessment should include a list of Federal candidate, proposed, and listed species; State-listed species; and locally sensitive species that are on or near the project site, including a detailed discussion of these species and information pertaining to their local status and distribution. Therefore, we recommend comprehensive, current biological surveys be performed on the project site, including directed surveys for all potentially occurring Federal and State-listed species using standard survey protocols. Investigators conducting surveys for federally listed species must be qualified biologists who possess valid section 10(a)(1)(a) permits issued by the U. S. Fish and Wildlife Service. We are particularly interested in any and all information and data pertaining to potential impacts to populations of listed species, including the toad, vireo, and federally threatened coastal California gnatcatcher (*Polioptila californica californica*). The IS/EA should disclose all potential impacts to these sensitive resources and the proposed measures to avoid and minimize such impacts.

5. Maps and tables summarizing specific acreages and locations of all habitat types, as well as the number and distribution of all Federal candidate, proposed, or listed species; State-listed species; and locally sensitive species on or near the project site that may be affected by the proposed project or project alternatives.

6. A detailed analysis of impacts of the proposed project on the movement of wildlife, proposed measures to avoid and minimize such impacts, and mitigation for unavoidable impacts.

7. An assessment of potential impacts to wetlands and other jurisdictional waters of the United States. Section 404 of the Clean Water Act prohibits the unauthorized discharge of dredged or fill material into such waters, including wetlands. Under this section, the Corps may issue permits for discharges of dredged or fill material into jurisdictional waters, including wetlands. Potential areas of Corps jurisdiction should be evaluated and wetlands should be delineated using the methodology set forth in the *1987 U.S. Army Corps of Engineers Wetland Delineation Manual*. The IS/EA should disclose all impacts to jurisdictional waters, including wetlands, proposed measures to avoid and minimize such impacts, and mitigation for unavoidable impacts.

We appreciate the opportunity to provide these early comments and look forward to reviewing the IS/EA. If you should have any questions regarding these comments, please contact Fish and Wildlife Biologist Don Morgan of my staff at (760) 431-9440.

Sincerely,

Jim A. Bartel
Assistant Field Supervisor

1-6-00-NFTA-252

cc: Bill Tippets, CDFG, San Diego, CA
Mark Durham, USCOE, Los Angeles, CA

SACRAMENTO OFFICE
STATE CAPITOL
SACRAMENTO, CA 95814-4906
(916) 445-3731
(916) 446-7382 FAX

DISTRICT OFFICES
27126-A PASEO ESPADA
SUITE 1621
SAN JUAN CAPISTRANO,
CA 92675
(949) 489-9838
(949) 489-8354 FAX

2755 JEFFERSON STREET
SUITE 101
CARLSBAD, CA 92008
(760) 434-7930
(760) 434-8223 FAX

California State Senate

SENATOR
BILL MORROW
THIRTY-EIGHTH SENATORIAL DISTRICT

00 MAY -1 AM 11:47

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DEFENSE CONVERSION, RETENTION & SPACE FLIGHT INDUSTRIES
DEVELOPMENTAL DISABILITIES & MENTAL HEALTH

April 28, 2000

Mr. Praveen Gupta
Chief of Environmental Planning
Caltrans District 12
3347 Michelson Dr., Suite 100
Irvine, California 92612-0661

Dear Mr. Gupta:

Thank you for your recent letter regarding the widening of Route 74. After reviewing this briefing, I did have a couple of questions.

First, is the City of San Juan Capistrano aware of your plans, and can you tell me when this work will begin. Additionally, will the work be done at night, and will traffic be re-routed? Any information you can provide will be helpful to me in answering questions my constituents may have.

I look forward to hearing from you.

Sincerely,

BILL MORROW
Senator, 38th District

BM:cm

REPRESENTING SOUTH ORANGE COUNTY, NORTH SAN DIEGO COUNTY, INCLUDING THE FOLLOWING COMMUNITIES
AEGEAN HILLS, ALISO VIEJO, BONSALL, BUENA, CAMP PENDLETON, CAPISTRANO BEACH, CARDIFF, CARLSBAD, DANA POINT, DE LUZ, DEL MAR, ENCINITAS, ESCONDIDO, FALLBROOK
LAGUNA HILLS, LAGUNA NIGUEL, LEISURE WORLD, LEUCADIA, MISSION VIEJO, MONARCH BAY, OCEANA, OCEANSIDE, RANCHO SANTA FE, SAN CLEMENTE, SAN DIEGO, SAN JUAN CAPISTRANO
SAN LUIS REY HEIGHTS, SAN MARCOS, SAN ONOFRE, SOLANA BEACH, SOUTH LAGUNA, SOUTH OCEANSIDE, THREE ARCH BAY AND VISTA

STATE OF CALIFORNIA—BUSINESS AND TRANSPORTATION AGENCY GRAY DAVIS, *Governor*

DEPARTMENT OF TRANSPORTATION

DISTRICT 12
3347 MICHELSON DRIVE, SUITE 100
IRVINE, CA 92612-0661

May 18, 2000

Honorable Bill Morrow
California State Senate, 38th District
27126-A Paseo Espada, Suite 1621
San Juan Capistrano, CA 92675

Dear Senator Morrow,

Thank you for your April 28, 2000, response letter to our scoping mailout for the Ortega Highway widening project.

In response to your inquiry, yes we are and will be working closely with the city of San Juan Capistrano during this project. The city is taking an active role in helping us to coordinate our public outreach effort during the environmental document phase. Although the project is still in the early stages of the process, we anticipate continuing to work with the city throughout the project's duration.

As part of our project scoping we have developed tentative dates for the various phases of this project. At the present time, we have a preliminary construction start date of October 2006. In addition, you asked specific questions regarding the timing of construction and the rerouting of traffic. These specific items are part of the construction staging of the project and will be determined pending the final project design. At this time we do not have a final design and therefore we have not detailed the specifics of how the construction will be staged. Never the less, we will be working closely with the city to ensure that we eliminate or minimize any negative impacts to area residents and the highway users themselves.

We hope the information provided adequately answers your questions. If you or your constituents have additional questions during this process, please do not hesitate to contact my office. I can be reached at (949) 724-2142.

Sincerely,

Praveen Gupta
Environmental Planning, Branch Chief

C: Rose Orem, Caltrans
Ahmed Abou-Abdou, Caltrans

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Office of the Mayor

August 24, 2004

The Honorable Todd Spitzer
Assembly Member, 71st District
1940 North Tustin, Suite 102
Orange, CA 92865

Subject: SR-74, Ortega Highway Widening Project

Dear Assembly Member Spitzer:

The City of San Juan Capistrano has been meeting with Caltrans staff representatives regarding the potential widening of State Route 74, Ortega Highway, through the easterly portion of our City. The project would widen Ortega Highway to four lanes from Antonio Parkway westerly to about Via Cordova to match up with the existing four-lane section, west of Via Cordova. The purpose of this letter is to solicit your support in halting the direction of this project as currently proposed by Caltrans.

While the City has supported the widening project subject to completion of the improvement of the Ortega/I-5 Interchange, we must object to the design as currently proposed. The proposed widening results in removal of the existing parkway landscaping and mature trees and will be replaced by asphalt, concrete curb and a sidewalk. Immediately behind the sidewalk on the south side will be a sixteen (16) foot high sound wall along the entire residential frontage from Calle Entradero to Via Eracarte a distance of about 3,400 feet (See attached plans). On the north side, there are no proposed sound walls. Instead, there will be about 1,500 feet of retaining walls ranging in height from twelve to fifteen (12-15) feet. As proposed, the improvements will destroy this scenic rural roadway, which we view as a primary entry into our community. This is truly an unacceptable condition in a community that values its natural and scenic beauty.

Our City's General Plan designates Ortega Highway as a scenic corridor. Further Caltrans has indicated to the City that Ortega Highway is designated by the State for eligibility as a Scenic Highway. This particular stretch of Ortega will serve as a gateway entrance into the City from the proposed Rancho Mission Viejo Project on our eastern border. It seems that when a project has eligibility potential, aesthetic impacts should be given serious

San Juan Capistrano: Preserving the Past to Enhance the Future

ATTACHMENT 1

The Honorable Todd Spitzer
August 24, 2004
Page Two

consideration. If the current unimaginative stark design is implemented, the impacts will be irreversible and the aesthetics on this beautiful stretch of road will be permanently destroyed. Caltrans has informed City staff that if we wish to do anything that exceeds the standard design all additional costs would be borne by the City, including obligations for long-term liability and maintenance.

Caltrans is presently marching down the road to prepare a Negative Declaration on the project. They plan to hold a public meeting on the project some time in late October or early November. We are informed that they intend to proceed even with the concerns raised by the City.

We are requesting several things. First, we would like to stop the process to give the City more time to meet with Caltrans and work out the aesthetic issues in a more satisfactory manner. Second, we would request Caltrans give more serious design consideration to the potential scenic route designation before it is lost forever. Third, since construction is far from being fully funded at this time, Caltrans work with the City, the County and the Rancho Mission Viejo Company to identify additional funding opportunities to accomplish our mutual objectives.

Your support and assistance in this matter is greatly appreciated. Please contact me if we can be of any assistance to you.

Sincerely,

Joe Soto
Mayor

Enclosures

cc: Supervisor Tom Wilson
Cindy Quon, Caltrans Director of District 12
Dave Adams, City Manager
William Huber, Assistant City Manager

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
District 12
3337 MICHELSON DRIVE, SUITE 380
IRVINE, CA 92612-8894
PHONE (949) 724-2010
FAX (949) 724-2019
TTY (949) 756-7813

Flex your power!
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May 4, 2006

Mr. Dave Adams, City Manager
City of San Juan Capistrano
32400 Paseo Adelanto
San Juan Capistrano, Ca 92675

Subject: Lower Ortega Widening Project Design Features Concurrence

Dear Mr. Adams,

The State of California Department of Transportation (Department) appreciates the opportunity to work in partnership with the City of San Juan Capistrano and the County of Orange to implement Ortega Highway improvements, which are safe, functional and acceptable to the community stakeholders.

We have endeavored over the past several weeks to reach consensus on specific design features for widening the subject State Highway between Calle Entradero and the easterly city limits. The Department and the City have discussed options for the highway, which include a reduced typical section, alternative noise abatement walls, and incorporation of aesthetic features for the retaining wall structures proposed on the north side of the roadway.

The proposed highway geometric section width of 70 feet with a painted median and minimal landscaping in the parkway areas adjacent to the roadway section is acceptable pending final review of the engineered plans and supporting specifications. We will also need to review and approve mandatory design exceptions for the proposed five-foot wide shoulders and for non-standard super-elevation sections proposed along the subject corridor. Department support of the 70-foot highway section assumes a gradual transition beginning within the city limits, designed to meet Department standards, joining the wider roadway section proposed by the County of Orange easterly of the city boundary. Acceptance of the proposal by the community and environmental clearance of the proposed project will also be required. The geometry will maintain the existing southerly curb line of the highway and will maintain the existing equestrian and hiking trail adjacent to the Hunt Club Development.

ATTACHMENT 2

The Department understands and supports the City's desire to maintain the scenic and historic character of the Ortega Highway corridor. Increased ambient noise levels have been identified as an impact caused by the proposed widening project. The Department is proposing to construct noise abatement walls along the south side of Ortega Highway unless we receive written waivers declining the proposed noise mitigation from 50% plus 1 of the impacted residents. The Department will be providing notice to the impacted community members relative to noise mitigation alternatives in May 2006. If the majority of the impacted community is in favor of constructing noise abatement sound walls then the Department will support the proposed glass and steel frame noise abatement wall alternative providing that said structure meets all Department requirements for noise attenuation, stability and safety. The walls will be located within right of way under City jurisdiction. The Department will need to look to the City to assure that the noise abatement wall will remain in place so that the Department can fulfill our noise mitigation obligations.

The proposed project will require construction of 12 to 18 foot high retaining structures at a minimum of three locations on the north sided of the Ortega Highway. The City is requesting The Department construct said walls with aesthetic treatments that include camouflage landscaping, form liners, and/or gunite faux rockscapes. The Department can support some aesthetic treatments including those requested by the city providing said aesthetic treatments do not impact the structural integrity of the wall and/or our ability to physically inspect the subject wall. We can generally support the form liner and gunite faux rockscape approaches that disguise the retaining structure without potentially compromising the wall integrity with root and water intrusion. Based on our discussions to date we believe the retaining structures can be constructed to blend into the existing landscape while providing a wall designed to meet Department structural and seismic standards. However, without benefit of specific geotechnical and engineering design information, a definitive acceptance of the proposed wall designs as presented cannot be made. The Department will work with the City to develop an acceptable final wall design that will provide a safe retaining structure acceptable to the community within the concepts that have been identified to date.

A Cooperative Agreement between the Department and the City will be prepared to address concerns relative to construction and funding of the noise abatement walls and retaining walls. Maintenance obligations will need to be agreed upon and documented in a Maintenance Agreement between the Department and the City.

Prior to the execution of the Cooperative Agreement, the Department requires the City's written concurrence for the following items:

1. Application of the general 70 foot roadway section from Calle Entradero to Avenida Siega consisting of:

   i. Four 12 foot mixed flow lanes
   ii. 12 foot painted median
   iii. 5 foot outside shoulders

2. Application of the general 76 foot roadway section from Avenida Siega to City/ County boundary consisting of:

3.

   i. Four 12 foot mixed flow lanes
   ii. 12 foot painted median
   iii. 8 foot outside shoulders (as transition into the wider County section)

4. The eastbound right turn pocket at the intersection of via Cordova be replaced at the south side of the existing location. The curb return and sidewalk at this location will be reconstructed.
5. The intersections within the City reach (namely, Calle Entradero, Via Cordova, Via Crystal, Via Errecarte, and Avenida Siega) will remain non-signalized and free of pedestrian crossing treatment.
6. The elimination of the north side sidewalk from Calle Entradero to Via Cordova and obtain a Letter of Support from the Hunt Club (or the appropriate property owner), if appropriate, for the subject sidewalk elimination. It is also understood that the privately owned equestrian trail between Calle Entradero and Via Cordova will remain in place and may be used as a multi-purpose trail.
7. City responsibility for maintaining or effecting the maintenance of the proposed glass noise abatement walls. This may include, but not be limited to, coordination with the adjacent property homeowners or homeowners association for such maintenance.
8. Be responsible for the maintenance and upkeep of landscape treatment on Ortega Highway within the City reach, including landscaping on retaining walls.

We look forward to continuing our partnership with the City to deliver this important highway capacity enhancement project to the community of San Juan Capistrano. If you have any questions related to the project or the contents of this letter please contact The Departments Project Manager, Mr. Ahmed Abou-Abdou, at (949) 724-2768.

Sincerely,

JIM BEIL
Deputy District Director
Capital Outlay Program
District 12

Cc: Ahmed Abou-Abdou, Caltrans Project Manager
Mili Lim, Caltrans Design
William Huber, SJC, Assistant City Manager
Harry Persaud, County of Orange

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 12
3337 MICHELSON DRIVE
SUITE 380
IRVINE, CA 92612-8894
PHONE (949)-724-2738
FAX (949) 724-2256
TTY (949) 756-7813

Flex your power!
Be energy efficient!

Dear Home/Property Owner: May 12, 2006

The California Department of Transportation is in the design phase to widen Ortega Highway (State Route 74) east of Interstate 5 in south Orange County. This project would ease current and projected traffic congestion in the project area.

Because the improved highway will accommodate additional traffic, noise levels are expected to increase in the project area. Therefore, the Department of Transportation has determined that it might be appropriate to construct three sound walls on the south side of Ortega Highway between Calle Entradero and Via Errecarte. You have received this letter because you own a property that might be affected by noise increases associated with the roadway improvement project (see attached aerial photograph) and one of the proposed walls. The Department of Transportation is, therefore, seeking your opinion as to whether a sound wall should be built between Calle Entradero and Via Cordova to reduce the level of traffic noise at the properties on the south side of Ortega Highway behind sound wall number 1.

Please note that the sound walls are planned to be around 14-feet high. Properties closer to the highway would experience greater noise reductions than properties farther away if the sound walls were built. Taller sound walls would also achieve greater noise reductions. The potential noise increase would most directly impact the first and second row of houses immediately next to the highway. The impact of traffic noise on houses beyond the second row would be significantly less. Similarly, sound walls would most directly benefit the first and second row of houses. Noise reductions resulting from the sound walls would be much less for houses beyond the second row.

If a majority of the affected homeowners is in favor of the sound walls, then sound walls will be considered for construction. If, however, fifty percent or more of the affected homeowners are opposed to the sound walls, they will not be built. Therefore, it is very important that you share your opinion with the Department of Transportation. Please complete and return the enclosed survey sheet in the provided, addressed envelope. In order to be counted, the survey sheet must be signed by the property owner(s) and postmarked by no later than June 15, 2006.

The City of San Juan Capistrano will be holding a joint workshop of the City Council and Planning Commission to review design concepts for walls and parkways for the Ortega Highway Project. You are invited to this workshop to view conceptual plans and renderings of the widening project and learn more about the project. A representative from the California Department of Transportation will attend the meeting to provide information about the sound walls and traffic noise. You may mail your survey sheet to us without attending the meeting. However, we encourage you to attend the meeting prior to completing the survey sheet. The City's workshop is scheduled as follows:

May 30, 2006, 7:00 PM
City of San Juan Capistrano, City Council Chambers
32400 Paseo Adelanto, San Juan Capistrano, CA 92675

If you have any questions please call Ms. Cindy Krebs of BonTerra Consulting at (714) 444-9199.

Reza Aurasteh, Ph.D., PE
Branch Chief,
Environmental Engineering
California Department of Transportation

ATTACHMENT 4

Survey Sheet

For homeowners between Calle Entradero & Via Cordova (Sound Wall #1)
Ortega Highway Project Sound Wall

Please complete this survey and mail to:
BonTerra Consulting
Attn: SR-74 Soundwall Survey151 Kalmus Dr., Suite E-200
Costa Mesa, CA 92626

This survey sheet is for properties located on the south and north side of Ortega Highway between Calle Entradero & Via Cordova. Please look at the enclosed aerial photograph, complete the following, sign and return to the address above.

As an option, the Department of Transportation and the City are working on the possibility of a transparent sound wall in lieu of a concrete block wall. If funding of the higher cost of a transparent wall can be arranged, construction of a transparent wall will be considered. Otherwise, a concrete block wall will be considered for construction.

My property is located within the area explained above. (Please check only one of the three "Yes" lines)

[ ] Yes, I am in favor of the proposed sound wall # 1 only if it is a transparent wall

[ ] Yes, I am in favor of the proposed sound wall # 1 only if it is a concrete block wall

[ ] Yes, I am in favor of the proposed sound wall # 1 either as a transparent wall or a concrete wall

[ ] I would prefer a ____ft wall (please circle your choice: 12 foot, 14 foot, 16* foot)

[ ] No, I am not in favor of the proposed sound wall #1.

[ ] I prefer that wall #1 is NOT constructed at any height or with any material.

*Please note that if a 16-ft sound wall is not possible because of safety concerns, a 14-ft wall will be constructed instead. The final roadway design will establish this.

The property owner should sign below:

Print First, Last Name(s) _____ Signature _____

Street Address of the Property _____ Date _____

City, Zip Code _____

AGENDA ITEM

May 30, 2006

TO: Dave Adams, City Manager

FROM: Molly Bogh, Planning Director

SUBJECT: Consideration of Conceptual Design Alternatives with Respect to Sound walls, Retaining Walls, and Landscaping for Caltrans' Proposed Widening of Ortega Highway (SR-74) from Calle Entradero to the Easterly City Limit

RECOMMENDATION

Conduct the public workshop; and,

By motion: provide direction on the proposed conceptual design alternatives with respect to design section, sound walls, retaining walls, and landscaping for Caltrans proposed widening of Ortega Highway (State Route-74) and provide responses to the following issues as requested by Caltrans:

1. Does the City concur with the proposed 70'-0" wide geometric design section for the Calle Entradero-Avenida Siega road segment, and a 76'-0" wide geometric design section for the Avenida Siega-City limit road segment?
2. Does the City concur with reconstructing the existing eastbound right-turn lane curb return and sidewalk at Via Cordova?
3. Does the City concur with maintaining the 5 intersections within the City as non-signalized and free of pedestrian crossings, until such future date that signal warrants may justify the need for signalization?
4. Does the City concur with eliminating the existing sidewalk along the north side of Ortega Highway from Calle Entradero to Via Cordova, and retaining the existing multi-purpose trail along the Hunt Club frontage?
5. What is the City's preferred material for sound walls on the south side of the highway? If the City prefers glass sound walls, does the City agree to fund the additional cost of glass walls over the cost of standard Caltrans-approved masonry block walls?
6. If the City prefers a glass sound wall design for the south side of the highway, will the City agree to accept maintenance responsibility for these glass sound walls on the south side of Ortega Highway?
7. What is the City's preferred material for retaining walls on the north side of the highway?
8. What is the City's preferred landscaping concept for the north side of the highway? If this concept exceeds normal Caltrans landscaping guidelines, will the City agree to fund the difference in cost?
9. Will the City agree to maintain all landscaping for the project located within City limits (including landscaping on retaining walls)?

SITUATION

A. Summary and Recommendation

The California Department of Transportation has proposed to widen Ortega Highway (SR-74) to four lanes with construction of left-turn lanes, from Calle Entradero to east of Antonio Parkway. Rancho Mission Viejo Company in cooperation with Caltrans is preparing preliminary design plans for the proposed widening of Ortega Highway. While the City does not have any legal jurisdiction over the proposed project, Caltrans has invited the City to participate in the project design process in order to address City concerns regarding aesthetics along the highway, designated as a scenic route in the City's General Plan.

Staff recommends that the City Council and Planning Commission conduct a public workshop to provide direction to Caltrans on the proposed conceptual design alternatives with respect to proposed design concepts, including the roadway section, sound walls, retaining walls, and landscaping for Caltrans-proposed widening of Ortega Highway.

C. Background

In 2004 Caltrans provided conceptual design plans to the City for input on proposed retaining walls and sound walls for the widening of Ortega Highway from 2 lanes to 4 lanes east of Calle Entradero to the City limits. Those design plans proposed to construct about 1,500 linear feet of 12'-0" to 15'-0" high concrete retaining walls along the north side of Ortega Highway and about 3,400 linear feet of 16'-0" high masonry sound wall along the south side. Staff determined that the proposed retaining and sound walls had the potential to impact the scenic quality of the current roadway corridor, which provides views of the valley and ridgelines and a rural ambiance consistent with the General Plan. In an August 24, 2004 letter to Assemblyman Todd Spitzer, then-Mayor Joe Soto outlined the City's concerns about the project (see Attachment 1).

In response to the City's concerns Caltrans presented revised wall and landscaping plans, but staff was unable to reach final agreement on the design concepts with Caltrans. At the same time, Rancho Mission Viejo (RMV) Company moved ahead with plans for widening Ortega Highway within Planning Area 1 of The Ranch Plan, and brought the parties together in an effort to plan the highway widening in a coordinated effort. Based on several meetings between the City, the County, RMV and Caltrans in 2005, it was agreed that RMV would assist the City and Caltrans in finalizing the roadway section for the portion of Ortega Highway within the City limits in order to provide a basis for identifying wall locations and heights. The City agreed to retain RMV's landscape consultant, Land Concern, in order to draft design concepts for walls and landscaping which would maintain the City's scenic character while creating a uniform theme for the Ortega corridor from I-5 to La Pata. Caltrans agreed to accept the City's input regarding wall and landscape design for

IS
Initial Study | EA

consideration in their environmental document and final design plans. The County agreed to use funds allocated to the Ortega Widening project from the Ladera traffic mitigation in order to fund some of the up-front design costs.

To assist staff and the consultant in exploring design concepts for walls and landscaping, staff formed an ad hoc advisory group consisting of three City Commission members including Tony Soto, Transportation Commissioner, Ilse Byrnes, Cultural Heritage Commissioner, and Robert Cardoza, Planning Commissioner and Design Review Committee member. The working group met four times to review concepts and provide input.

Environmental Processing: The design direction provided by the City Council and Planning Commission will assist Caltrans in the completing the Environmental Impact Report/Environmental Impact Study for the proposed project. The City's design direction will be incorporated into preparation of the "aesthetics" section of the environmental documentation by Caltrans. No additional environmental review of the City's recommendations is necessary.

D. **Project Description**

The project consists of the proposed widening of Ortega Highway from two lanes to four lanes from the existing four lane road section near Calle Entradero to east of Antonio Parkway/La Pata. The City is focusing its review on that segment of the project situated within the City. The project proposes the following elements:

- Maintaining the existing south edge of Ortega Highway at the present curb line, maintaining the existing sidewalk and landscaped parkway, and erecting sound walls in three locations to block noise from adjacent residential neighborhoods. Sound wall heights would vary from 12 to 16 feet.
- Widening the roadway by adding two additional travel lanes and a continuous left turn lane, and taking additional right-of-way on the north side of the highway.
- Constructing 12'-0" to 18'-0" retaining walls at three different locations along the north side of Ortega Highway at the edge of the existing/proposed right-of-way to accommodate the proposed road widening.
- Reconstructing existing private driveway entrances along the north side to maintain access to existing homes.
- Landscaping along the north side of Ortega Highway.

In a letter to the City dated May 4, 2006 Caltrans requested that the City provide direction or design concurrence on several aspects of the proposed project (see Attachment 2), as summarized below:

1. The proposed 70'-0" wide geometric design section for the Calle Entradero-Avenida Siega road segment.
2. The proposed 76'-0" wide geometric design section for the Avenida Siega-City limit road segment.

3. The proposed reconstruction of the existing eastbound right turn lane curb return and sidewalk at Via Cordova.
4. Maintaining the existing 5 intersections within the City as non-signalized and free of pedestrian crossings.
5. Eliminating the existing sidewalk along the north side of Ortega Highway from Calle Entradero to Via Cordova.
6. City acceptance of responsibility for maintaining any glass sound walls (or having the corresponding Homeowners Association maintain the walls).
7. City acceptance of responsibility for maintaining all landscaping including retaining wall landscaping within the City.

E. Issues & Staff Analysis

North Side Improvements

Caltrans proposed widening project will occur primarily along the north side of Ortega Highway. Retaining walls are proposed at three locations along the north side of Ortega Highway. About 380 linear feet of 12'-0" to 15'-0" high retaining wall is proposed between Palm Hill Drive and the private entrance across from Via Cristal along Ortega. An additional 150 linear feet of retaining wall is proposed along the north edge of Palm Hill Drive. While the plans depict a potential 20 foot wide parkway for landscaping, the sections depict minimum 5'-0". About 240 linear feet of 12'-0" to 15'-0" high retaining wall is proposed along the slope across from Via Errecarte. The layout plans also depict a 20 foot wide parkway but the sections show minimum 5'-0". The most significant retaining wall is a 600 linear foot 15'-0" to 18'-0" high retaining wall proposed between Shade Tree Lane and the most easterly private entrance near the City limit. The plans depict a 10 foot wide parkway at this location but the sections again show a minimum 5'-0".

While the existing sidewalk in the vicinity of Hunt Club would be eliminated, the existing equestrian (multi-purpose) trail would be retained. Several roads and private drives would be reconstructed as a result of widening and the grades (steepness) would increase. Caltrans plans propose to increase the Palm Hill Drive grade from about 16.7% to 23.0% and the existing easterly private drive from 15.0% to 21.1%.

Staff, the consultant and the ad hoc committee reviewed several design concepts for the proposed retaining walls, including the Caltrans standard wall design, a decorative masonry block, a stepped wall with landscaping, and a reinforced gunite wall designed to look like native rock. These concepts are summarized in the following table.

	Discussion Points
Retaining Wall Design Concepts	
Option 1a: Standard Caltrans Retaining Wall.	• This Caltrans standard retaining wall consists of a concrete, poured-in-place wall system. The existing retaining wall along the north side of Ortega between the I-5 northbound on-ramp and Rancho Viejo Road is an example of a standard retaining wall, but with a "fractured-fin" finish to give the wall a textured appearance. • The Caltrans standard retaining wall is functional but provides no aesthetic enhancement.
Option 1b: Standard Caltrans Masonry Block Retaining Wall (with Sack Finish)	• This Caltrans standard retaining wall consists of a concrete block wall and provides a more aesthetic appearance than the poured-in-place wall system. • This retaining wall with a plastered and painted finish would convey the appearance of an adobe wall. The paint finish would probably consist of an earthtone color, typical of the Mission buildings, which would compliment the landscape palette of the corridor. • This concept was used adjacent to the Rancho Madrina housing project on Rancho Viejo Road. If properly landscaped, this concept could blend into the Mission theme and become less visible than some of the other alternatives.
Option 2a: Single Wall System with River-rock Form Liner.	• The "River-rock Form liner" retaining wall concept, as the name implies, involves the use of a "form liner in the concrete wall forms which create a "river-rock" appearance. An example of this wall system occurs along the west side I-5 in San Diego County north of the San Diego city limits. • This design approach reflects the rock materials found in other areas of the City, such as Stone Field. However, unless the treatment is done carefully, it may convey an unauthentic appearance. The form liner approach results in a high degree of uniformity in material, color, and surface variation which distinguishes it from a retaining wall with a river-rock façade (veneer).

Option 2b: Single Wall System with Gunite Faux Rockscape.	• The gunite-faced retaining wall system would involve the installation of steel mesh with slope tie-backs to which earth-toned gunite would be applied. The gunite would be hand-troweled to convey the appearance of a rock outcropping. While the technique is labor intensive and expensive, it effectively conveys a natural appearance. Two local examples of the effective use of "gunite faux rockscape" include (1) the bluffs along the north side of Coast Highway in San Clemente between Camino Capistrano and Avenida Pico, and (2) the slope along the north side of Pacific Coast Highway (PCH) in Dana Point just south of Crown Valley Parkway. • The use of "gunite faux rockscape" in these two locations reflects the coastal geology where exposed rock faces occur as a result of water and wind erosion. However, exposed rock bluffs is not a geologic feature common in San Juan Capistrano and therefore is not generally appropriate within the City. In addition, the treatment is more expensive than other wall designs.
Option 3: Two-tiered Wall System (river rock form liner or gunite faux rockscape)	• The "Two-tiered Wall System" would provide a mid-wall break to accommodate landscaping so that a 12'-0" retaining wall could be constructed as two 6'-0" walls or an 18'-0" high retaining wall could be constructed as two 9'-0" walls. In terms of visual impact of the retaining wall, the two-tiered system could be superior to a single wall system if right-of-way were no constraint to design. However, existing residential development along the north side of Ortega Highway limits the ability to expand the area of right-of-way. • This concept would either require additional public right-of-way from adjoining private properties or would result in a reduced parkway width at the base of the retaining wall. The ad hoc committee felt that providing adequate landscaping at the top and base of the walls is necessary. The 2-tiered wall design may not allow this given right of way constraints.
Landscaping	• The ad hoc committee recommended covering as much of the retaining walls as possible with vines and landscaping. • In areas without retaining walls, the committee recommended use of California native plant material, including trees (per Caltrans standards) where possible, to be spaced in natural groupings with shrub massing and ground cover.

South Side Improvements

While the proposed widening project occurs primarily along the north side of Ortega Highway, improvements are also proposed to the south side. The most significant proposed improvements to the south side of the road include three segments of proposed sound wall with a maximum height of 12'-0" to 16'-0". Proposed sound walls would be constructed between Calle Entradero and Via Cordova (about 730 linear feet), between Via Cordova and Via Cristal (about 710 linear feet), and between Via Cristal and Via Errecarte (1,170 linear feet). Caltrans does not propose a sound wall between Via Errecarte and Avenida Siega, nor east of Avenida Siega. According to Caltrans guidelines, sound walls are constructed only in areas where they will reduce noise levels by at least 5 decibels. The proposed sound walls would be situated along the outside of the parkway so as to accommodate the existing sidewalk and 5'-0" wide landscape area.

The existing sidewalk would be maintained and a new sidewalk would be constructed from Avenida Siega to the City limit. An eastbound right-turn lane would be constructed at Via Cordova which would also require replacement of the existing sidewalk. Between Avenida Siega/Shadetree and the City limit, the proposed road widening would occur almost equally to both the north and south sides of the road.

Staff, the consultant and the ad hoc committee reviewed two design concepts for the proposed sound walls including the Caltrans standard masonry sound wall design and combination glass and masonry sound wall design. These concepts are summarized in the following table.

Sound wall Design Concepts	
Option 1: Masonry & glass sound wall	• The "Masonry & glass sound wall" would consist of the installation of glass wall panels above existing masonry walls. The glass panels would be self-supporting on steel posts embedded in concrete footings. There would be no additional bearing weight on the existing property owner/HOA walls. • Along the easterly portions of the widening area, existing wall heights are variable. In these areas, a solid wall would be constructed adjacent to the existing walls and topped with glass panels. • The use of glass sound wall panels would maintain the existing views of the southerly hills and San Juan Creek Valley from along the Ortega corridor, and provide light and transparency for adjacent residents, avoiding a tunnel-like look.
Caltrans standard masonry sound wall	• The "Caltrans standard masonry sound wall" would consist of the installation of a solid masonry wall of 12'-0" to 16'-0" foot high. • The standard masonry wall would block all ridgeline and San Juan Creek valley views to the south of the Ortega corridor.
Landscaping	• Parkway landscaping on the south side of the highway already exists adjacent to residential subdivisions. Existing landscaping generally contains turf, shrubs and trees. There is no proposal by Caltrans to replace this landscaping. Any new landscaping in this area would be at the City's expense. • The ad hoc committee recommended that this area be replanted at some point with a more natural plant palette similar to that used at the Rancho Madrina project on Rancho Viejo Road.

OTHER DESIGN ISSUES

In addition to the wall and landscaping concepts outlined above, the City's Engineering Department has reviewed the design plans and has no comments on the proposed roadway cross sections. However, Engineering staff identified the following issues which should be addressed in the final design:

1. The design should clarify whether existing utilities will be under-grounded. The City recommends undergrounding of utilities as part of the widening project.

2. The design, bidding and construction of the road improvements should be coordinated with the City Water Department to accommodate installation of a 12-inch water line from Antonio Parkway to Toyon Drive, in order to avoid the need for subsequent road closures and trenching after the road widening project is completed. The City will use the same engineer (HDR) for design of the water line project as Caltrans is using for roadway design. The City requests that Caltrans integrate the City Water Department into the bidding and construction process, such that the plans and specifications for the water line are part of the same bid package as the road improvements, that the same contractor is awarded both projects, and that bid amounts for both components of the project are considered in the award of contract.
3. The City needs an equestrian crossing of Ortega Highway to connect trail systems north and south of the highway. The City is currently evaluating the feasibility of using the La Novia signal to accommodate an equestrian crossing. However, the City wants to retain the future option to establish an equestrian crossing at Errecarte or Via Cristal.
4. The preliminary design proposes to increase the grade (steepness) of the Palm Hill Drive access road from 16.7% to 23.0% and of the existing easterly private entrance from 15.0% to 21.1%. The existing and proposed grades exceed Orange County Fire Authority (OCFA) standards. The proposed private street and private driveway grades cannot exceed the existing grades where the existing grades presently exceed OCFA standards for emergency vehicle and fire apparatus accessibility.

FINANCIAL

The cost of retaining Land Concern to assist in developing preferred design concepts for the Ortega Widening Project is not to exceed $20,000. The County has agreed to reimburse the City for the cost of this work through a cooperation agreement regarding Ortega Highway improvements. Therefore, there is no fiscal impact to the City from the process of developing design recommendations.

HDR Engineering has prepared construction cost estimates for the various types of retaining walls and sound walls. The estimates provide a rough, order-of-magnitude cost comparison of the various alternatives under consideration (see Attachment 3). Should the City recommend design alternatives which require additional expense above and beyond the Caltrans standard designs, the City would be expected to cover the additional cost.

For non-standard retaining walls, Caltrans expects the City to pay for the additional construction cost which exceeds the basic Caltrans wall design standard. However, Caltrans would be responsible for maintaining the retaining walls. The retaining wall with sack-finish design for north side retaining walls would increase the construction cost. The City has requested HDR Engineering to provide a cost estimate.

For non-standard sound walls (glass and masonry), Caltrans expects the City to pay the difference between the cost of such walls and the Caltrans standard masonry sound wall, and also maintain the sound walls. The financial impact is unknown at this point, but could be significant. HDR estimates that the glass-masonry sound wall could add $0.9 to $1.2

million to the construction cost. The maintenance cost for the glass-masonry sound wall alternative is unknown.

The City presently has responsibility for maintaining landscaping along the south side of Ortega Highway between Via Cordova and Avenida Siega. Staff will provide estimates of annual landscape maintenance cost at the workshop. Caltrans has requested that the City maintain all landscaping on the north and south sides (including on the retaining walls). The annual cost of this maintenance is unknown.

PUBLIC NOTIFICATION

Although this workshop is not a public hearing, the City has mailed a public meeting notice by first-class mail to all owners of real property (as listed on the latest Orange County Real Property Tax Assessment rolls) situated within five-hundred (500) feet of the project. The meeting agenda has been posted consistent with State law and City policy.

Caltrans also mailed a sound wall survey to potentially affected property owners along the Ortega Highway Corridor to determine their preferences with respect to sound wall heights and treatments (see Attachment 4). That survey included reference to the City's public workshop this evening. Consequently, some meeting attendees may have received notice via the Caltrans survey.

RECOMMENDATION

Conduct the public workshop; and,

By motion: that the City Council and Planning Commission conduct a public workshop and provide direction on the proposed conceptual design alternatives with respect to sound walls, retaining walls, and landscaping for Caltrans proposed widening of Ortega Highway (State Route-74) and provide responses to the following issues as requested by Caltrans:

1. Does the City concur with the proposed 70'-0" wide geometric design section for the Calle Entradero-Avenida Siega road segment, and a 76'-0" wide geometric design section for the Avenida Siega-City limit road segment?
2. Does the City concur with reconstructing the existing eastbound right-turn lane curb return and sidewalk at Via Cordova?
3. Does the City concur with maintaining the 5 intersections within the City as non-signalized and free of pedestrian crossings, until such future date that signal warrants may justify the need for signalization?
4. Does the City concur with eliminating the existing sidewalk along the north side of Ortega Highway from Calle Entradero to Via Cordova, and retaining the existing multi-purpose trail along the Hunt Club frontage?
5. What is the City's preferred material for sound walls on the south side of the highway? If the City prefers glass sound walls, does the City agree to fund the additional cost of glass walls over the cost of standard Caltrans-approved masonry block walls?
6. If the City prefers a glass sound wall design for the south side of the highway, will the City agree to accept maintenance responsibility for these glass sound walls on the south side of Ortega Highway?
7. What is the City's preferred material for retaining walls on the north side of the highway?
8. What is the City's preferred landscaping concept for the north side of the highway? If this concept exceeds normal Caltrans landscaping guidelines, will the City agree to fund the difference in cost?
9. Will the City agree to maintain all landscaping for the project located within City limits (including landscaping on retaining walls)?

Respectfully submitted,

Molly Bogh
Planning Director

Prepared by,

William Ramsey, AICP
Principal Planner

Enclosures: Ortega Highway Retaining Wall and Sound Wall View Simulations (to be provided under separate cover)

Attachments:

1. August 24, 2004 letter from then-Mayor Joe Soto to Assemblyman Todd Spitzer.
2. May 4, 2006 Letter from Jim Beil, Caltrans to Dave Adams, City Manager.
3. Retaining Wall and Sound Wall Construction Cost Estimates by HDR.
4. Caltrans Ortega Highway Sound Wall Survey dated May 12, 2006.

32400 PASEO ADELANTO
SAN JUAN CAPISTRANO, CA 92675
(949) 493-1171
(949) 493-1053 FAX
www.sanjuancapistrano.org

MEMBERS OF THE CITY COUNCIL
SAM ALLEVATO
DIANE BATHGATE
WYATT HART
JOE SOTO
DAVID M. SWERDLIN

June 6, 2006

Ahmed Abou-Abdou, P.E. Project Manager
Department of Transportation
District 12
3337 Michelson Drive
Irvine, CA 92612-1699

Subject: Consideration of Conceptual Design Alternatives with Respect to Sound Walls, Retaining Walls, and Landscaping Related to Caltrans' Proposed Widening of Ortega Highway (SR-74) from Calle Entradero to the Easterly City Limits (820.20)

Mr. Abou-Abdou:

This letter is in response to your correspondence to the City dated May 4, 2006 requesting City input on various design features for the Lower Ortega Widening Project. Thank you for the opportunity to provide input in the design of the project. On May 30, 2006, the City Council and Planning Commission of the City of San Juan Capistrano conducted a joint public workshop to review conceptual design alternatives related to Caltrans' proposed widening of Ortega Highway within the City. The proposed widening would extend from Calle Entradero easterly to a point about 0.4 miles east of Antonio Parkway/La Pata Avenue; however, the City has limited its review to that portion of the project located within the City's corporate limits.

In your letter you requested City concurrence on several aspects of the project design. At the May 30, 2006 joint workshop, the City Council and Planning Commission discussed the following issues and gave direction to staff as described below:

1. The City Council and Planning Commission concurred with the Caltrans proposal for a 70'-0" wide geometric design section for the Calle Entradero-Avenida Siega road segment; the proposed 76'-0" wide geometric design section for the Avenida Siega-City limit road segment; and the proposal to reconstruct the existing eastbound, right-turn lane curb return and sidewalk at Via Cordova.

2. Regarding signalized crossings on this portion of Ortega Highway, your letter proposed that Calle Entradero, Via Cordova, Via Crystal, Via Errecarte, and Avenida Siega would remain non-signalized and free of pedestrian crossings. The City Council and Planning Commission indicated that at least one signalized

San Juan Capistrano: Preserving the Past to Enhance the Future

intersection and pedestrian/equestrian crossing is needed in this area, noting that the City would fund any traffic signal that did not meet established signal warrants.

3. The City Council and Planning Commission concurred with the proposed removal of the existing sidewalk along the north side of Ortega Highway between Calle Entradero and Via Cordova, and with no proposed construction of new sidewalk on the north side of Ortega Highway. The existing sidewalk on the south side of the highway would remain and be extended east of Avenida Siega to the City limits. Although the Planning Commission and City Council concurred with the need for sidewalks on only the south side of the highway in this area, they reiterated the need for a future signalized pedestrian crossing.

4. The City Council and Planning Commission concurred that sound walls on the south side of the highway should be designed to be aesthetically compatible with the scenic highway designation in the General Plan. Various materials were discussed, including glass and masonry block with sacked finish. General consensus was reached that more study of sound wall materials is needed to address both aesthetics and sound reduction (including sound deflection to properties on the north side of Ortega Highway), and acknowledging the City's willingness to fund the cost of aesthetic sound wall treatments/materials that exceed Caltrans standards. The environmental document prepared by Caltrans for the project should evaluate and propose mitigation for both the direct traffic noise impacts to homes along the south side and indirect noise impacts (reflected noise) to homes along the north side of the highway.

5. The City Council indicated general consensus that the City is willing to fund maintenance of glass sound walls or other sound walls that exceed Caltrans standards, provided that such materials can reduce sound deflection affecting residences on the north side of the highway.

6. The City Council and Planning Commission reached general consensus that for retaining walls on north side of Ortega Highway, faux rock is the preferred material, except that if the walls can be completely covered with landscape material such as vines, another material may be acceptable. A batter wall would be preferable to a vertical wall.

7. The City Council and Planning Commission directed that landscaping along the north side of Ortega Highway should consist primarily of drought tolerant, native or historical California plant materials. The City is open to funding any cost differential between this type of plant material and Caltrans standard planting plans.

8. The City Council indicated a general consensus that the City would agree to maintain all landscaping for the project located within City limits.

In addition to the above design-related issues for which Caltrans has sought concurrence, the City has identified the following issues which should be addressed.

a. The design should clarify whether existing utilities will be under-grounded. The City recommends undergrounding of overhead utilities as part of the Ortega Highway widening project.

b. The design, bidding and construction of the road improvements need to be coordinated with the City Water Department to accommodate installation of a 12-inch water line from Antonio Parkway to Toyon Drive, in order to avoid the need for subsequent road closures and trenching after the road widening project is completed. The City will use the same engineer (HDR) for design of the water line project as Caltrans is using for roadway design. The City requests that Caltrans integrate the City Water Department into the bidding and construction process, such that the plans and specifications for the water line are part of the same bid package as the road improvements, that the same contractor is awarded both projects, and that bid amounts for both components of the project are considered in the award of contract.

c. The City needs an equestrian crossing of Ortega Highway to connect trail systems north and south of the highway. The City is currently evaluating the feasibility of using the La Novia signal to accommodate an equestrian crossing. However, the City wants to retain the future option to establish an equestrian crossing at Errecarte or Via Cristal.

d. The preliminary design proposes to increase the grade (steepness) of the Palm Hill Drive access road from 16.7% to 23.0% and of the existing easterly private entrance from 15.0% to 21.1%. The existing and proposed grades exceed the Orange County Fire Authority (OCFA) standard which we understand is a maximum 15.0% grade. The proposed street and driveway grades cannot exceed the existing grades where the existing grades already exceed OCFA standards for emergency vehicle and fire apparatus.

e. The City supports the provision of bicycle facilities in conformance with the Orange County Transportation Authority (OCTA) Commuter Bikeways Strategic Plan (CBSP).

The City Council and Planning Commission greatly appreciated the opportunity afforded by Caltrans to review the project, take public input, consider design alternatives, and provide recommendations to Caltrans for completing the design and environmental work for the Lower Ortega Widening Project. In particular, Mayor Swerdlin has asked that thanks be extended to District Director Cindy Quon and all members of the Caltrans staff involved in this project, for creating a process that invited City input on context sensitive design within San Juan Capistrano.

Please feel free to call me at (949) 443-6323 with any questions about this letter or the City's recommendations on the project.

Sincerely,

Molly Bogh
Planning Director

Cc: Dave Adams, City Manager
William Huber, Assistant City Manager
Nasser Abbaszadeh, Engineering & Building Director
Brian Perry, Senior Civil Engineer
Alan Oswald, Senior Engineer-Traffic
William Ramsey, AICP, Principal Planner
Planning Commission
Ilse Byrnes, Parks, Recreation, & Equestrian Commissioner
Tony Soto, Transportation Commissioner
Reza Aurasteh, PhD, P.E., Caltrans, District 12
Milli Lim, P.E., Caltrans District 12
Deedee Martinez, L.A., Caltrans District 12
Jeff Thompson, Rancho Mission Viejo
Laura Eisenberg, Rancho Mission Viejo
Bill Bennett, HDR, Engineering
Mike Sweeny, L.A., Land Concern
Kathleen Brady, BonTerra Consulting
Cindy Krebs, BonTerra Consulting

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
3337 MICHELSON DRIVE, SUITE 380
IRVINE, CA 92612-8894
PHONE (949) 724-2007
FAX (949) 724-2019
TTY (949) 756-7813

Flex your power!
Be energy efficient!

August 21, 2006

Ms. Molly Bogh, Planning Director
City of San Juan Capistrano
32400 Paseo Adelanto
San Juan Capistrano, CA 92675

Subject: Lower Ortega Highway Widening Project (EA 12-086900)
Sound Wall Type

Dear Ms. Bogh:

As you are aware, the Department conducted a sound wall survey for the Lower Ortega Highway widening project in May 2006. We are pleased to inform you that the results of the sound wall surveys have been compiled and analyzed. Over 84% of the respondents are in favor of sound walls. In regards to the type of sound walls, 13% preferred glass walls, 19% preferred concrete walls, and 68% indicated no preference. Since over 50% are in favor of the sound walls, the project is required to have sound walls in accordance with the Department's noise abatement protocol. Additionally, to comply with the desire of the residents, the walls should be made of concrete or non-transparent material.

In your letter dated June 6, 2006, Paragraph 4 states that "...more study of sound wall materials is needed to address both aesthetics and sound reduction (including sound deflection to properties on the north side of Ortega Highway) and acknowledging the City's willingness to fund the cost of aesthetic sound wall treatments/materials that exceed Caltrans standards..." Paragraph 5 further states that "...the City is willing to fund maintenance of glass sound walls or other sound walls that exceed Caltrans standards, provided that such materials can reduce sound deflection affecting residences on the north side of the highway."

In response to your concerns in aesthetics and sound deflection, we have identified two sound absorbing wall systems for your consideration: QUILITE® Noise Barriers, , and Sound Fighter® LSE Noise Barrier Wall System. These products are among the Department's current list of pre-qualified sound wall systems. The construction details for the specific project application need to be reviewed and approved by the Department's Office of Structure Design.

Among the two products listed, Sound Fighter® LSE Noise Barrier has the best sound absorbing capability; (According to the manufacturer, it has a very high absorptive value and it weighs approximately 5.0 lbs./sqft). QUILITE® weighs approximately 6 lb./sqft, but is not a transparent wall. Both systems require some additional structural support. Additional structural support requirements may result in more construction impacts to the south side parkway. Among the two types of walls, only QUILITE® allows natural light penetration and the manufacturer claims that it reduces reflected noise by more than 60%. Attached please see some sample applications of these sound wall systems. More detailed information on these walls can be found on the following web sites.
www.quilite.com/highway.html and www.soundfighter.com/wall.htm

Please note that reflective noise reductions indicated here are claimed by manufacturer. Caltrans has not verified these claims by actual field measurements.

The following are two other pre-qualified noise barrier systems web sites. These are sound barriers and not sound absorption type.

Carsonite Sound Barrier can be found @ http://www.carsonite.com/

Port-o-Wall System Sound wall can be found @ www.port-o-wall.com

The web site for Pre-qualified Paraglas material is http://www.paraglassoundstop.com
This material is transparent but does not reduce reflected noise.

Since these sound walls will be located within right of way under City jurisdiction, the Department will also be willing to support other wall type that City determines feasible provided that it meets all Department requirements for noise attenuation, and is approved by Caltrans structural engineers. However, the height and length of the walls have already been established to be 14' for sound wall No. 1, 16' for the sound wall No. 2, and 16' for soundwall No. 3, according to the July 20, 2006 memorandum from Caltrans' Environmental Engineering (copy attached).

In relation to the sound wall material, the sound wall survey reflects the desire of the respondents. According to the survey, more people prefer a concrete wall versus a transparent wall. As such if the City prefers transparent wall, we suggest that the City contact those residents. Caltrans will be happy to provide the address of property owners who prefer concrete wall.

As you are aware, this project is progressing on an accelerated basis. The following item need to be addressed in order for the project to proceed as planned:

1) City needs to notify the Department in writing its selection of the sound wall type and aesthetic treatment by September 29, 2006.

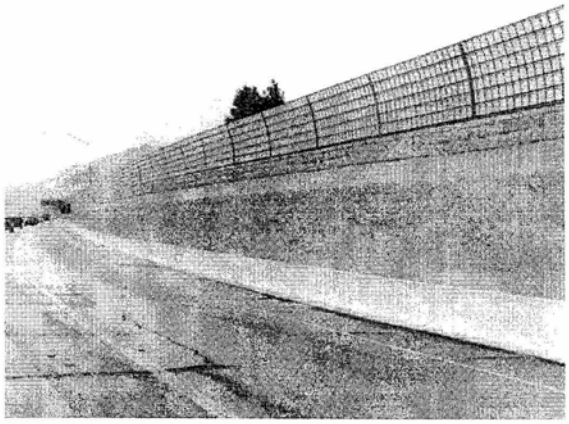
Thank you for your support on this important project. Should you have further questions, please feel free to contact me at (949) 724-2768.

Sincerely,

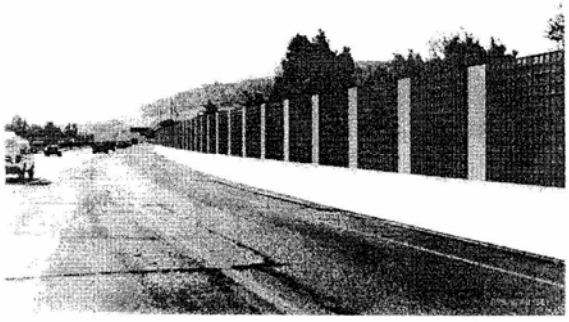
Ahmed Abou-Abdou, PE, PMP
Project Manager
Caltrans, District 12

Cc: William Huber, City of SJC
Harry Persaud, County of Orange

QUILITE® Noise Barriers



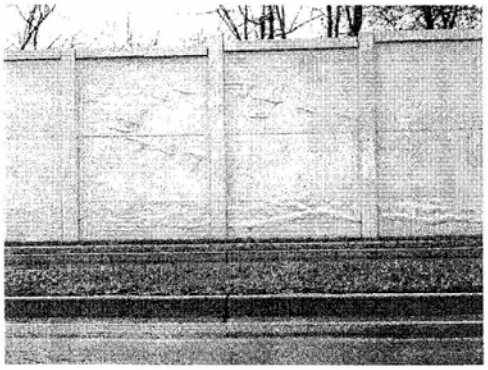
Computer model



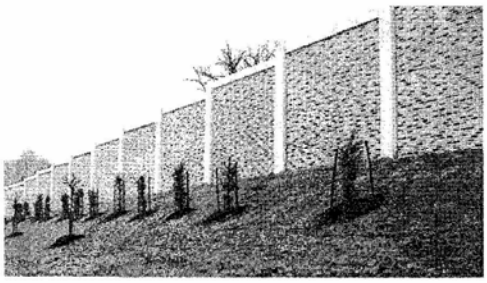
Computer model

Source: http://www.quilite.com/opt2.jpg

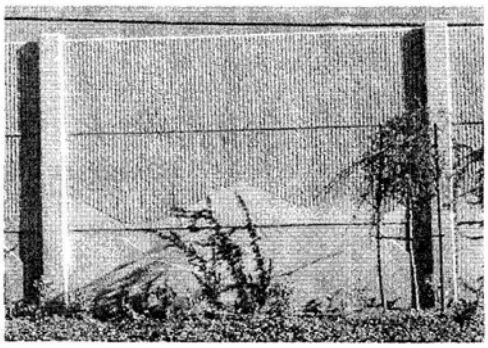
SoundSorb® Noise Barrier



MD Rt. 216
Graphic art panels



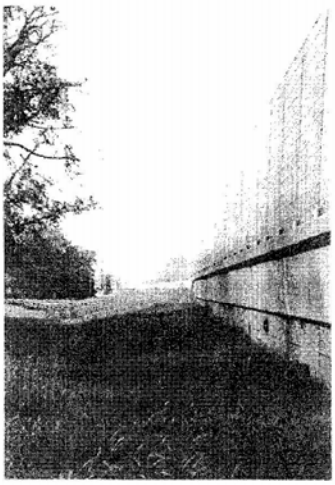
MD Rt. 216
Old Brick Pattern



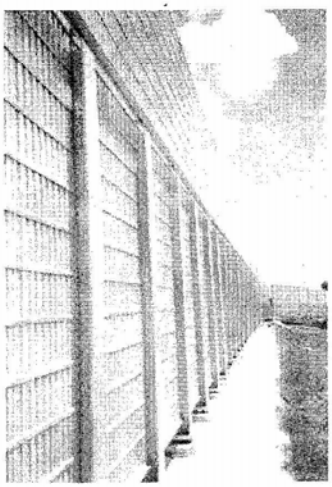
Custom Texture
MTA Busway , CA

Source: http://www.soundsorb.com/projects.html

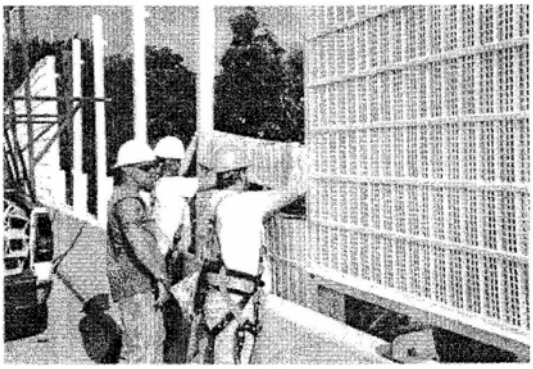
Sound Fighter® LSE Noise Barrier Wall System



I-49
Shreveport, LA



I-10
Baton Rouge, LA



I-10 Installation
Baton Rouge, LA

Source: http://www.soundfighter.com/Walls_gallery.aspx

Rec'd at City Council mtg 10/3/2006 MM

Outline of comments for presentation of Petition to SJC City Council 3/3/06

To: Members of the City Council

We are members of a committee involved in information collection, discussion and collective action regarding some important issues affecting the City.

We are hereby submitting a set of petitions to the Council that ask for your restraint in connection with:

1. The widening of the Ortega Highway where it already consists of four lanes
2. The erection of soundwalls on the south side of the Ortega
3. The removal of any mature trees and the existing sidewalk on the north side of the Ortega
4. The construction of a cloverleaf interchange at the intersection of the Ortega and the I-5.

Thus far, close to 275 residents have signed the petitions and we are receiving daily calls for copies so additional signatures are sure to come.

Bernard J. Hale, Spokesperson
30981 Steeplechase Drive
San Juan Capistrano, CA 92675

10/04/06 X Council, CM, ACM, E&B

Petition to the City Council of San Juan Capistrano
In Opposition to the Widening of Ortega and New I-5/Ortega Interchange

We, the undersigned residents of San Juan Capistrano, hereby request the members of our City Council to use all available means to stop turning Ortega Highway into a "driveway to the I-5 for surrounding communities."

Specifically, we oppose the current plans of Caltrans to widen Ortega Highway and build a massive new I-5/Ortega Interchange. We call on the City Council to stop spending our tax dollars to facilitate these projects and inform Caltrans that it needs to build/improve other access points to the I-5 before the City will consider supporting the widening of Ortega and the new interchange.

The proposed Ortega/I-5 interchange improvements are extremely destructive of the character of San Juan and our historic downtown, and will merely attract a great deal more traffic to use our City as a driveway to the I-5, further degrading arterial street traffic and causing bigger headaches for the citizens and businesses of our town. The proposed sound walls will create a "tunneling effect" on Ortega, destroy the rural character and numerous trees lining Ortega, and badly degrade the quality of life for literally thousands of our residents. We should be insisting that Ortega and the interchange CANNOT be acceptably improved to meet the traffic needs of 2030 and therefore Caltrans must look at other alternatives to handle the regional traffic at access points for the I-5 other than Ortega.

The City needs to make findings that Ortega Highway and the Ortega interchange cannot bear the brunt of the increased traffic accessing the I-5 in 2030 due to the negative impact on our historic downtown and our residents along the Ortega corridor. Therefore, CALTRANS must focus on alternative access points to the I-5 (such as Stonehill, Avery, etc.) and the City should only support limited changes to Ortega that will not add sound walls, destroy trees, nor add "cloverleafs" to the interchange. The rural entryway from the East needs to be preserved as it is the last entrance to our City that reflects our rural, small-village character.

SIGNATURE LISTING-PETITION

NAME (PRINTED)	ADDRESS	SIGNATURE
Vicki Berg	30661 Hunt Club Dr.	
Fred Berg	"	
[illegible]	30641 Hunt Club	
Pat Kelly	30697 Hunt Club Dr	
Betty Kelly	30692 Hunt Club Dr	
Patricia M. Hayhurst	30641 Fox Run Ln.	
Marvin Hurst	30641 Fox Run Ln	
OSMAN CASTILLO	30701 FOX RUN LN	
DENISE CASTILLO	30701 FOX RUN LN	
Kathi Sterling	30741 Fox Run Lane	
Sally McMullen	30741 Fox Run	
Scott Sterling	30741 Fox Run	
Pat Wesselink	30641 Hunt Club	
Suzanne McCardle	30671 Hunt Club Dr	
[illegible] Cangianos	27579 Paseo Castile	
Jim PRIESTHEY	30796 HILLSIDE TER SJC	
Gail FRYAR	30731 Calle Chuera	
Pat Koehler	32122 Calle Los Elegantes	
Dan Koehler	32122 Calle Los Elegantes	
Patty Collins	30582 Steeplechase Dr.	
MARILYN WEBER	30932 Via Mirador SJC	
Kathleen Roth	30742 Hunt Club Dr	
Arlen C Baker	27203 Ortega A SJC	
Robert MOLEY	28221 PASEO ANDANTE SJC	
John Wally	37351 Calle Balmes SJC	
Wesley Dragil	27515 Via Ramona S.J.C.	
Thomas + Michelle Spieker	38482 Calle Mira Monte, SJC, CA	
Holly Socci	30591 Steeplechase Dr	SJC, CA
Eileen Armenaal	30741 Steeplechase Dr	SJC CA
[illegible]	30591 Steeplechase DR	SJC, CA 92675
Shelley Upton	29811 Summerwind	SJC, 92675
Lindsey Tanner	194 Del Gado Rd	
Musa Balbaan	10114 W. Canada Dr	
Lia Begerblom	24452 Canada Rd	
Jessee Ellen Fromm	27332 Silver Creek Dr	SJC 92675
Howard Fromm	27332 Silver Creek Dr	SJC 92675

A RECAP OF THE MEETING HELD ON 10/24/06

LOCATION: MEETING WAS HELD AT City offices at 31411 La Matanza

ATTENDEES: Representing the City Of San Juan Capistrano were Mayor David Swerdlin, Assistant City Manager William Huber, and Engineering and Building Director Nasser Abbaszadeh.

Representing a wide part of the communities on both the north and south sides of the Ortega were 20 individuals including:
Ed Dahlen, Lennie DeCaro, Bernie Hale, Suzanne McCardle, Dan Merkle, Gail Fayad, Renee Ritchie, Mark Rottmann, Susan Turner, Monique Rea, Terry McCardle, Cheryl Trotsky, Mark Nielsen, Art Cusolito, Dick McEwen, Cici and Fred Barry, & Charles Rea

ISSUES DISCUSSED:

Mayor Swerdlin started the meeting off with a brief statement that the city leadership understands that the Ortega is an important entrance into the city, that the widening project can have a wide variety of impacts...some positive and some negative, and that he and his staff want to see it done correctly.

Mr. Huber followed with a discussion of the history of the Ortega Widening Project. It was begun by CalTrans in the late 1990's. He stated that Caltrans has "superior" rights over the city because of the nature of Highway 74 and it is a State Highway. . CalTrans could force the project through without city approval, but has thus far shown a willingness to listen to the input of the City leaders as well as concerned citizens and revised the original approach after they prepared a project report and then held a scoping meeting open to the public at Ambuel Elementary School . The project report began to emerge in 2004, but it
Was not considered acceptable by the city and a protest was filed. CalTrans did agree to make a number of modifications to the scope. We now are seeing what the results of all that effort have produced so far.

The EIR is due out in draft form around March of 2007. It will be made available to the public and in particular to any interested parties on record with the city. It will include technical information about the projected traffic loads, decibel levels for sound, and information about the sound walls, projected traffic lanes, and areas affected by plant and sidewalk removal . Input from interested citizens will be sought during forums. Construction is currently expected to begin in late 2008 to early 2009.

Mr. Huber stated that the project not only involves San Juan Capistrano but also the County of Orange. The County has elected to take the lead in the overall direction of the project, but the engineering must meet CalTrans guidelines.

Page 2.

A additional traffic signal on the Ortega is currently not a part of the project.

A lively discussion then followed. Major items discussed included the sound concerns that can reverberate from a sound wall, the elimination of the sidewalk and some trees on the north side of the Ortega between the two entrances to the Hunt Club, safety concerns related to exiting from such developments as Belford Terrace and the Hunt Club onto the Ortega on the north side as well as from the south side of the street, the design of the interchange at Ortega and the I-5.

Two issues that were repeatedly brought up were the need for a stop light somewhere near or east of the Hunt Club entrance as well as sidewalks for students to use in going to the new high school in the fall of 2007.

Mr. Huber and Mr. Abbaszadeh placed a large rendering of the proposed project on the wall of the meeting room for all of us to view and ask questions about .

Mr. Abbaszadeh then presented us with hard copies of a slide presentation that discussed the I-5 and Ortega Interchange project. It included a depiction of the five alternatives now under consideration. Key milestones for the future include:
Public review/comment on the draft EIR (June/July 2007)
Holding public hearings (June/July 2007)
Respond to public comments in final EIR
CalTrans approval of final EIR and Project Report (March 2008)

Mr. Abbaszadeh then presented a list of the eleven questions that I had presented to him a few days before the meeting along with staff developed answers.
Unfortunately some of the answers were in conflict with what the CalTrans Project Description included, so the answers are going to be updated and supplied to me for dissemination.

In summary, The mayor, Mr. Huber and Mr. Abbaszadeh were polite and patient with our many questions and I think they heard our concerns loud and clear. One issue that the mayor called attention to was a traffic signal on the Ortega. He asked staff to give it "fast track" attention.
We concluded that it would be best if we worked as a team with the city rather than as adversaries, and all agreed to that. To that end, we were invited to create a small advisory group of around six people which would then meet with the City Staff and Caltrans in an attempt to develop some mutually acceptable approaches to try to address our concerns. I invite each neighborhood community to name someone to be on that committee. I will submit the names to Nasser and ask that a meeting schedule be developed.

Bernie Hale

California Department of Transportation

Survey Sheet

For homeowners between Calle Entradero & Via Cordova (Sound Wall #1)
Ortega Highway Project Sound Wall

Please complete this survey and mail to:
BonTerra Consulting
Attn: SR-74 Soundwall Survey, 151 Kalmus Dr., Suite E-200
Costa Mesa, CA 92626

This survey sheet is for properties located on the south and north side of Ortega Highway between Calle Entradero & Via Cordova. Please look at the enclosed aerial photograph, complete the following, sign and return to the address above.

As an option, the Department of Transportation and the City are working on the possibility of a transparent sound wall in lieu of a concrete block wall. If funding of the higher cost of a transparent wall can be arranged, construction of a transparent wall will be considered. Otherwise, a concrete block wall will be considered for construction.

My property is located within the area explained above. (Please check only one of the three "Yes" lines)

_____ Yes, I am in favor of the proposed sound wall # 1 only if it is a transparent wall

_____ Yes, I am in favor of the proposed sound wall # 1 only if it is a concrete block wall

_____ Yes, I am in favor of the proposed sound wall # 1 either as a transparent wall or a concrete wall

I would prefer a ____ft wall (please circle your choice: 12 foot, 14 foot, 16* foot)

_____ No, I am not in favor of the proposed sound wall #1.

I prefer that wall #1 is NOT constructed at any height or with any material.

*Please note that if a 16-ft sound wall is not possible because of safety concerns, a 14-ft wall will be constructed instead. The final roadway design will establish this.

The property owner should sign below

_____ Print First, Last Name(s)

_____ Signature

_____ Street Address of the Property

_____ Date

_____ City, Zip Code

California Department of Transportation

Survey Sheet

For homeowners between Via Cordova and Via Cristal (Sound Wall #2)
Ortega Highway Project Sound Wall

Please complete this survey and mail to:
BonTerra Consulting
Attn: SR-74 Soundwall Survey, 151 Kalmus Dr., Suite E-200
Costa Mesa, CA 92626

This survey sheet is for properties located on the south and north side of Ortega Highway between Via Cordova and Via Cristal. Please look at the enclosed aerial photograph, complete the following, sign and return to the address above.

As an option, the Department of Transportation and the City are working on the possibility of a transparent sound wall in lieu of a concrete block wall. If funding of the higher cost of a transparent wall can be arranged, construction of a transparent wall will be considered. Otherwise, a concrete block wall will be considered for construction.

My property is located within the area explained above. (Please check only one of the three "Yes" lines)

_____ Yes, I am in favor of the proposed sound wall # 2 only if it is a transparent wall

_____ Yes, I am in favor of the proposed sound wall # 2 only if it is a concrete block wall

_____ Yes, I am in favor of the proposed sound wall # 2 either as a transparent wall or a concrete wall

I would prefer a ____ft wall (please circle your choice: 10 foot, 12 foot, 14 foot, 16* foot)

_____ No, I am not in favor of the proposed sound wall #2.

I prefer that wall #2 is NOT constructed at any height or with any material.

*Please note that if a 16-ft sound wall is not possible because of safety concerns, a 14-ft wall will be constructed instead. The final roadway design will establish this.

The property owner should sign below

_____ _____
Print First, Last Name(s) Signature

_____ _____
Street Address of the Property Date

_____
City, Zip Code

California Department of Transportation

Survey Sheet

For homeowners between Via Cristal and Via Errecarte (Sound Wall #3)
Ortega Highway Project Sound Wall

Please complete this survey and mail to:
BonTerra Consulting
Attn: SR-74 Soundwall Survey, 151 Kalmus Dr., Suite E-200
Costa Mesa, CA 92626

This survey sheet is for properties located on the south and north side of Ortega Highway between Via Cristal and Via Errecarte. Please look at the enclosed aerial photograph, complete the following, sign and return to the address above.

As an option, the Department of Transportation and the City are working on the possibility of a transparent sound wall in lieu of a concrete block wall. If funding of the higher cost of a transparent wall can be arranged, construction of a transparent wall will be considered. Otherwise, a concrete block wall will be considered for construction.

My property is located within the area explained above. (Please check only one of the three "Yes" lines)

_____ Yes, I am in favor of the proposed sound wall # 3 only if it is a transparent wall

_____ Yes, I am in favor of the proposed sound wall # 3 only if it is a concrete block wall

_____ Yes, I am in favor of the proposed sound wall # 3 either as a transparent wall or a concrete wall

I would prefer a ____ft wall (please circle your choice: 12 foot, 14 foot, 16* foot)

_____ No, I am not in favor of the proposed sound wall #3.

I prefer that wall #3 is NOT constructed at any height or with any material.

*Please note that if a 16-ft sound wall is not possible because of safety concerns, a 14-ft wall will be constructed instead. The final roadway design will establish this.

The property owner should sign below

_____ _____
Print First, Last Name(s) Signature

_____ _____
Street Address of the Property Date

_____
City, Zip Code

PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT
NA

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT
NA

Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)*
Since there are few parallel routes, the redistribution effects will be minimal.

Comments/Explanation/Details *(attach additional sheets as necessary)*
The Project is included in the FY 1996/2003 RTIP and the 2006 FTIP. The purpose of the project is to improve the traffic flow within the project limits. Currently, the existing traffic demand exceeds traffic capacity. The roadway operates at the LOS F, the traffic forecast for the year 2030 will be LOS F (No Built) and LOS C (Built).

PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT NA **RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT** NA
Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)* Since there are few parallel routes, the redistribution effects will be minimal.
Comments/Explanation/Details *(attach additional sheets as necessary)* The Project is included in the FY 1996/2003 RTIP and the 2006 FTIP. The purpose of the project is to improve the traffic flow within the project limits. Currently, the existing traffic demand exceeds traffic capacity. The roadway operates at the LOS F, the traffic forecast for the year 2030 will be LOS F (No Built) and LOS C (Built).

PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

RTIP ID# *(required)* 0RA120535

Project Description *(clearly describe project)*
In the City of San Juan Capistrano and County of Orange from Calle Entradero to San Antonio Parkway. Widen from 2 Lanes to 4 Lanes.

Type of Project *(use Table 1 on instruction sheet)*
Change to existing State Highway

County Orange	Narrative Location/Route & Postmiles 12-Ora-74-KP 1.6/4.7 **Caltrans Projects – EA#** 12-086900

Lead Agency: Caltrans

Contact Person	**Phone#**	**Fax#**	**Email**
Ahmed Abou-Abdou	949-724-2768	949-440-4465	aabouabd@dot.ca.gov

Hot Spot Pollutant of Concern *(check one or both)* **PM2.5 X** **PM10 X**

Federal Action for which Project-Level PM Conformity is Needed *(check appropriate box)*

Categorical Exclusion (NEPA)	X	**EA or Draft EIS**	**FONSI or Final EIS**	**PS&E or Construction**	**Other**

Scheduled Date of Federal Action:

Current Programming Dates *as appropriate*

	PE/Environmental	**ENG**	**ROW**	**CON**
Start	July 1999	March 2006	February 2007	March 2008
End	February 2007	February 2008	February 2008	May 2010

Project Purpose and Need (Summary): *(attach additional sheets as necessary)*
The purpose of this project is to improve the traffic flow within the project limits. Currently the existing traffic demand exceeds traffic capacity. The roadway operates at the level of service (LOS) F. The traffic forecast for the year 2030 is 41,000 vehicles per day (ADT) and 3,530 vehicles for the peak hour for both directions. Based on the traffic forecast the roadway will continue to operate at LOS F in the year 2030.

Smita Deshpande/D12/Caltrans/CA Gov
03/07/2007 11:23 AM

To "Harry Persaud" <Harry.Persaud@rdmd.ocgov.com>
cc "Jeff Thompson" <Jthompson@ranchomv.com>, "Saadatnejadi, Lan" <Lan.Saadatnejadi@hdrinc.com>, alison army
bcc
Subject Re: SR 74 Project

Thanks Harry.

Smita Deshpande, Branch Chief
Environmental Planning Branch 'A'
Caltrans District 12
(949) 724-2245
"Harry Persaud" <Harry.Persaud@rdmd.ocgov.com>

"Harry Persaud" <Harry.Persaud@rdmd.ocgov.com>
03/07/2007 10:18 AM

To <smita_deshpande@dot.ca.gov>
cc "Saadatnejadi, Lan" <Lan.Saadatnejadi@hdrinc.com>, "Jeff Thompson" <Jthompson@ranchomv.com>
Subject SR 74 Project

Good Morning Smita

As a follow up to the SR 74 environmental coordination meeting and to facilitate the release of Caltrans draft environmental document, this email serves to advice you that the County is willing/planning to take the lead for construction administration for the widening project, including the landscaping. The landscaping may be accomplish within the construction widening contract or as a separate contract immediately following completion of the widening project.

If you have any questions or need additional information please contact me.

Thanks-Have a great day

Harry Persaud AICP, PMP
Manager, Subdivision & Infrastructure Services
Resources & Development Management Department
Phone: 714-834-5282
Fax: 714-834-5413

California Department of Transportation

Survey Sheet

For homeowners between Calle Entradero & Via Cordova (Sound Wall #1)
Ortega Highway Project Sound Wall

Please complete this survey and mail to:
BonTerra Consulting
Attn: SR-74 Soundwall Survey, 151 Kalmus Dr., Suite E-200
Costa Mesa, CA 92626

This survey sheet is for properties located on the south and north side of Ortega Highway between Calle Entradero & Via Cordova. Please look at the enclosed aerial photograph, complete the following, sign and return to the address above.

As an option, the Department of Transportation and the City are working on the possibility of a transparent sound wall in lieu of a concrete block wall. If funding of the higher cost of a transparent wall can be arranged, construction of a transparent wall will be considered. Otherwise, a concrete block wall will be considered for construction.

My property is located within the area explained above. (Please check only one of the three "Yes" lines)

_____ Yes, I am in favor of the proposed sound wall # 1 only if it is a transparent wall

_____ Yes, I am in favor of the proposed sound wall # 1 only if it is a concrete block wall

_____ Yes, I am in favor of the proposed sound wall # 1 either as a transparent wall or a concrete wall

I would prefer a ____ft wall (please circle your choice: 12 foot, 14 foot, 16* foot)

_____ No, I am not in favor of the proposed sound wall #1.

I prefer that wall #1 is NOT constructed at any height or with any material.

*Please note that if a 16-ft sound wall is not possible because of safety concerns, a 14-ft wall will be constructed instead. The final roadway design will establish this.

The property owner should sign below

_____ _____
Print First, Last Name(s) Signature

_____ _____
Street Address of the Property Date

_____
City, Zip Code

TCWG Project-Level PM Hot Spot Analysis Project Lists

Review of PM Hot Spot Interagency Review Forms

August 2006	Determination
LA0C40.pdf	Not a POAQC - hot spot analysis not required (needs clarifying information in NEPA document)
ORA120535.pdf	Not a POAQC - hot spot analysis not required
LA17850.pdf	Not a POAQC - hot spot analysis not required
LA18850.pdf	Not a POAQC - hot spot analysis not required
LA0D477_a.pdf | LA0D477_b.pdf	Not a POAQC - hot spot analysis not required
ORA00147_a.pdf | ORA00147_b.pdf | ORA00147_c.xls	Not a POAQC - hot spot analysis not required
RIV010203.pdf	Not a POAQC - hot spot analysis not required
RIV060118.pdf	Not a POAQC - hot spot analysis not required
SBd0H760_a.pdf | SBd0H760_b.pdf	Not a POAQC - hot spot analysis not required
LA0C8057.pdf	Exempt from hot spot analysis
LA996381.pdf	Not a POAQC - hot spot analysis not required
LA996348.pdf	Not a POAQC - hot spot analysis not required

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SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT
NA

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT
NA

Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)*
Since there are few parallel routes, the redistribution effects will be minimal.

Comments/Explanation/Details *(attach additional sheets as necessary)*
The Project is included in the FY 1996/2003 RTIP and the 2006 FTIP. The purpose of the project is to improve the traffic flow within the project limits. Currently, the existing traffic demand exceeds traffic capacity. The roadway operates at the LOS F, the traffic forecast for the year 2030 will be LOS F (No Built) and LOS C (Built).

PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

RTIP ID# *(required)* 0RA120535

Project Description *(clearly describe project)*
In the City of San Juan Capistrano and County of Orange from Calle Entradero to San Antonio Parkway. Widen from 2 Lanes to 4 Lanes.

Type of Project *(use Table 1 on instruction sheet)*
Change to existing State Highway

County Orange	Narrative Location/Route & Postmiles 12-Ora-74-KP 1.6/4.7 **Caltrans Projects – EA#** 12-086900

Lead Agency: Caltrans

Contact Person	**Phone#**	**Fax#**	**Email**
Ahmed Abou-Abdou	949-724-2768	949-440-4465	aabouabd@dot.ca.gov

Hot Spot Pollutant of Concern *(check one or both)* **PM2.5 X** **PM10 X**

Federal Action for which Project-Level PM Conformity is Needed *(check appropriate box)*

Categorical Exclusion (NEPA)	X	**EA or Draft EIS**	**FONSI or Final EIS**	**PS&E or Construction**	**Other**

Scheduled Date of Federal Action:

Current Programming Dates *as appropriate*

	PE/Environmental	**ENG**	**ROW**	**CON**
Start	July 1999	March 2006	February 2007	March 2008
End	February 2007	February 2008	February 2008	May 2010

Project Purpose and Need (Summary): *(attach additional sheets as necessary)*
The purpose of this project is to improve the traffic flow within the project limits. Currently the existing traffic demand exceeds traffic capacity. The roadway operates at the level of service (LOS) F. The traffic forecast for the year 2030 is 41,000 vehicles per day (ADT) and 3,530 vehicles for the peak hour for both directions. Based on the traffic forecast the roadway will continue to operate at LOS F in the year 2030.

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*

Areas of the City of San Juan Capistrano and unincorporated Orange County are located in the Trabuco RSA. A substantial portion of this large, sparsely populated region occupying eastern Orange County contain unincorporated, undeveloped land including designated open spaces such as O'Neil and Caspers Parks and a large section of the Cleveland National Forest. Trabuco RSA is framed by Santiago and Black Star Canyons on the west, I-405 on the south, and Riverside County to the east. Although this RSA contains the Cities of Mission Viejo, Lake Forest, Rancho Santa Margarita, areas of San Clemente and San Juan Capistrano, and the rural communities of Silverado, Modjeska, and Trabuco Canyons, over 26% of the land area remains developable. This represents the highest percentage of all Orange County's RSAs. Approximately three-quarters of the County's planned communities with future growth potential are located here, primarily Ladera Ranch and Rancho Mission Viejo.

The Ladera Ranch planned community development consists of 8,100 residential units plus commercial uses and the nearby Talega residential development comprises 4,965 units.

The Rancho Mission Viejo Planned Community development projected land use consists of 22,815 gross acres and the following types of uses:

Residential: Gross acres = 7,277 Maximum Dwelling Units = 14,000

Urban Activity Center:Gross acres = 251 Maximum Square Footage = 3,480,000

Neighborhood Center:Gross acres = 50 Maximum Square Footage = 500,000

Business Park:Gross acres = 80 Maximum Square Footage = 1,220,000

Golf Resort:Gross acres = 25

Open Space Use: Open space acres = 15,132

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Build	No Build
LOS D (AM and PM)	LOS F (AM and PM)
AADT = 28,000	AADT = 28,000
% Trucks = 7%	% Trucks = 7%
Truck AADT = 1,960	Truck AADT = 1,960

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Build	No Build
LOS C (AM and PM)	LOS F (AM and PM)
AADT = 42,000	AADT = 42,000
% Trucks = 5%	% Trucks = 5%
Truck AADT = 2,200	Truck AADT = 2,200

Nasser Abbaszadeh
<NAbbaszadeh@SanJuanCapistrano.org>
02/06/2007 05:33 PM

To "'Smita Deshpande'" <smita_deshpande@dot.ca.gov>
cc "'Ahmed Abou-Abdou'" <ahmed_abou-abdou@dot.ca.gov>, "'Saadatnejadi, Lan'" <Lan.Saadatnejadi@hdrinc.com>
bcc
Subject Issues from the Community Meeting on January 22, 2007

History: This message has been forwarded.

Hi Smita:

Following is a list of the issues we discussed at the 1/22/07 community meeting (it was a working group with 12 or 13 people in attendance). I grouped the issues into three main areas.

Issues:

1. No widening

2. If there is a project - main issues:
   a. Safe and attractive project
   b. Traffic signal/pedestrian crossing
   c. Sound walls

3. Other issues if there is a project
   a. Air pollution
   b. Retaining walls/step them back
   c. Landscaping/loss of trees
   d. Sidewalks on the north side
   e. Right turn lane (deceleration lanes) into side streets
   f. Coordination with the Ortega Interchange project
   g. Future of trash trucks on Ortega/ can they go somewhere else?

Engineering & Building Department Mission Statement - "To enhance the quality of life and preserve the City's heritage and charm through timely response, effective design, environmental sensitivity, quality construction, and neighborhood improvement."

Appendix D 2008 Regional Transportation Improvement Program

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ORANGE COUNTY RTIP PROJECTS				
SYS-TEM*	RTP ID	ROUTE	DESCRIPTION	PROJECT COST ($1,000'S)
S	ORA000193	22	HIOV CONNECTORS ON 22/405 BTWN SEAL BEACH BLVD & VALLEY VIEW & ON 405/605 BTWN KATELLA AVE & SEAL BEACH BLVD WITH 2ND HOV LNE IN EACH DIRECTION ON 405 BTWN CONNECTORS EA 071631	$469,525
S	ORA000195	22	ON SR-22 (I-405 TO SR55) ADD 2 HOV LANES/1 EA DIR (FRM 0 - 2) & 2 AUX LANES/1 EA DIR (FRM 0- 2) (I-5 TO BEACH) & OPERATING IMPROVMENTS (SEE COMMENTS) TCRP PAYBACK WHEN AVAILABLE	$546,587
S	ORA100510	22	REPLACE SR22 INTERCHANGES, CONSTRUCT HOV LANES AND LENGTHEN BRIDGES IN GARDEN GROVE	$13,520
S	ORA981104	22	RECONSTRUCT HARBOR BLVD INTERCHANGE. 4 LANES EACH DIRECTION (1/4 MILE BEFORE AND AFTER SR-22 RAMPS) 2 HOV LNES(1 E/B & 1 W/B) AND PROPOSED SR-22 HOV LANES.	$4,794
S	550	55	ALTON AVE IN SANTA ANA CONSTRUCT A NEW 4-LANE (2E/B AND 2W/B) OVERCROSSING & HOV ACCESS RAMPS @SR-55 -	$76,988
S	ORA000146	55	MEATS AVE @ SR55 INTERCHANGE. CONSTRUCT ON-RAMP/OFF-RAMPS. PART OF SR-55 ENHANCEMENT PROJECTS.(0 TO 2 LANES)	$154,041
S	ORA015	55	BAKER STREET AND SR-55; N/B & S/B FRONTAGE ROAD IMPROVEMENTS. S/B FREE RIGHT TURN, N/B LEFT-TURN AND 2ND E/B LEFT.	$900
S	ORA016	55	PAULARINO AVE (SR-55 @ PAULARINO AVE) IN COSTA MESA INTERSECTION IMPROVEMENT. ADDING A N/B RAMP AND W/B RIGHT-TURN-LANE.	$505
S	ORA017	55	PAULARINO AVE IN COSTA MESA. INTERSECTION IMPROVEMENT ADD S/B RIGHT-TURN LANE.	$270
S	ORA030603	55	CONSTRUCT 1 AUX LANE ON S/B SR-55 BETWEEN E EDINGER AVE OFF RAMP AND DYER RD ON RAMP	$34,617
S	ORA030610	55	ADD SOUTHBOUND AUXILIARY LANE FROM DYER TO MACARTHUR	$2,619
S	ORA000107	57	AT LAMBERT IN CITY OF BREA. FWY/ARTERIAL (FROM 2 TO 3 LANES) ON RAMP	$4,985
S	ORA120320	57	SR-57/LAMBERT RD INTERCHANGE IMPROVEMENTS - RECONFIG EXISTING DIAMOND INTERCHANGE TO LOOP RAMP, ADD SB LN ON OFFRAMP	$35,000
S	ORA120332	57	ADD ONE MF LANE ON N/B SR-57 FROM 0.4 MI N/O SR-91 TO 0.1 MI N/O LAMBERT RD (5.1 MILES)	$181,730
S	ORA120333	57	EXIST 4 MF N/B; WIDEN TO 5 MF LANES N/B FROM 0.3 MI S/O KATELLA TO 0.3 MI N/O LINCOLN (2.92 MILES) -- 0F0400	$41,086
S	10254	73	SJHTC, 15 MI TOLL RD BETWEEN I-5 IN SAN JUAN CAPISTRANO AND RTE 73 IN IRVINE, EXISTING 3 MF EA. DIR. 1 ADD'L MF EA. DIR., PLUS CLIMBING AND AUX LNS AS REQ, BY 2015 PER SCAG/TCA MOU 4/5/01. TCM. (INTERIM PHASES INCLUDED IN PROJECT. SEE MODEL LIST FOR FURTHER DETAIL)	$343,000
S	ORA000152	74	ORTEGA HWY (RANCHO VIEJO RD TO JUST EAST OF I-5/SR-74 INTERCHAGE) RDWAY WIDEN ADD RT TRN LNE TO CAPAC & REDUCE QUE ON WB SR-74 TO NB I-5 TRN. N/B FRM 2TO3 & S/B 2TO3 .	$2,550
S	ORA120507	74	ORANGE COUNTY - ORTEGA HWY (SAN CLEMENTE) - WIDEN FRM 2 TO 4 LNS; CALLE ENTRADERO TO ANTONIO PKWY	$54,071

ProjectID	County	Air Basin	Model		Program	Route	Begin	End	System	Conformity Category	Amend	Source
ORA120507	Orange	SCAB	O333		CAR63	74	1	1.29	S	NON-EXEMPT	10	2006
									Agency	ORANGE COUNTY		

ORANGE COUNTY - ORTEGA HWY (SAN CLEMENTE) - WIDEN FRM 2 TO 4 LNS; CALLE ENTRADERO TO ANTONIO PKWY (LOWER ORTEGA) PPNO 4110

Fund	ENG	R/W	CON	Total	Prior	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	Total
STP LOCAL - REGIONAL			5,825	5,825				5,825				5,825
AGENCY		2,173	300	2,473			2,173	300				2,473
DEVELOPER FEES	3,300		20,831	24,131	3,300			20,831				24,131
STATE CASH - IIP	3,713			3,713	3,713							3,713
STATE CASH - RIP			10,000	10,000				10,000				10,000
ORA120507 Total	7,013	2,173	36,956	46,142	7,013		2,173	36,956				46,142

ProjectID	County	Air Basin	Model		Program	Route	Begin	End	System	Conformity Category	Amend	Source
ORA021201	Orange	SCAB	O268		CAR63	90		2.5	S	NON-EXEMPT	0	2006
									Agency	FULLERTON		

IMPERIAL HWY SMART ST (HARBOR TO SR57) RESTRIPE 4 - 6 LNS (HARBOR BLVD & BERRY ST MEDIAN MODIFICATNS AT PUENTE INTERSEC. BUS PADS, BUS TURNOUTS & SOUNDWALLS AT VAR LOCATIONS

Fund	ENG	R/W	CON	Total	Prior	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	Total
ORANGE M - SMARTST		116	2,425	2,541	116	2,425						2,541
ORA021201 Total		116	2,425	2,541	116	2,425						2,541

ProjectID	County	Air Basin	Model		Program	Route	Begin	End	System	Conformity Category	Amend	Source
ORA000115	Orange	SCAB	2066		CAR63	90		2.5	S	NON-EXEMPT	0	2006
									Agency	LA HABRA		

IMPERIAL HWY SMART ST (LAC TO HARBOR) RESTRIPE 4 TO 6 LNS (LAC LINE TO IDAHO ST. ADD RAISED MEDIAN. MODFY MEDIANS AT 4 INTSECS. ADD BUS PADS, TURNOUTS.(COMBINES ORA028 AND ORA029)

Fund	ENG	R/W	CON	Total	Prior	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	Total
ORANGE M - SMARTST	755	3,000	6,908	10,663	3,755	6,908						10,663
ORA000115 Total	755	3,000	6,908	10,663	3,755	6,908						10,663

ProjectID	County	Air Basin	Model		Program	Route	Begin	End	System	Conformity Category	Amend	Source
ORA040601	Orange	SCAB			ITS04	91			S	EXEMPT	4	2006
									Agency	ORANGE COUNTY TRANS AUTHORITY (OCTA)		

ACQUIRE AND INSTALL VALUE PRICING PILOT SYSTEM ON THE 91 EXPRESS LANES TO TEST VIABILITY OF DYNAMIC PRICING OF TOLL LANES

Fund	ENG	R/W	CON	Total	Prior	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	Total
DEMO-SAFETEA-LU	470			470	470							470
ADVANCED CONSTRUCTION CONVERSION	354			354		118	118	118				354
AGENCY	147			147	147							147
LOCAL ADVANCE CONSTRUCTION	118			118	118							118
ORA040601 Total	1,089			1,089	735	118	118	118				1,089

State Highway

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amend	Source
ORA120507	Orange	SCAB	O333	ORA120507	CAR63	74	1	1.29	S	NON-EXEMPT	0	2008
							PTC	54,071	Agency	ORANGE COUNTY		

ORANGE COUNTY - ORTEGA HWY (SAN CLEMENTE) - WIDEN FRM 2 TO 4 LNS; CALLE ENTRADERO TO ANTONIO PKWY (LOWER ORTEGA) PPNO 4110

Fund	ENG	R/W	CON	Total	Prior	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	Total
STP LOCAL - REGIONAL			5,825	5,825		5,825						5,825
AGENCY		2,173	300	2,473	2,173	300						2,473
DEVELOPER FEES	3,300		20,831	24,131	3,300	20,831						24,131
STATE CASH - IIP	3,713	7,929		11,642	11,642							11,642
STATE CASH - RIP			10,000	10,000		10,000						10,000
ORA120507 Total	7,013	10,102	36,956	54,071	17,115	36,956						54,071

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amend	Source
ORA040601	Orange	SCAB		ORA040601	ITS04	91			S	EXEMPT	0	2008
							PTC	1,089	Agency	ORANGE COUNTY TRANS AUTHORITY (OCTA)		

ACQUIRE AND INSTALL VALUE PRICING PILOT SYSTEM ON THE 91 EXPRESS LANES TO TEST VIABILITY OF DYNAMIC PRICING OF TOLL LANES

Fund	ENG	R/W	CON	Total	Prior	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	Total
DEMO-SAFETEA-LU	470			470	470							470
ADVANCED CONSTRUCTION CONVERSION	354			354	236	118						354
AGENCY	147			147	147							147
LOCAL ADVANCE CONSTRUCTION	118			118	118							118
ORA040601 Total	1,089			1,089	971	118						1,089

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amend	Source
ORA000822	Orange	SCAB		2M01126	CARH3	91	.87	5.47	S	NON-EXEMPT	0	2008
							PTC	72,400	Agency	ORANGE COUNTY TRANS AUTHORITY (OCTA)		

CONNECT EXISTING AUXILIARY LANE THROUGH INTERCHANGES ON WB SR-91 BETWEEN SR-57 AND I-5 WITH ITS ELEMENTS PPNO 4516A EA 0C5700

Fund	ENG	R/W	CON	Total	Prior	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	Total
ORANGE M2 - FREEWAY	8,887	5,113	23,450	37,450	3,500		10,500			23,450		37,450
TRADE CORRIDOR PROGRAM			34,950	34,950						34,950		34,950
ORA000822 Total	8,887	5,113	58,400	72,400	3,500		10,500			58,400		72,400

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amend	Source
ORA000821	Orange	SCAB		2M0727		91	8.1	8.6	S	NON-EXEMPT	0	2008
							PTC	91,434	Agency	CALTRANS		

SR-91 (SR-55/ TUSTIN INTERCHANGE) ADD LANE. PPNO 4587A EA 0C560

Fund	ENG	R/W	CON	Total	Prior	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	Total
STATE CASH - RIP	16,817	4,234	70,383	91,434		7,474	4,234	9,343		70,383		91,434
ORA000821 Total	16,817	4,234	70,383	91,434		7,474	4,234	9,343		70,383		91,434

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Appendix E List of Acronyms

A

AADT	Annual Average Daily Traffic
AAQS	ambient air quality standards
AB	Assembly Bill
ac	acres
AC	Asphalt Concrete
ACMs	asbestos-containing materials
ACOE	United States Army Corps of Engineers
ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act
ADI	area of direct impacts
ADL	aerially deposited lead
ADT	Average Daily Traffic
AEP	Association of Environmental Professionals
af	acre-feet
AHERA	Asbestos Hazard Emergency Response Act
AICP	American Institute of Certified Planners
AMSL	above mean see level
APE	Association of Environmental Professionals
APE	Area of Potential Effect
APEFZA	Alquist Priolo Earthquake Fault Zoning Act
AQMP	Air Quality Management Plan
ASR	Archaeological Survey Report
AST	aboveground storage tank
AT&T	American Telephone and Telegraph

B

BA	Biological Assessment

BACM	Best Available Control Measures
bgs	below ground surface
BLM	Bureau of Land Management
BMP	Best Management Practice
BO	Biological Opinion
BSA	Biological Study Area
C	
CAA	Clean Air Act as amended in 1990
CAAQS	California Ambient Air Quality Standards
CAC	County Agricultural Commissioner
CalEPPC	California Exotic Pest Plant Council
Cal-IPC	California Invasive Plant Council
Cal-OSHA	California Division of Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CARB	California Air Resources Board
Department	California Department of Transportation
CBSP	Commuters Bikeways Strategic Plan
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFA	California Department of Food and Agriculture
CDFG	California Department of Fish and Game
CDR	Center for Demographic Research
CEDD	California Employment Development Department
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980

CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERFA	Community Environmental Response Facilitation Act of 1992
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH_4	methane
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CIA	Community Impact Assessment
CIDH	cast-in-drilled-hole
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_{2eq}	carbon dioxide equivalent
COG	Council of Governments
COHCA	County of Orange Health Care Agency
CORRACTS	Corrective Action Sites
COZEEP	Construction Zone Enhanced Enforcement Program
CSG	Conservation Service Group
CSJC	City of San Juan Capistrano
CSUF	California State University at Fullerton
CTs	Census Tracts
CUSD	Capistrano Unified School District
CVAG	Coachella Valley Association of Governments
CVWD	Capistrano Valley Water District
CWA	Clean Water Act
cy	cubic yards

D

DAMP	Drainage Area Management Plan
dBA	A-weighted decibel
dBA L_{eq}	A-weighted noise level
DPM	diesel particulate matter
DTSC	Department of Toxic Substance Control

E

e/o	east of
EA	Environmental Assessment
EIR	Environmental Impact Report
EIR/EIS	Environmental Impact Report/Environmental Impact Statement
EMFAC	Emission Factors
EO	Executive Order
EPA	United States Environmental Protection Agency
ERNS	Emergency Response Action Notification System
ESA	Environmentally Sensitive Area

F

FC	Federal Candidate
FCV	Fuel cell vehicle
FE	Federal Endangered
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FP	Fully Protected
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FIRM	Flood Insurance Rate Map

FP, FPE, FPT	Federal Proposed
FT	Federal Threatened
ft	feet/foot
FSC	Federal Species of Concern
FTA	Federal Transit Administration
G	
g	acceleration force (measurement of earthquake forces)
GEN	Generators
GFIR	(Caltrans) Guidelines for Foundation Investigations and Reports
GHG	greenhouse gas
GIS	Geographic Information Systems
GSRDs	gross solids removal devices
H	
H:V	horizontal:vertical
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HMMP	Habitat Mitigation Monitoring Plan
HOV	high occupancy vehicle lane
HPSR	Historic Property Survey Report
HRCR	Historical Resources Compliance Report
HRER	Historical Resources Evaluation Report
HSG	Hydrologic Soil Groups
K	
km	kilometer
I	
I-15	Interstate 15
I-5	Interstate 5

IA	Implementation Agreement
ICU	intersection capacity utilization
IHCL	Inventory & Historic and Cultural Landmarks
IL	Insertion Loss
in	inch
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
IS/EA	Initial Study/Environmental Assessment
IS (Proposed MND)	Initial Study with proposed Mitigated Negative Declaration
ISA	Initial Site Assessment (Hazardous Wastes)
ITP	Incidental Takes Permit
IWMD	Orange County Integrated Waste Management Department
L	
LU	Landscape Unit
LBP	lead-based paint
LEDPA	least environmentally damaging practicable alternative
L_{max}	maximum sound level
LOP	Letter of Permission
LOS	level of service
LUST	leaking underground storage tank
M	
m	meter
MBTA	Migratory Bird Treaty Act
MCB	
MCE	Maximum Credible Earthquake
MEP	Maximum Extent Practical

mi	miles
MLD	Most Likely Descendant
mm	millimeter
MND	Mitigated Negative Declaration
MOE	Measure of Effectiveness
MOU	Memorandum of Understanding
MPAH	Master Plan of Arterial Highways
mph	miles per hour
MPO	Metropolitan Planning Organization
MSAA	Master Streambed Alteration Agreement
MSAT	Mobile Source Air Toxics
msl	mean sea level
N	
N/A	not applicable or not available
NAAQS	National Ambient Air Quality Standard
NAC	noise abatement criteria
NAHC	Native American Heritage Commission
NB	north-bound
NCC	Notice of Construction Completion
NCCHCS	North County Combined Highway Corridors Study
NCCP	Natural Community Conservation Planning Act
ND	Negative Declaration
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NF	Not Feasible
NFRAP	No Further Remedial Action Planned
NHPA	National Historic Preservation Act

NHS	National Highway System
NLEV	national low-emission vehicle
NLR	No Longer Reporting
NMFS	National Marine Fisheries Office
NO_2	nitrogen dioxide
NOA	naturally occurring asbestos
NOAA Fisheries	National Marine Fisheries Service
NOC	Notice of Construction
NOD	Notice of Determination
NOI	Notice of Intent
NOP	Notice of Preparation
NP	Not Permitted
NPDES	National Pollutant Discharge Elimination System
NRC	noise reduction coefficient
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Preservation
NWP	Nationwide Permit

O

O_3	ozone
OCFA	Orange County Fire Authority
OCIWMD	Orange County Integrated Waste Management Department
OCP	Orange County Projections
OCTA	Orange County Transportation Authority
OCTAM	Orange County Transportation Analysis Model
OHP	Office of Historic Preservation
OMB	White House Office of Management & Budget
OSHA	Occupational Safety and Health Administration

P

PA	Programmatic Agreement
PA/ED	Project Approval/Environmental Document
PAC	Public Awareness Campaign
PACM	presumed asbestos-containing materials
Pb	lead
PCBs	polychlorinated biphenyls
PDS	Project Development Support
PDT	Project Development Team
PEAR	Preliminary Environmental Assessment Report
PER	Paleontological Evaluation Report
PID	Photo Ionization Detector
PIR	Paleontological Investigation Report
PM	particulate matter *or* post mile
PMP	Paleontological Mitigation Plan
POAQC	project of air quality concern
ppm	parts per million
PPV	Peak Particle Velocity
PRC	Public Resources Code
PRIMP	Paleontological Resource Impact Mitigation Program
PS&E	Plans, Specifications, and Estimates
PSR	Project Study Report
PT&T	Pacific Telephone and Telegraph Company

R

RAP	Relocation Assistance Program
RCP	Riverside County Projections
RCPG	Regional Comprehensive Plan and Guide

RCRA	Resource Conservation and Recovery Act of 1976
RCRIS	Resource Conservation and Recovery Information System
RE	Resident Engineer
RMP	Regional Management Plan
RMV	Rancho Mission Viejo
ROG	Reactive Organic Gases
ROW	right-of-way
RSA	Regional Statistical Area
RSA	Resource Study Area
RTA	Riverside Transit Agency
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board

S

SAA	Streambed Alteration Agreement
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act, A Legacy for Users
SAMP	Special Area Management Plan
SAP	Sampling Analysis Procedures
SB	Sound Barrier
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SCG	Southern California Gas
SCH	State Clearinghouse

SCRIP	South County Road Improvement Program
SCS	Soil Conservation Service
SCSAM	South County Sub-Area Model
SDC	(Caltrans) Standard Seismic Design Criteria
SDG&E	San Diego Gas and Electric
sec/veh	seconds per vehicle
SER	(Caltrans) Standard Environmental Reference
SFR	Single Family Residential
SHPO	State Historic Preservation Office/Officer
SHRCR	Supplemental Historical Resources Compliance Report
SI	Site Investigation
SIP	State Implementation Plan
SMSA	Standard Metropolitan Statistical Area
SMWD	Santa Margarita Water District
SO_2	sulfur dioxide
SR	State Rare
SR-241	State Route 241
SR-74	State Route 74
SRF	single-family residence
SSC	Species of Special Concern
SSP	Standard Special Provision
ST	State Threatened
STIP	State Transportation Implementation Program
STP	2002 Strategic Transportation Plan (City of San Juan Capistrano)
SVP	Society of Vertebrate Paleontologists
SWL	Solid Waste Landfill Facilities
SWMP	Storm Water Management Plan

SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
T	
T/E	Threatened and Endangered species
TAC	Technical Advisory Committee
TCA	Transportation Corridor Agencies
TCE	Temporary Construction Easement
TCR	Transportation Concept Report
TCWG	Transportation Conformity Working Group
TeNS	Technical Noise Supplement
TMC	Transportation Management Center
TMP	Traffic Management Plan
TNM	Traffic Noise Model
TPH	total petroleum hydrocarbons
TSCA	Toxic Substances Control Act
TSM	Transportation System Management
U	
U.S.	United States
UPRR	Union Pacific Railroad
U.S.C	United States Code
USDA	Untied States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank
V	
v/c	volume-to-capacity

VA	Value Analysis
VdB	RMS velocity in decibels
VHT	vehicle hours traveled
VIA	Visual Impact Assessment
VMT	vehicle miles traveled
vph	vehicles per hour
W	
WRCOG	Western Riverside Council of Governments

Appendix F List of Technical Studies

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Lower SR-74 List of Technical Studies

The technical studies prepared to support the analysis and conclusions contained in this EIR are listed below. These studies have been bound separately, and copies are available for review at:

California Department of Transportation, District 12
3347 Michelson Drive, Suite 100
Irvine, California 92612
http://www.dot.ca.gov/dist12/Lower74_DEIR.html

City of San Juan Capistrano
Planning Services Department
32400 Paseo Adelanto
San Juan Capistrano, California 92675

San Juan Capistrano Regional Library
31495 El Camino Real
San Juan Capistrano, California 92675

Air Quality Assessment Report, Ortega Highway (SR-74) Widening Project (Lower Ortega), LSA Associates, Inc., November 2008.

Air Quality Analysis, State Route 74 Widening Lower Ortega Highway, LSA Associates, Inc., April 2008.

Archaeological Survey Report for the Lower 74 (Ortega Highway) Widening Project, California Department of Transportation, December 2006.

Environmentally Sensitive Area (ESA) Action Plan for the Lower 74 (Ortega Highway) Widening Project, California Department of Transportation, December 2006.

Final Technical Noise Impact Analysis Report Addendum for State Route 74 (Ortega Highway), LSA Associates, Inc., July 2008.

Final Technical Noise Impact Analysis Report for State Route 74 (Ortega Highway), California Department of Transportation, June 2007.

Hazardous Waste Initial Site Assessment, Lower SR-74 Widening Project, LSA Associates, Inc., July 2008 (Updated on August 2008).

Historic Property Survey Report, State Route 74 (Lower Ortega Highway) Widening Project, California Department of Transportation, January 2007.

Historical Resources Evaluation Report (Architecture), California Department of Transportation, December 2006.

Historical Resources Evaluation Report (Historic archaeology), California Department of Transportation, December 2006.

Initial Study (with proposed Mitigated Negative Declaration),California Department of Transportation, July 2007.

Initial Site Assessment Route 74 from Via Cordova to Antonio Parkway, *Orange County, California*, GeoCon Environmental Consultants, Inc., May 2000.

Natural Environment Study SR-74 (Ortega Highway), California Department of Transportation, June 2007.

Natural Environment Study Supplement, Lower SR-74 (Ortega Highway) Widening Calle Entradero to City of San Juan Capistrano/County Line, LSA Associates, Inc., June 2008 (Updated on August 2008).

Paleontological Resources Identification and Evaluation Report for State Route 74 Widening Project, LSA Associates Inc., May 2008.

Paleontology Report, California Department of Transportation, November 2006.

Revised Hydrology Study for Environmental Assessment Route 74, California Department of Transportation, August 2006.

Revised Preliminary Geotechnical Report For Widening From Two-Lane Highway To Four-Lane Highway On State Route 74 (Ortega Highway), California Department Of Transportation, Geotechnical Services, August 2006.

SR-74 (Ortega Highway) Widening Project Traffic Study, Austin-Foust Associates, Inc., November 2006.

SR-74 (Ortega Highway) Widening Project Supplemental Traffic Study, Austin-Foust Associates, Inc., June 2007.

State Route 74 Lower Ortega Highway Widening Draft Traffic Study, Austin-Foust Associates, Inc., July 2008.

SR-74 Lower Ortega Highway Widening Project, Water Resources and Water Quality Technical Study, California Department of Transportation, November 2006 (Updated March 2008).

Visual Impact Assessment, Lower State Route 74 Ortega Highway Widening, RBF Consulting, April 2008 (Updated on September 2008).

Visual Impact Assessment Route 74 Widening Project, California Department of Transportation, December 2006.

Appendix G Preliminary Design Layouts

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	74	1.0/3.0	11	200

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

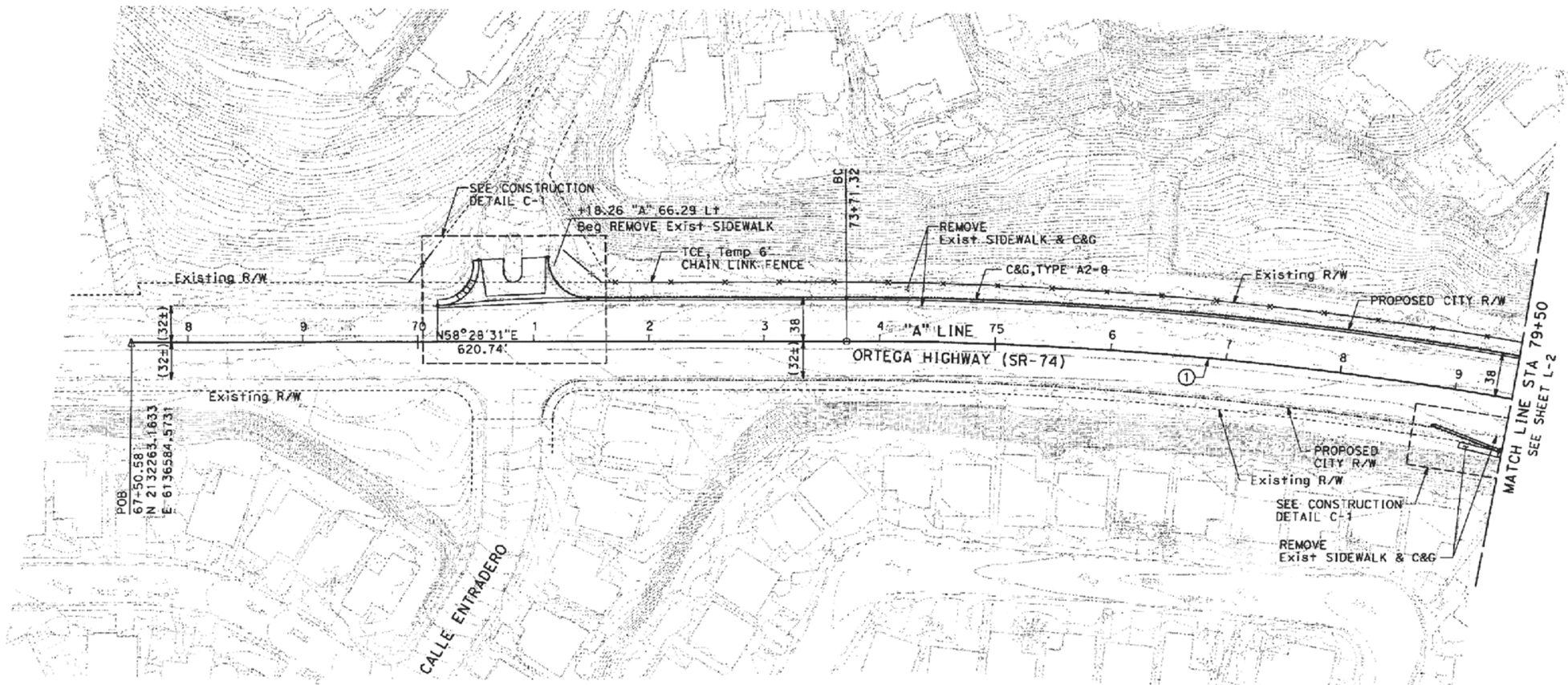
REGISTERED PROFESSIONAL ENGINEER BRUCE A. SCHMITH No. C 65551 Exp. 9-30-07 CIVIL STATE OF CALIFORNIA

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

HDR Engineering, Inc.
3230 El Camino Real, Suite 200
Irvine, CA 92602

NOTES:

1. FOR COMPLETE RIGHT-OF-WAY AND ACCURATE ACCESS DATA, SEE RIGHT-OF-WAY RECORD MAPS AT DISTRICT OFFICE
2. REFER TO THE TITLE SHEET FOR SURVEY CONTROL NOTES.



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ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

ALTERNATIVE 1

SCALE: 1" = 50

L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: BRUCE A. SCHMITH

CALCULATED-DESIGNED BY: BULBUL GANGULY

CHECKED BY: LIEM NGUYEN

REVISED BY: HCL

DATE REVISED

LAST REVISION 00-00-00

DATE PLOTTED => 7/12/2007
TIME PLOTTED => 10:52:07 AM

BORDER LAST REVISED 3/1/2007

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EA 086904

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REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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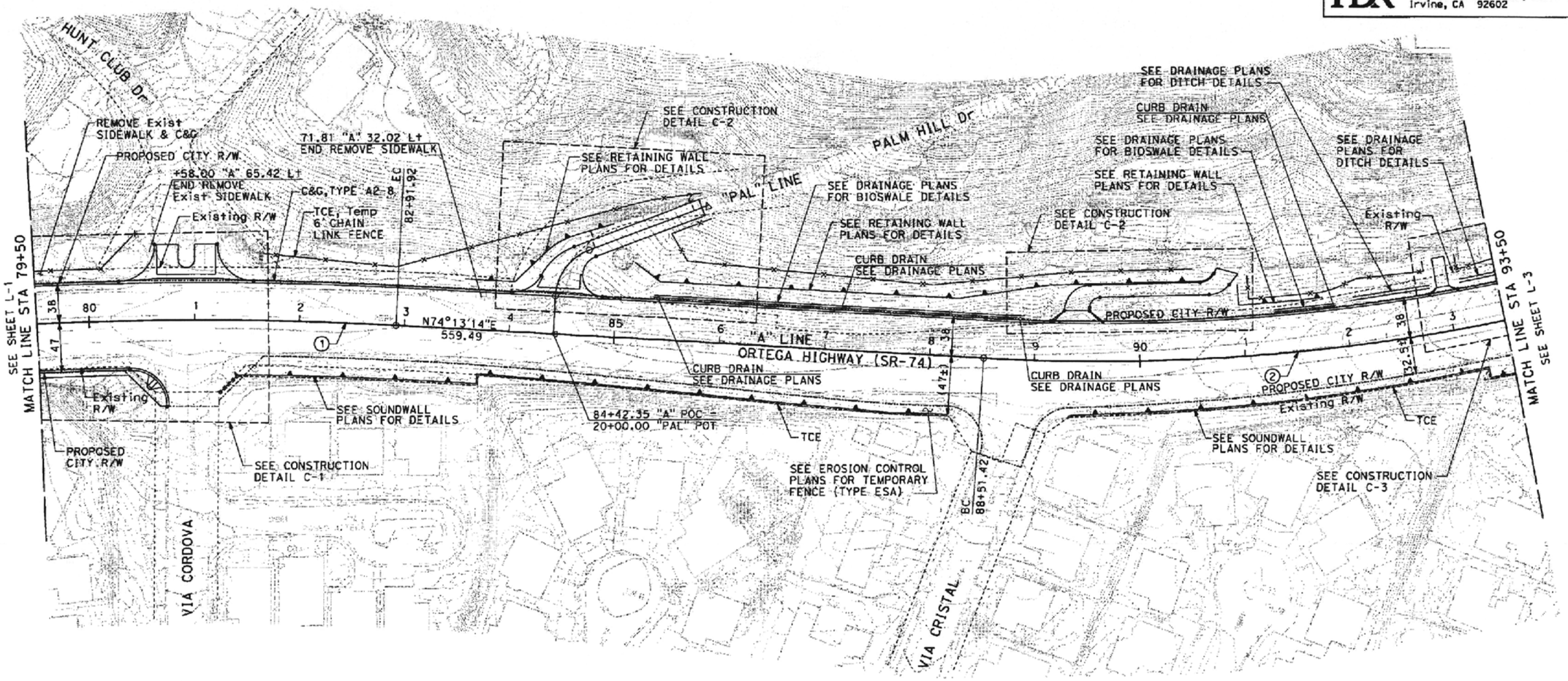
1. FOR COMPLETE RIGHT-OF-WAY AND ACCURATE ACCESS DATA, SEE RIGHT-OF-WAY RECORD MAPS AT DISTRICT OFFICE
2. REFER TO THE TITLE SHEET FOR SURVEY CONTROL NOTES.



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ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

ALTERNATIVE 1

SCALE: 1" = 50

L-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERV	BULBUL GANGULY	REVISED BY	HCL
Caltrans	BRUCE A. SCHMITH	LIEM NGUYEN	DATE REVISED	
		CALCULATED-DESIGNED BY	CHECKED BY	

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REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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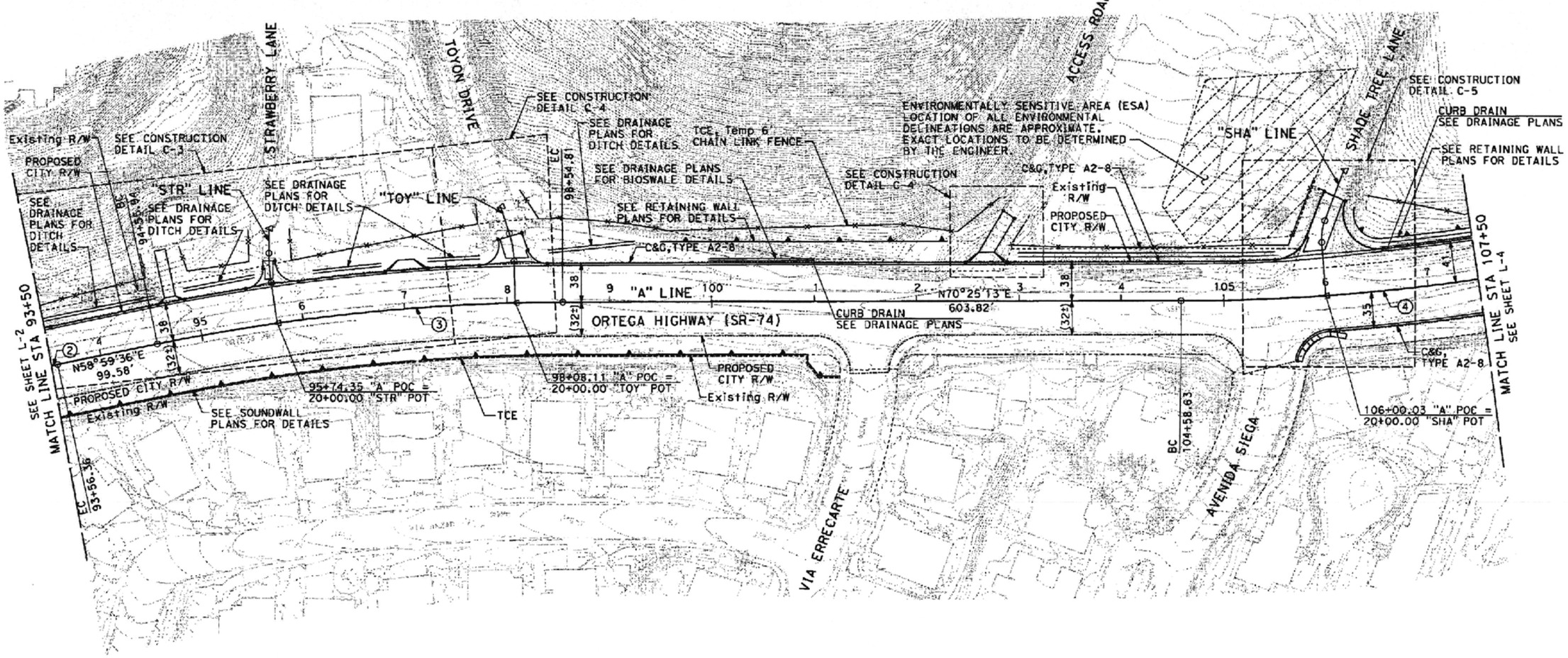
NOTES:

1. FOR COMPLETE RIGHT-OF-WAY AND ACCURATE ACCESS DATA, SEE RIGHT-OF-WAY RECORD MAPS AT DISTRICT OFFICE
2. REFER TO THE TITLE SHEET FOR SURVEY CONTROL NOTES.



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④	2000.00	17°21'33.05"	305.31	605.95

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

ALTERNATIVE 1

SCALE: 1" = 50

L-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT FUNCTIONAL SUPERV. BRUCE A. SCHMITH

CALCULATED-DESIGNED BY BULBUL GANGULY

CHECKED BY LIEM NGUYEN

REVISED BY HCL

DATE REVISED

LAST REVISION 00-00-00

DATE PLOTTED => 7/12/2007

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REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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Irvine, CA 92602

NOTES:

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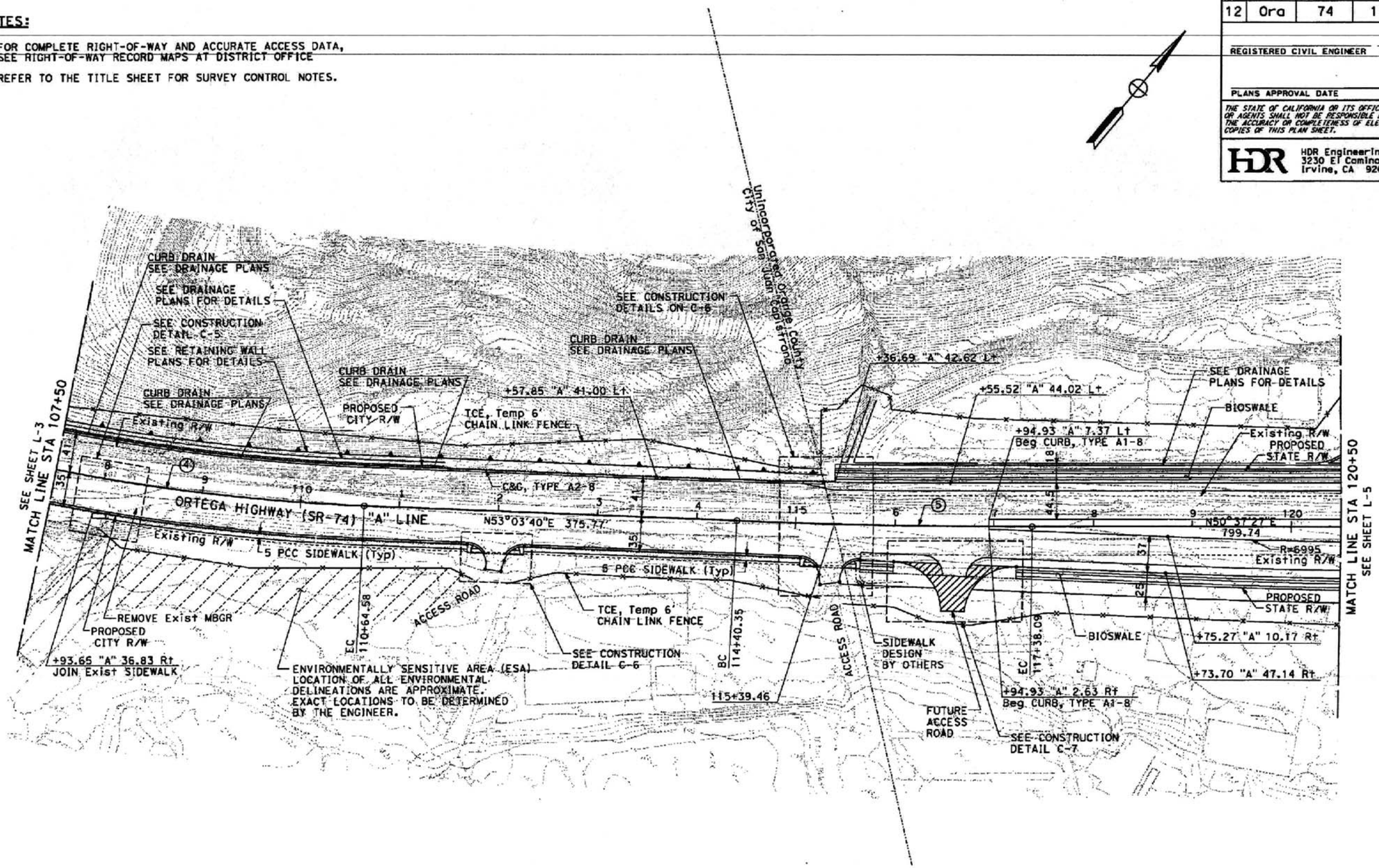
2. REFER TO THE TITLE SHEET FOR SURVEY CONTROL NOTES.



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ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

ALTERNATIVE 1

SCALE: 1" = 50

L-4

HCL	REVISED BY	BULBUL GANGULY	CALCULATED-DESIGNED BY
	DATE REVISED	LIEM NGUYEN	CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR: BRUCE A. SCHMITH

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	74	1.0/3.0	3	200

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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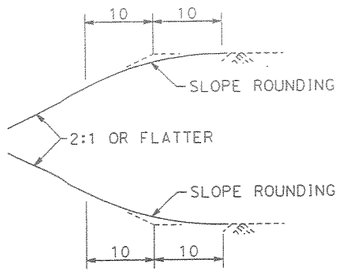
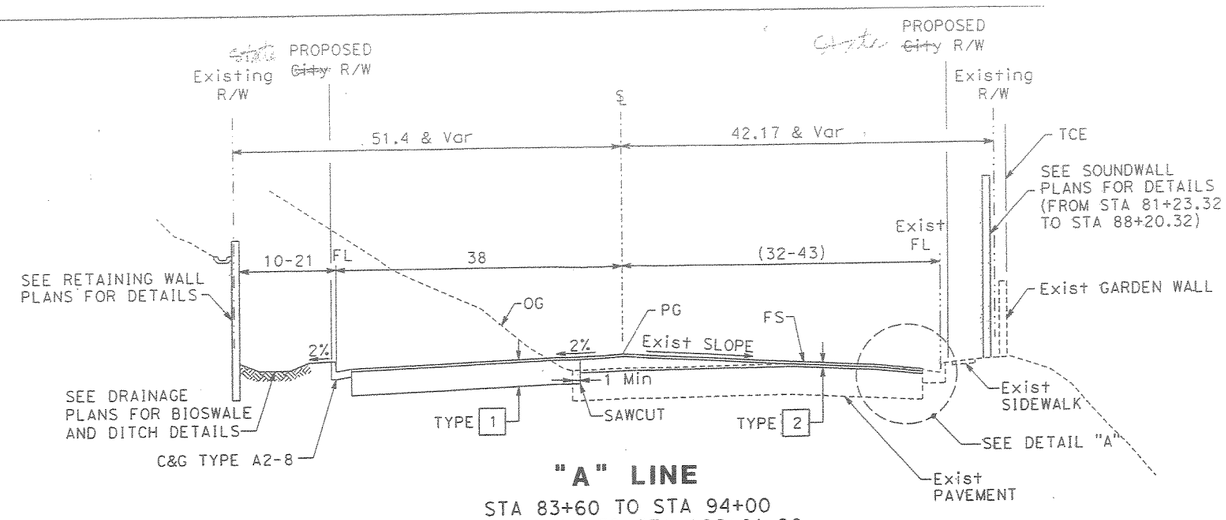


SLOPE ROUNDING DETAIL
(TYPICAL)



"A" LINE

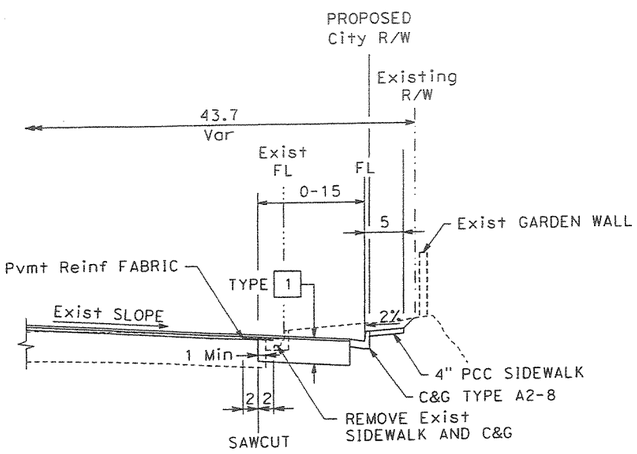
STA 83+60 TO STA 94+00
STA 100+00 TO STA 106+01.90

DESIGN DESIGNATION (SR-74)

2005 ADT= 24,000 D=52%
2030 ADT= 42,000 T=8.0%
DHV= 3,390 V=45 MPH
TI_{20}= 13
ESAL= 21,800,000

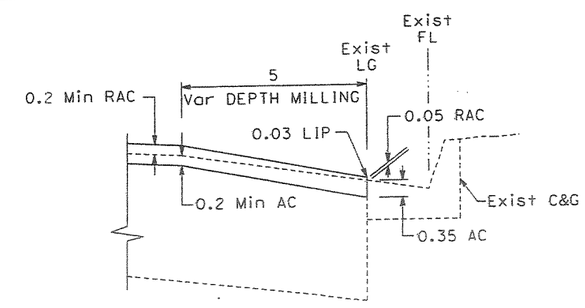
NOTES:

1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
3. FOR LOCATIONS OF CURB AND GUTTER, DIKE AND MBGR, SEE LAYOUT AND SUMMARY OF QUANTITIES SHEETS.
4. FOR VARIATIONS IN TYPICAL CROSS SECTIONS, REFER TO LAYOUT, CONSTRUCTION DETAILS, PAVEMENT CONSTRUCTION AND REMOVAL AND PAVEMENT DELINEATION PLANS.
5. CURB AND GUTTER, DRIVEWAY, AND DIKE SHOULD BE PLACED ON NATIVE SUBGRADE MOISTURE CONDITIONED TO A MINIMUM OF 3% OVER OPTIMUM MOISTURE CONTENT AND COMPACTED TO 90% COMPACTION.
6. CONVENTIONAL OVERLAY IS TO BE USED INSTEAD OF RAC OVERLAY WITHIN 100 FEET IN ALL DIRECTIONS OF THE ANTIONIO/LA PATA AND ORTEGA HIGHWAY INTERSECTION.
7. CLEAN AND FILL ALL EXPOSED CRACKS WIDER THAN 1/8".
8. THE JOINTS BETWEEN THE EXISTING PAVEMENT AND THE NEW PAVEMENT SHALL BE SEALED. A LAYER OF PRIME COAT IS TO BE APPLIED BETWEEN ALL BONDED AND UNBONDED LAYERS. A LAYER OF THICK COAT SHALL BE APPLIED TO ALL VERTICAL CUT FACES AND BETWEEN SUBSEQUENT AC LIFTS.
9. COLD MILL NORTHBOUND LANES OF LA PATA FROM ORTEGA HIGHWAY TO 200 SOUTHERLY, 0.35 BELOW PRESENT ELEVATIONS AND OVERLAY 0.35 AC BASE, TYPE III B3-PG 64-10.

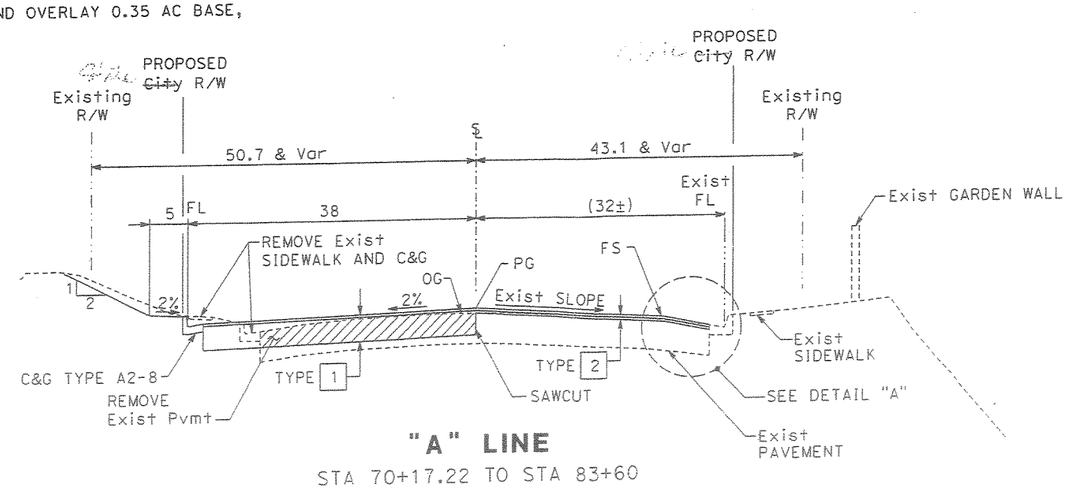


STA 78+86.40 TO STA 80+37.33

STRUCTURAL SECTIONS	
TYPE 1	0.2 Min RUBBERIZED ASPHALT CONCRETE (RAC), TYPE G
	1.55 AC BASE, TYPE A, 3/4" MAX
TYPE 2	0.2 Min RAC, TYPE G
	0.2 Min MILL AND AC BASE, TYPE A, 3/4" MAX
TYPE 3	CLEAN SURFACE AND OVERLAY 0.2 Min ARHM, TYPE GG-B(3/4") - PG 64-16
TYPE 4	0.2 Min ARHM, TYPE GG-B(3/4") - PG 64-16
	0.9 AC BASE, TYPE III B3-PG 64-10
TYPE 5	0.2 Min AC SURFACE, TYPE GG-B (3/4") - PG 64-16
	1.05 AC BASE, TYPE III B3-PG 64-10
TYPE 6	1.75 AC TYPE A, 3/4" MAX



DETAIL A



"A" LINE

STA 70+17.22 TO STA 83+60

LEGEND:

EXISTING PAVEMENT

NEW PAVEMENT

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

TYPICAL CROSS SECTIONS

NO SCALE

X-1

HCL	REVISED BY	DATE REVISED
BULBUL GANGULY	LIEM NGUYEN	
CALCULATED-DESIGNED BY	CHECKED BY	
CONSULTANT FUNCTIONAL SUPERV BRUCE A. SCHMITH		

STATE OF CAL A - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => 12:09:20 PM

USERNAME => USER | CU 00000 | EA 086904

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	74	1.0/3.0	4	200

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER BRUCE A. SCHMITH No. C 65551 Exp. 9-30-07 CIVIL STATE OF CALIFORNIA

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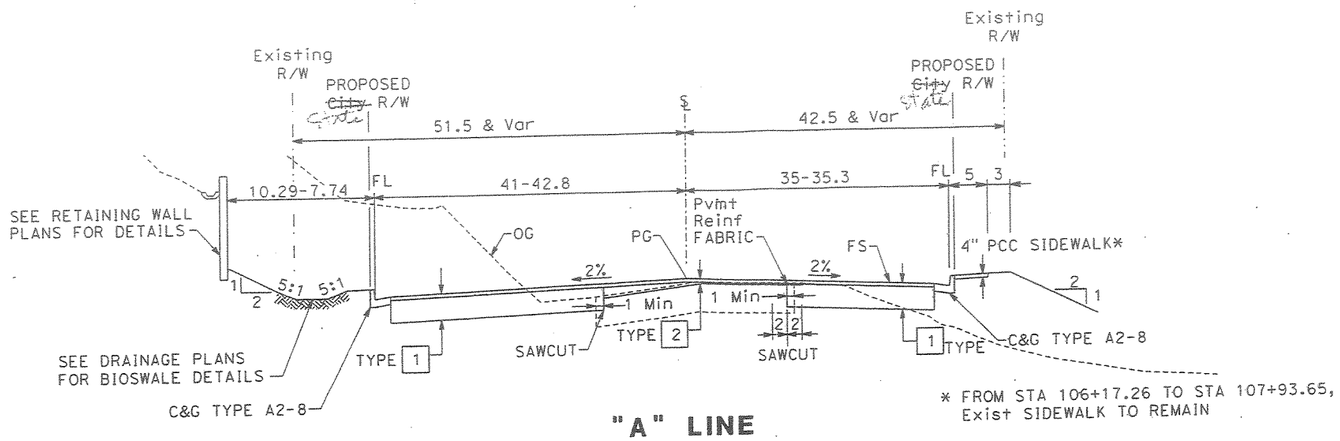
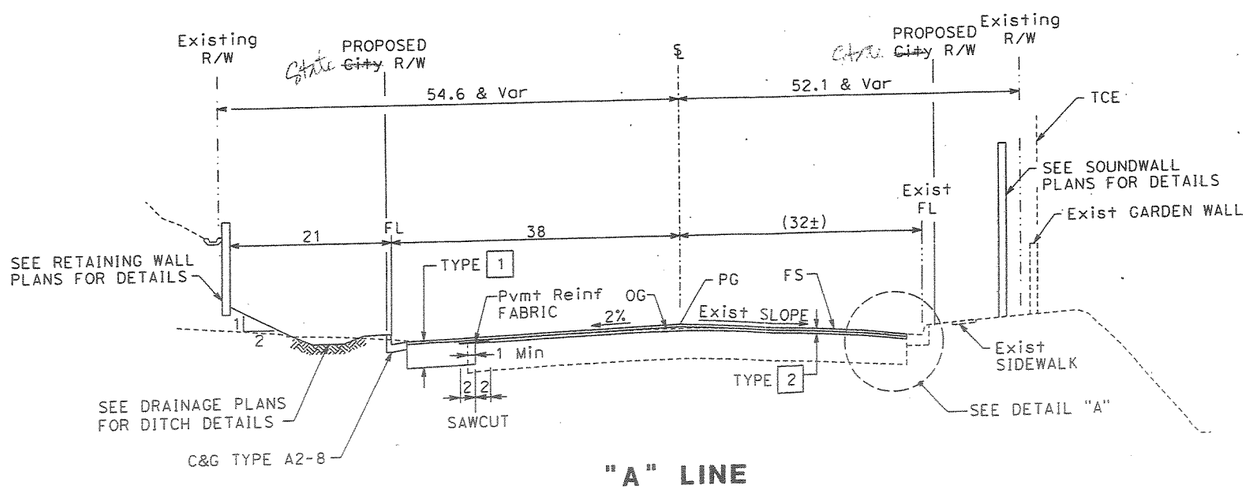
HDR Engineering, Inc.
3230 El Camino Real, Suite 200
Irvine, CA 92602



* FROM STA 106+17.26 TO STA 107+93.65, Exist SIDEWALK TO REMAIN

"A" LINE

STA 106+01.90 TO STA 115+39.46



"A" LINE

STA 94+00 TO STA 100+00

LEGEND:

EXISTING PAVEMENT

NEW PAVEMENT

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

TYPICAL CROSS SECTIONS

NO SCALE

X-2

STATE OF CAL. - DEPARTMENT OF TRANSPORTATION | CONSULTANT FUNCTIONAL SUPERV. BRUCE A. SCHMITH | CALCULATED-DESIGNED BY BULBUL GANGULY | CHECKED BY LIEM NGUYEN | REVISED BY | DATE REVISED | HCL

LAST REVISION | DATE PLOTTED => 7/12/2007

USERNAME => USER | CU 00000 | EA 086904

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	74	1.08/1.94		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER LIEM ANH NGUYEN No. C 70728 Exp. 6-30-09 CIVIL STATE OF CALIFORNIA

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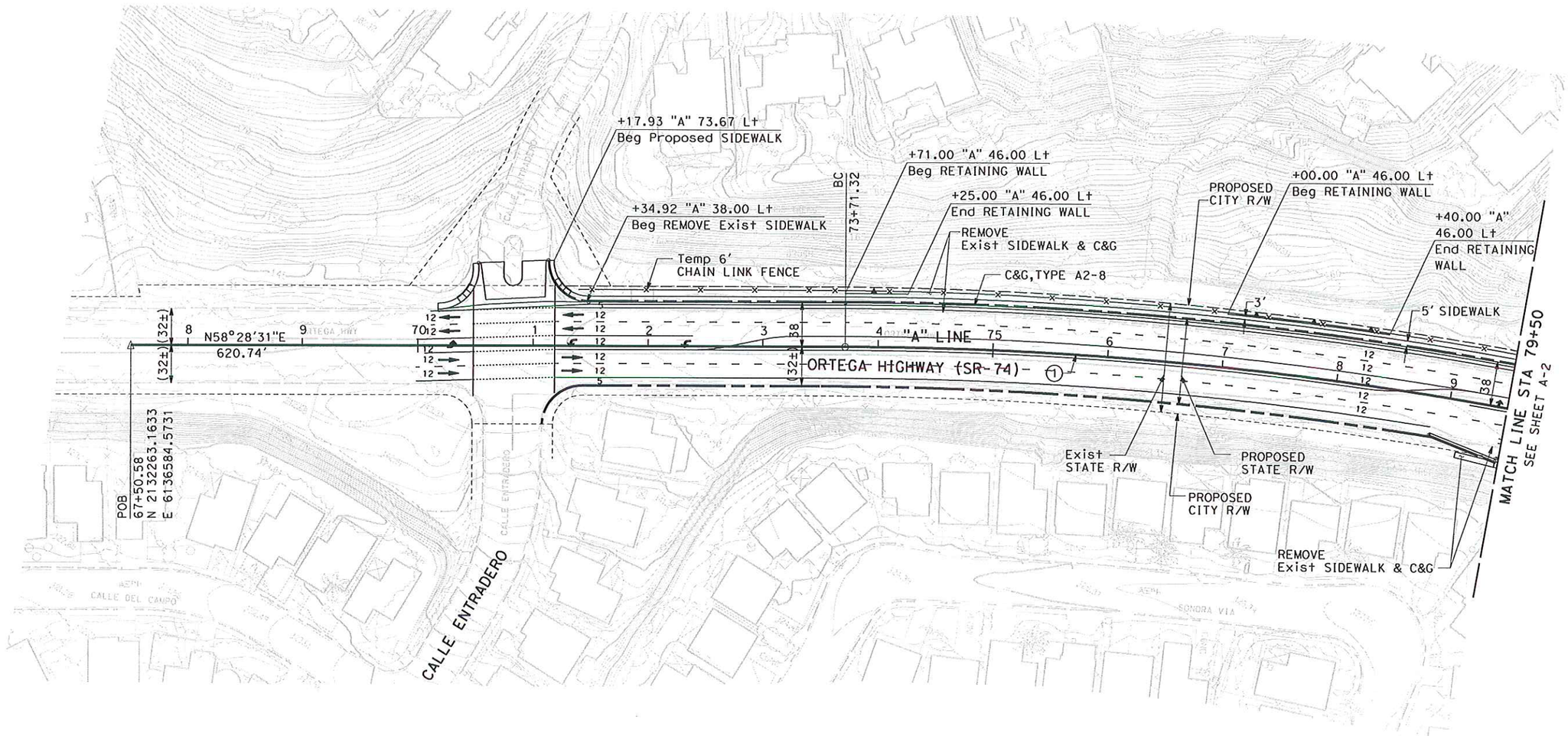
Irvine, CA 92602

NOTES:

1. FOR COMPLETE RIGHT-OF-WAY AND ACCURATE ACCESS DATA, SEE RIGHT-OF-WAY RECORD MAPS AT DISTRICT OFFICE
2. REFER TO THE TITLE SHEET FOR SURVEY CONTROL NOTES.



CURVE DATA				
NO.	R	Δ	T	L
1	3350.00	15°44'42.76"	463.22	920.60

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

ALTERNATIVE 2

SCALE: 1" = 50

L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: LAN SAADATNEJADI

CALCULATED-DESIGNED BY: BULBUL GANGULY

CHECKED BY: LIEM NGUYEN

REVISED BY: HCL

DATE REVISED

LAST REVISION | DATE PLOTTED => 2/26/2008

RELATIVE PLOTTER SCALE 0 1 2 3 | USERNAME =>USER

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	74	1.08/1.94		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER LIEM ANH NGUYEN No. C 70728 Exp. 6-30-09 CIVIL STATE OF CALIFORNIA

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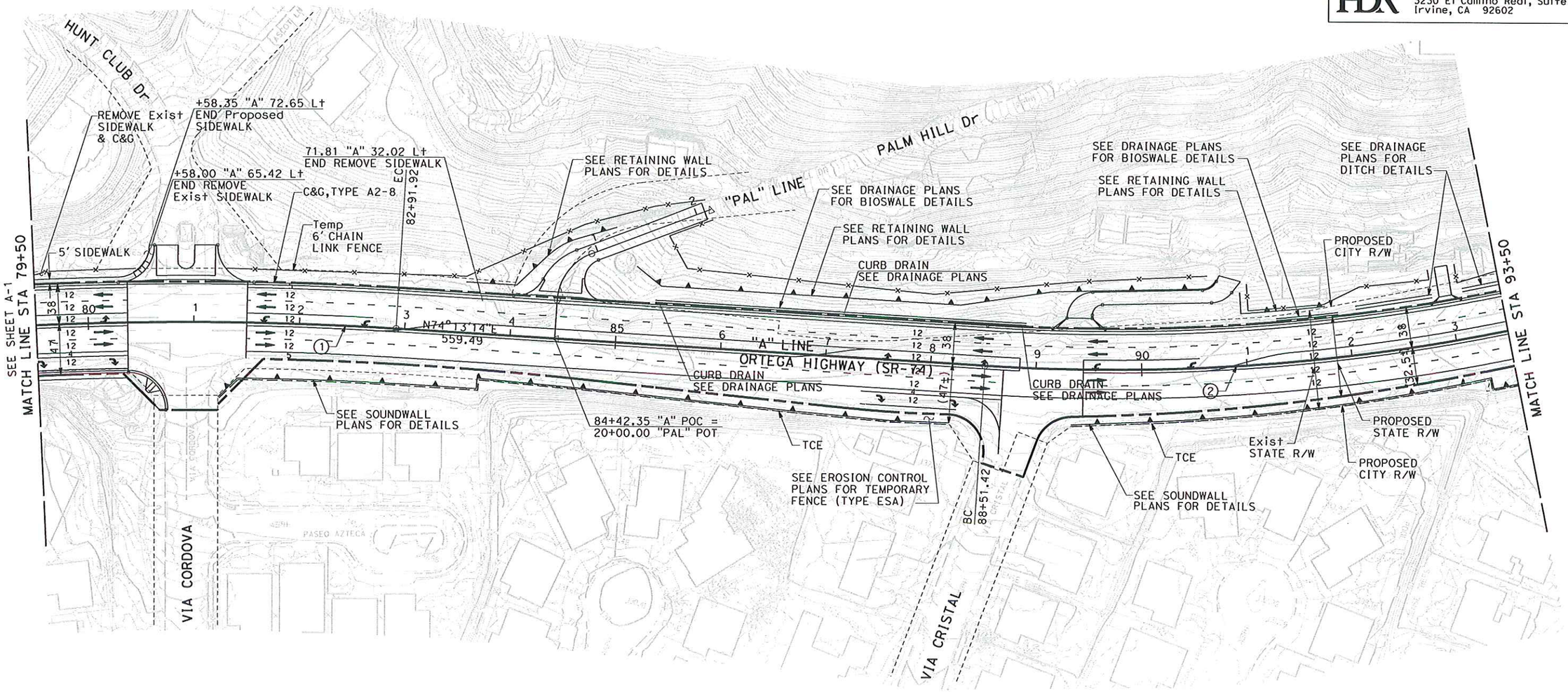

CURVE DATA				
NO.	R	Δ	T	L
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2	1900.00	15°13'37.47"	253.97	504.95

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

ALTERNATIVE 2

SCALE: 1" = 50

L-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: LAN SAADATNEJADI

CALCULATED-DESIGNED BY: BULBUL GANGULY

CHECKED BY: LIEM NGUYEN

REVISED BY: HCL

DATE REVISED:

LAST REVISION: DATE PLOTTED =>2/25/2008

RELATIVE BORDER SCALE 0 1 2 3

USERNAME =>USER

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	74	1.0/3.0	13	200

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER BRUCE A. SCHMITH No. C 65551 Exp. 9-30-07 CIVIL STATE OF CALIFORNIA

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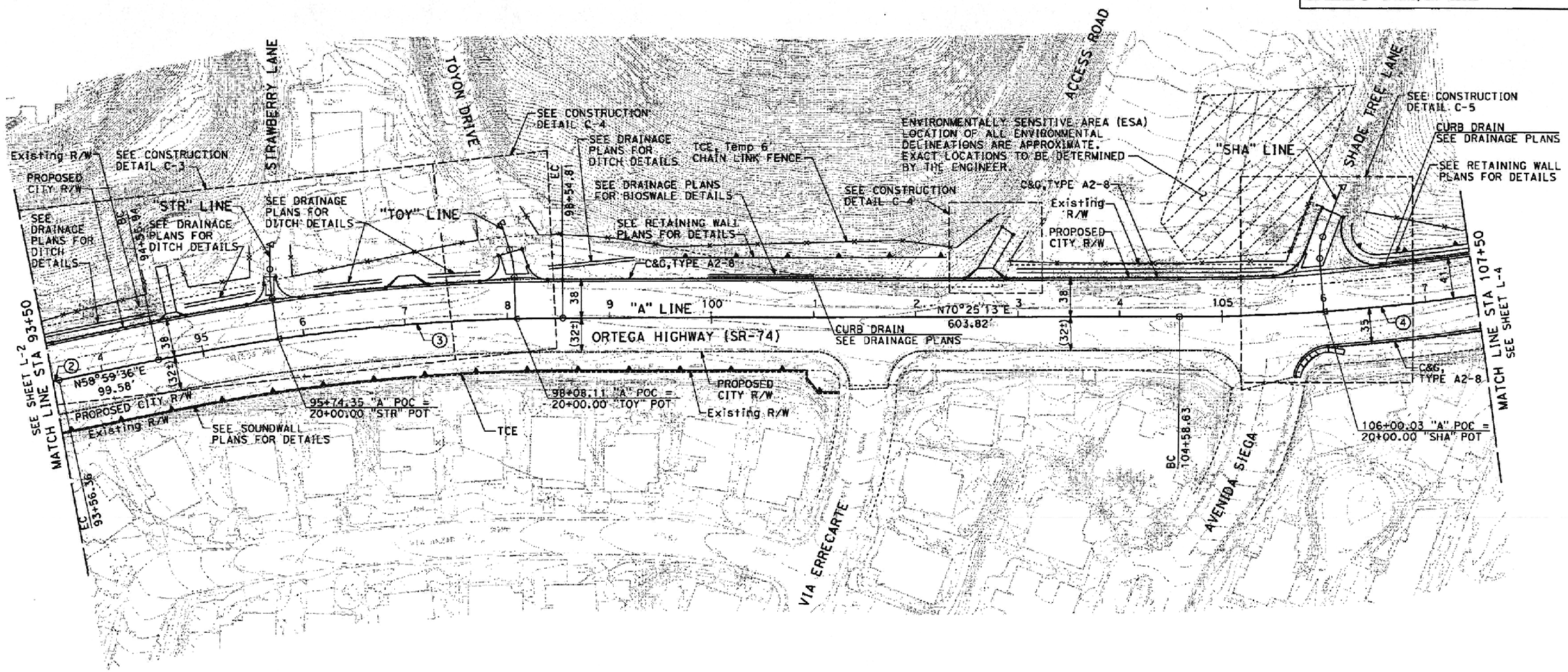
2. REFER TO THE TITLE SHEET FOR SURVEY CONTROL NOTES.



CURVE DATA				
NO.	R	Δ	T	L
②	1900.00	15°13'37.47"	253.97	504.95
③	2000.00	11°25'36.68"	200.10	398.87
④	2000.00	17°21'33.05"	305.31	605.95

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

ALTERNATIVE 2

SCALE: 1" = 50

L-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONSULTANT FUNCTIONAL SUPERV: BRUCE A. SCHMITH

CALCULATED-DESIGNED BY: BULBUL GANGULY | CHECKED BY: LIEM NGUYEN | REVISED BY | DATE REVISED | HCL

LAST REVISION 00-00-00 | DATE PLOTTED => 7/12/2007 | TIME PLOTTED => 10:52:39 AM

BORDER LAST REVISED 3/1/2007 | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => USER | DGN FILE => ...\c086904ea03.dgn | CU 00000 | EA 086904

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	74	1.0/3.0	14	200

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER BRUCE A. SCHMITH No. C 65551 Exp. 9-30-07 CIVIL STATE OF CALIFORNIA

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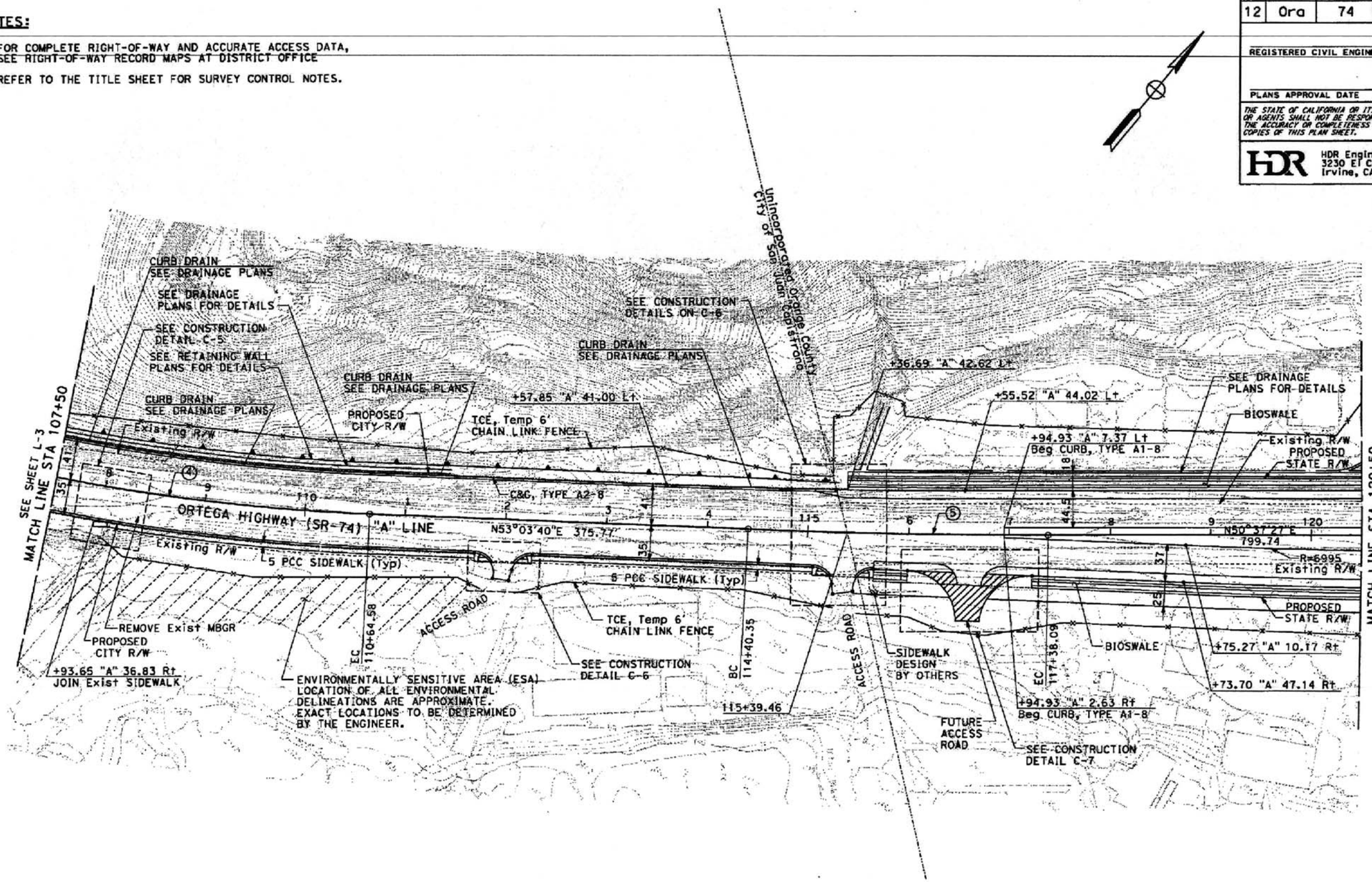
2. REFER TO THE TITLE SHEET FOR SURVEY CONTROL NOTES.



CURVE DATA				
NO.	R	Δ	T	L
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5	7000.00	2°26'13.36"	148.89	297.74

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

ALTERNATIVE 2

SCALE: 1" = 50

L-4

REVISED BY	DATE REVISED
HCL	

CALCULATED-DESIGNED BY: BULBUL GANGULY
CHECKED BY: LIEM NGUYEN
CONSULTANT FUNCTIONAL SUPERV: BRUCE A. SCHMITH
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00 DATE PLOTTED => 7/12/2007 TIME PLOTTED => 10:53:00 AM

BORDER LAST REVISED 3/1/2007 | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => USER DGN FILE => ...\c086904ea04.dgn | CU 00000 | EA 086904

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	74	1.08/1.94		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER LIEM ANH NGUYEN No. C 70728 Exp. 6-30-09 CIVIL STATE OF CALIFORNIA

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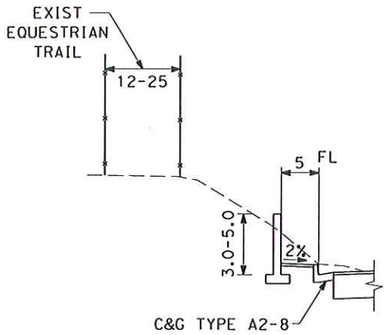
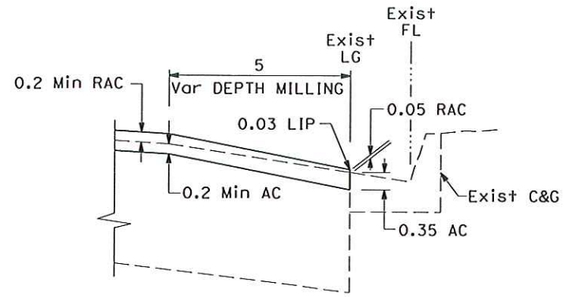
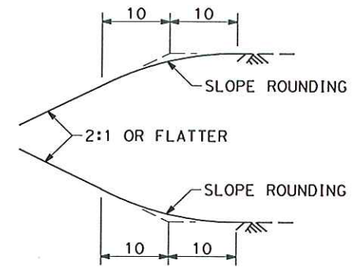


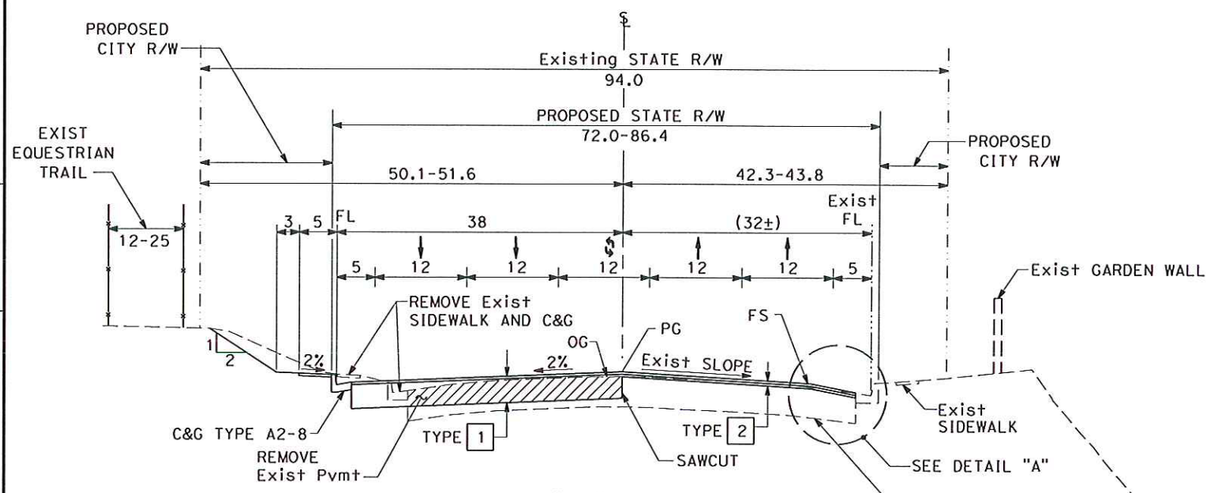
RETAINING WALL
STA 73+71.00 TO STA 74+25.00
STA 77+00.00 TO STA 78+40.00



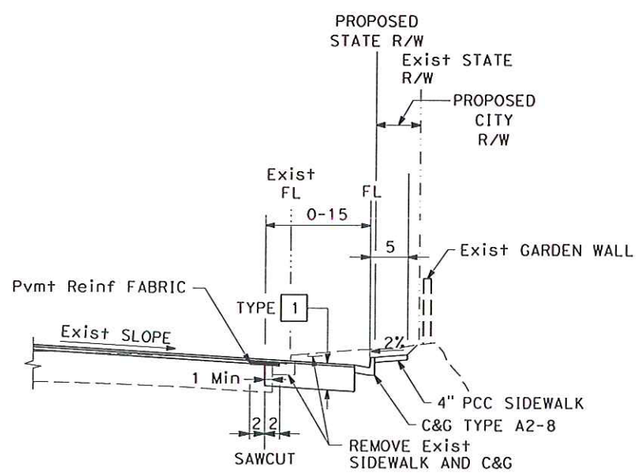
DETAIL A



SLOPE ROUNDING DETAIL
(TYPICAL)



"A" LINE
STA 70+17.22 TO STA 83+60



STA 78+86.40 TO STA 80+37.33

DESIGN DESIGNATION (SR-74)

2005 ADT= 24,000 D=52%
2030 ADT= 42,000 T=8.0%
DHV= 3,390 V=45 MPH
TI_{20}= 13
ESAL= 21,800,000

STRUCTURAL SECTIONS	
TYPE 1	0.2 Min RUBBERIZED ASPHALT CONCRETE (RAC), TYPE G
	1.55 AC BASE, TYPE A, ¾" MAX
TYPE 2	0.2 Min RAC, TYPE G
	0.2 Min MILL AND AC BASE, TYPE A, ¾" MAX
TYPE 3	1.75 AC TYPE A, ¾" MAX

NOTES:

1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. FOR LOCATIONS OF CURB AND GUTTER, DIKE AND MBGR, SEE LAYOUT AND SUMMARY OF QUANTITIES SHEETS.
3. FOR VARIATIONS IN TYPICAL CROSS SECTIONS, REFER TO LAYOUT, CONSTRUCTION DETAILS, PAVEMENT CONSTRUCTION AND REMOVAL AND PAVEMENT DELINEATION PLANS.
4. CURB AND GUTTER, DRIVEWAY, AND DIKE SHOULD BE PLACED ON NATIVE SUBGRADE MOISTURE CONDITIONED TO A MINIMUM OF 3% OVER OPTIMUM MOISTURE CONTENT AND COMPACTED TO 90% COMPACTION.
5. CLEAN AND FILL ALL EXPOSED CRACKS WIDER THAN ⅛".
6. THE JOINTS BETWEEN THE EXISTING PAVEMENT AND THE NEW PAVEMENT SHALL BE SEALED. A LAYER OF PRIME COAT IS TO BE APPLIED BETWEEN ALL BONDED AND UNBONDED LAYERS. A LAYER OF THICK COAT SHALL BE APPLIED TO ALL VERTICAL CUT FACES AND BETWEEN SUBSEQUENT AC LIFTS.

LEGEND:

- EXISTING PAVEMENT
- NEW PAVEMENT
- REMOVE EXISTING PAVEMENT

ALL DIMENSIONS ARE IN FEET
UNLESS OTHERWISE SHOWN

ALTERNATIVE 2
TYPICAL CROSS SECTIONS

NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: LAN SAADATNEJADI
CALCULATED-DESIGNED BY: BULBUL GANGULY
CHECKED BY: LIEM NGUYEN
REVISED BY: HCL
DATE REVISED:

LAST REVISION | DATE PLOTTED => 3/25/2009

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Appendix H Comments on SR-74 Initial Study with Proposed Mitigated Negative Declaration (Bound Separately)

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Appendix I Noise Attenuation

Noise attenuation as a project feature has been recommended for this project as community enhancement to protect residences south of SR-74. The need for this recommendation was based on Caltrans *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, August 2006.* This protocol is based on the Federal-Aid Highway Act of 1970 and the associated implementing regulations (23 CFR 772) that govern the analysis of traffic noise impacts. This regulation contains noise abatement criteria (NAC) that are used to determine when a noise barrier is required. The NAC differ depending on the type of land use. For example, the NAC for residences (67 dBA) are lower than the NAC for commercial areas (72 dBA). Table I-1 lists the noise abatement criteria for use in the NEPA 23 CFR 772 analysis. In California, approaching the NAC is defined as coming within 1 dBA of the NAC. 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 Appendix discusses noise attenuation including height of these sound walls that have been incorporated in the project. The feasible and reasonable analysis was based on information from Section 2.2.7 such as criteria for noise measurement locations. Figure I-1 shows the noise-sensitive receptor locations and the evaluated noise barriers within the project area (with the wrap-around wall scenario). Figure I-2 shows the noise-sensitive receptor locations and the evaluated noise barriers within the project area (without the wrap-around wall scenario). It should be noted that the reference to soundwalls in Figures I-1 and I-2 are referred to as noise barriers in this section.

Table I-1 Activity Categories and Noise Abatement Criteria (NAC)

Activity Category	NAC, Hourly A-Weighted Noise Level, dBA L_{eq}(h)	Description of Activities
A	**57 Exterior**	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B	**67 Exterior**	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals
C	**72 Exterior**	Developed lands, properties, or activities not included in Categories A or B above
D	**–**	Undeveloped lands
E	52 Interior	Residence, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums

Source: FHWA 23 CFR 772.

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LEGEND

- Analyzed Soundwall
- 1 1st Row Receivers
- 1A 2nd Row Receivers
- K-1 Calibration Receivers
- R-2 Long Term Receptors

Project Limits

SOUNDWALL NO. 7

SOUNDWALL NO. 1

SOUNDWALL NO. 1

VIA SONORA

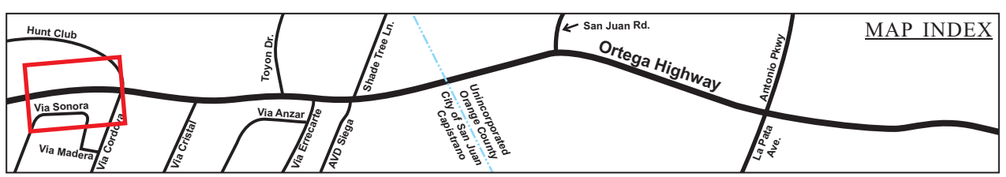
NOTES:

* Caltrans station designation numbering is in metric units.

** Sheets 5 through 9 showing the County portion of the project is proceeding under a separate project and not analyzed as part of this EIR section.

* The figure shown are the original drawings in metric units.

* Based on the new plans, the maximum wall height for SW-3 is 4.3 m (14 ft) from STA 27+06 to STA 28+43 and 4.9 m (16 ft) from STA 28+43 to STA 30+76.5.



NO SCALE

SOURCE: Caltrans

FIGURE I-1

Sheet 1 of 9

Lower SR-74 Widening Project

Receptors and Modeled Soundwall

12-ORA-74 PM 1.0/1.9

EA No. 086920

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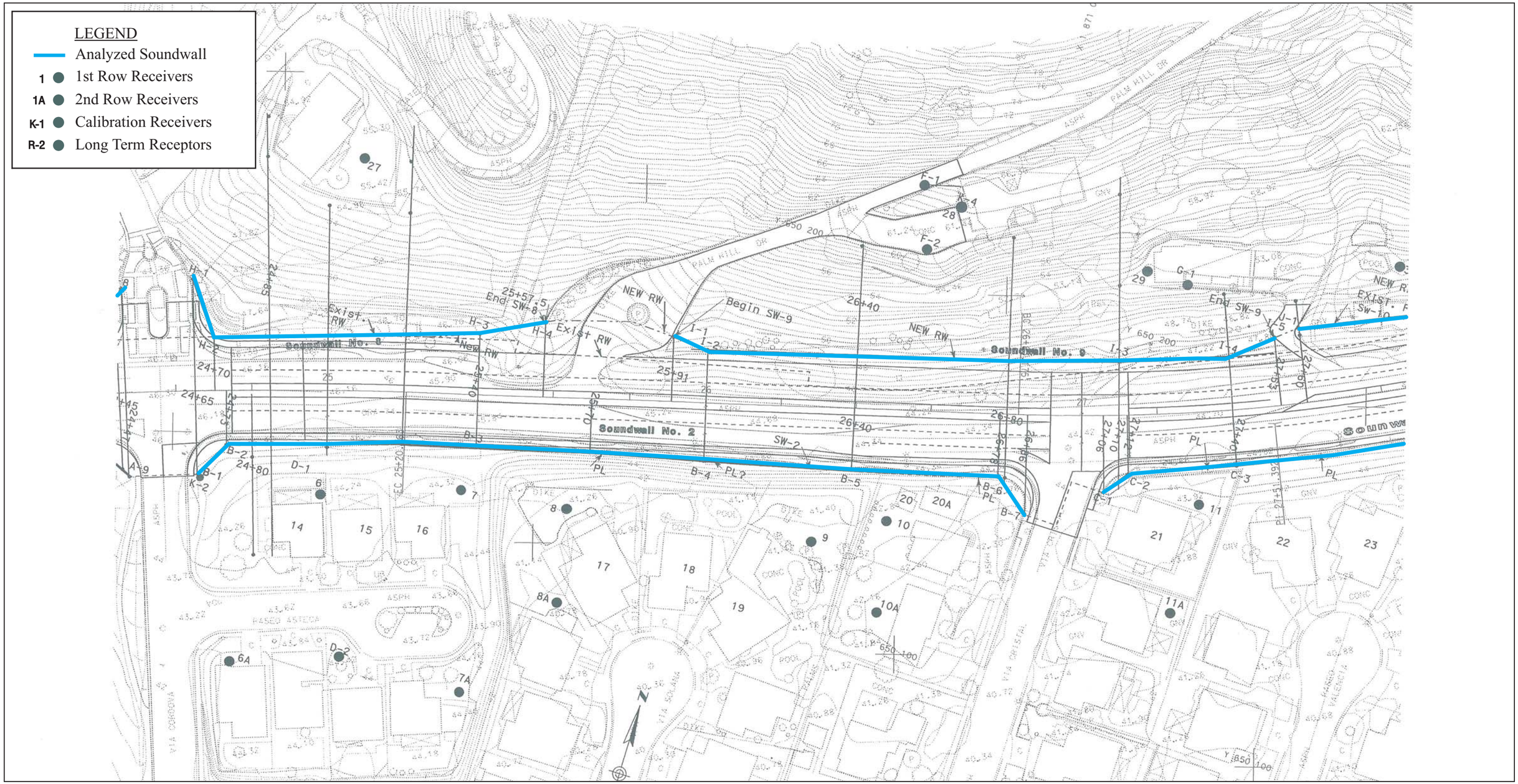

NOTES:

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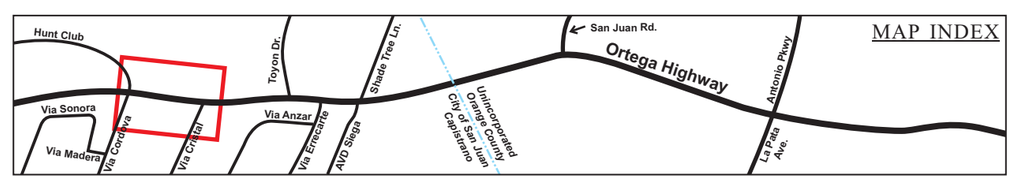

NO SCALE

SOURCE: Caltrans

FIGURE I-1

Sheet 2 of 9

Lower SR-74 Widening Project

Receptors and Modeled Soundwall

12-ORA-74 PM 1.0/1.9

EA No. 086920

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LEGEND

- Analyzed Soundwall
- 1 1st Row Receivers
- 1A 2nd Row Receivers
- K-1 Calibration Receivers
- R-2 Long Term Receptors

Soundwall No. 3

Soundwall No. 10

Soundwall No. 11

NOTES:

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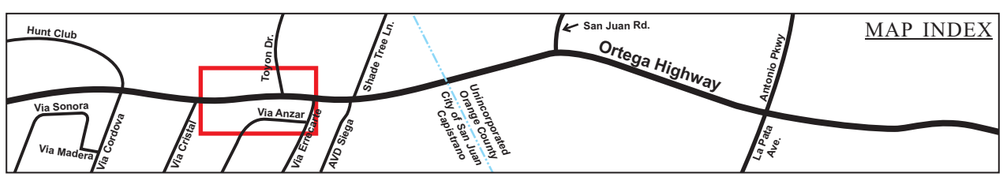

NO SCALE

SOURCE: Caltrans

FIGURE I-1

Sheet 3 of 9

Lower SR-74 Widening Project

Receptors and Modeled Soundwall

12-ORA-74 PM 1.0/1.9

EA No. 086920

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NOTES:

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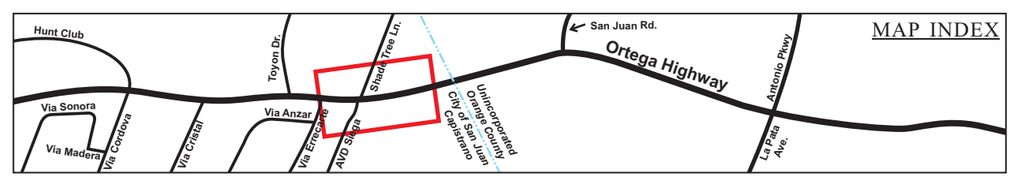
* The figure shown are the original drawings in metric units.

* Based on the new plans, the maximum wall height for SW-3 is 4.3 m (14 ft) from STA 27+06 to STA 28+43 and 4.9 m (16 ft) from STA 28+43 to STA 30+76.5.



NO SCALE

SOURCE: Caltrans

FIGURE I-1

Sheet 4 of 9

Lower SR-74 Widening Project

Receptors and Modeled Soundwall

12-ORA-74 PM 1.0/1.9

EA No. 086920

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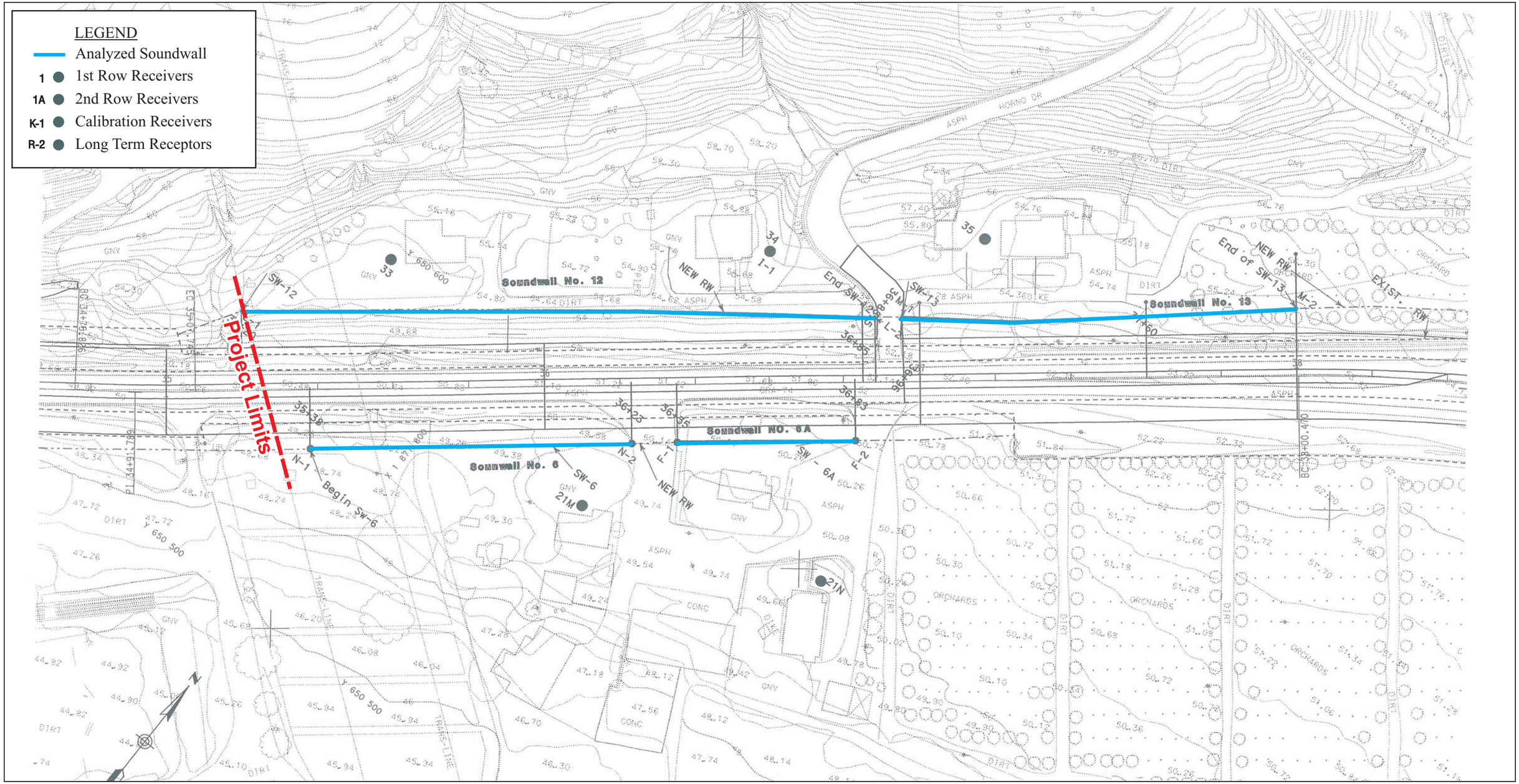

NOTES:

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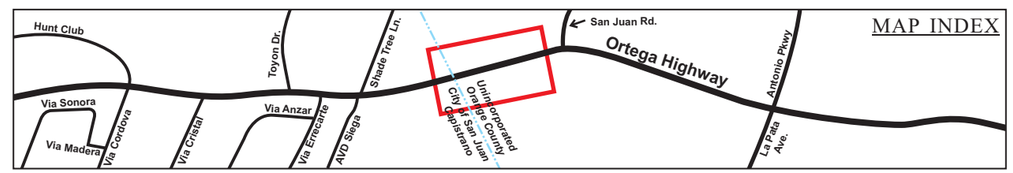

FIGURE I-1
Sheet 5 of 9

Lower SR-74 Widening Project
Receptors and Modeled Soundwall
12-ORA-74 PM 1.0/1.9
EA No. 086920

NO SCALE
SOURCE: Caltrans

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NOTES:

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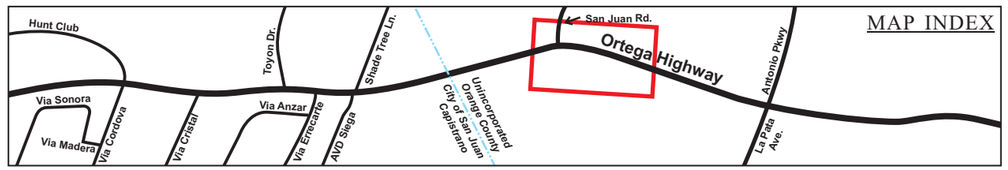

NO SCALE

SOURCE: Caltrans

FIGURE I-1

Sheet 6 of 9

Lower SR-74 Widening Project

Receptors and Modeled Soundwall

12-ORA-74 PM 1.0/1.9

EA No. 086920

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Figure A-7

NOTES:

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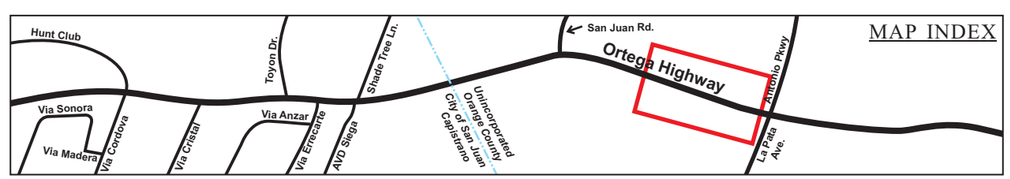

NO SCALE

SOURCE: Caltrans

FIGURE I-1
Sheet 7 of 9

Lower SR-74 Widening Project

Receptors and Modeled Soundwall

12-ORA-74 PM 1.0/1.9

EA No. 086920

I:\CDT0802A\G\Receptor_Soundwall_Locs-I-1_sh7.cdr (11/19/08)

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NEW RW

NEW RW

Figure A-8

NOTES:

* Caltrans station designation numbering is in metric units.

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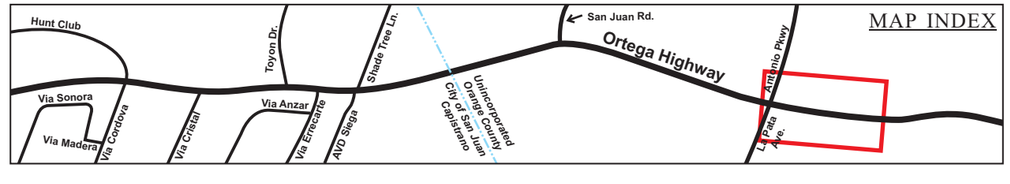
* The figure shown are the original drawings in metric units.

* Based on the new plans, the maximum wall height for SW-3 is 4.3 m (14 ft) from STA 27+06 to STA 28+43 and 4.9 m (16 ft) from STA 28+43 to STA 30+76.5.



NO SCALE

SOURCE: Caltrans

FIGURE I-1
Sheet 8 of 9

Lower SR-74 Widening Project
Receptors and Modeled Soundwall

12-ORA-74 PM 1.0/1.9
EA No. 086920

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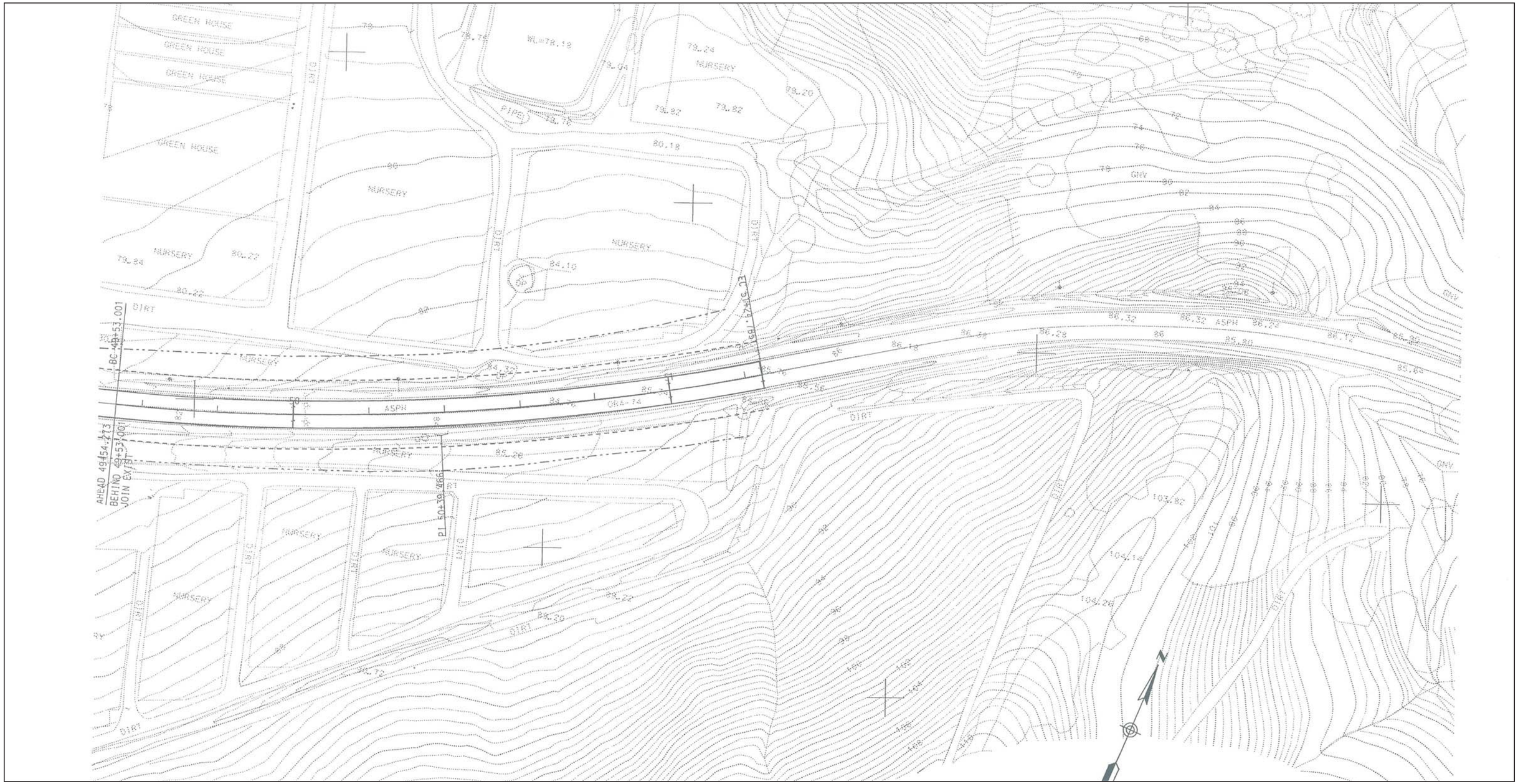

NOTES:

* Caltrans station designation numbering is in metric units.

** Sheets 5 through 9 showing the County portion of the project is proceeding under a separate project and not analyzed as part of this EIR section.

* The figure shown are the original drawings in metric units.

* Based on the new plans, the maximum wall height for SW-3 is 4.3 m (14 ft) from STA 27+06 to STA 28+43 and 4.9 m (16 ft) from STA 28+43 to STA 30+76.5.

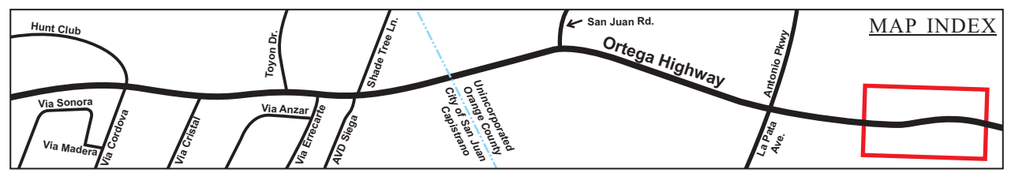

FIGURE I-1
Sheet 9 of 9

NO SCALE

SOURCE: Caltrans

Lower SR-74 Widening Project

Receptors and Modeled Soundwall

12-ORA-74 PM 1.0/1.9

EA No. 086920

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LEGEND

- Analyzed Soundwall (Without Wrap Around Wall) **
- 1 1st Row Receivers
- 1A 2nd Row Receivers
- K-1 Calibration Receivers
- R-2 Long Term Receptors

Project Limits

SOUNDWALL NO. 7

SOUNDWALL NO. 1

VIA SONORA

NOTES:

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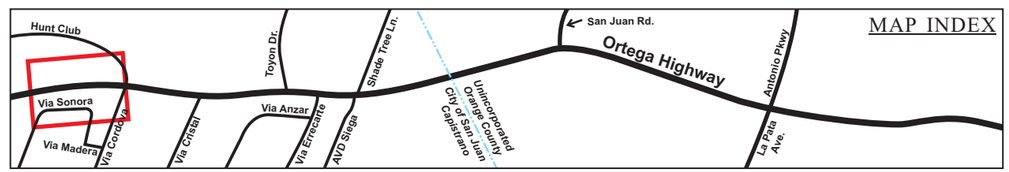

NO SCALE

SOURCE: Caltrans

FIGURE I-2

Sheet 1 of 3

Lower SR-74 Widening Project

Receptors and Modeled Soundwall Without Wrap Around

12-ORA-74 PM 1.0/1.9

EA No. 086920

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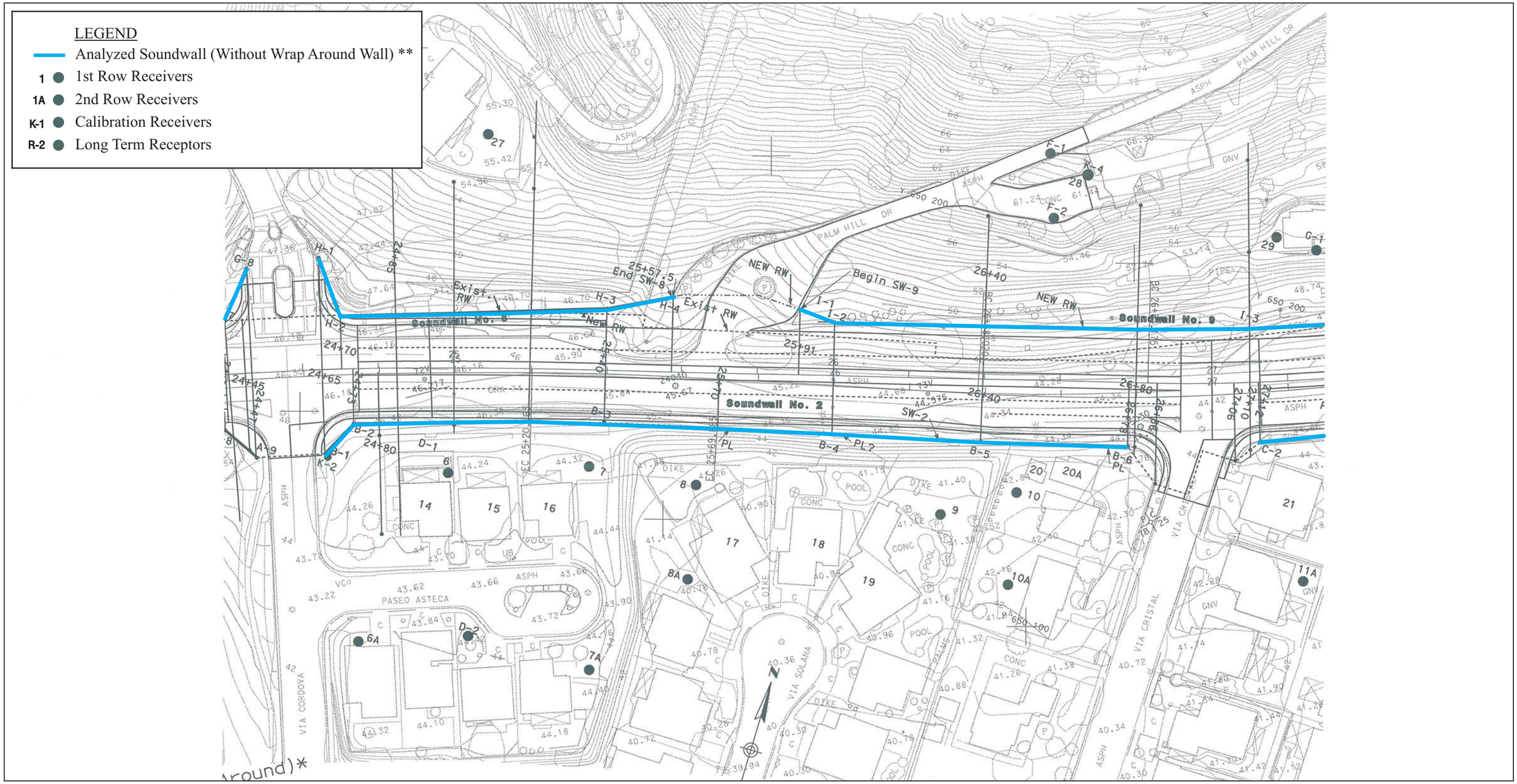
LEGEND

- Analyzed Soundwall (Without Wrap Around Wall) **
- 1 ● 1st Row Receivers
- 1A ● 2nd Row Receivers
- K-1 ● Calibration Receivers
- R-2 ● Long Term Receptors



NOTES:

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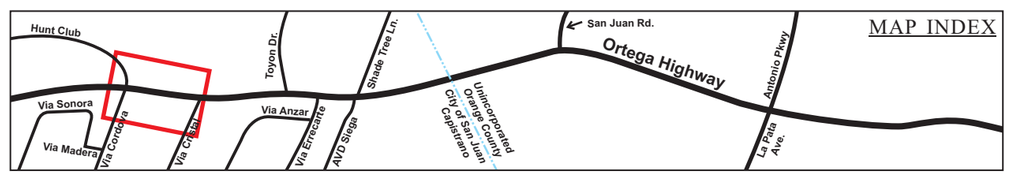
* Based on the new plans, the maximum wall height for SW-3 is 4.3 m (14 ft) from STA 27+12 to STA 28+43 and 4.9 m (16 ft) from STA 28+43 to STA 30+76.5.



NO SCALE

SOURCE: Caltrans

FIGURE I-2

Sheet 2 of 3

Lower SR-74 Widening Project

Receptors and Modeled Soundwall Without Wrap Around

12-ORA-74 PM 1.0/1.9

EA No. 086920

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LEGEND

- Analyzed Soundwall (Without Wrap Around Wall) **
- 1 ● 1st Row Receivers
- 1A ● 2nd Row Receivers
- K-1 ● Calibration Receivers
- R-2 ● Long Term Receptors

Soundwall No. 3

Soundwall No. 10

Soundwall No. 11

VIA ANAZAR

VIA ESTENAGA

PASEO VALENCIA

TOLON DR

EXIST. RW

NEW RW

Exist. RW

NOTES:

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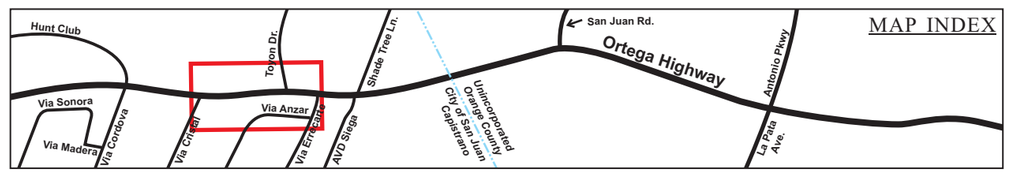
* The figure shown are the original drawings in metric units.

* Based on the new plans, the maximum wall height for SW-3 is 4.3 m (14 ft) from STA 27+12 to STA 28+43 and 4.9 m (16 ft) from STA 28+43 to STA 30+76.5.



NO SCALE

SOURCE: Caltrans

FIGURE I-2

Sheet 3 of 3

Lower SR-74 Widening Project

Receptors and Modeled Soundwall Without Wrap Around

12-ORA-74 PM 1.0/1.9

EA No. 086920

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Feasibility

Feasibility is defined as engineering considerations. Section 3 of the Protocol states that a minimum noise reduction of 5 dBA must be achieved at the impacted receivers in order for the proposed noise abatement measure to be considered feasible. The feasibility criterion is not necessarily a noise abatement design goal. Greater noise reductions are encouraged if they can be reasonably achieved. The following elements may restrict feasibility:

- Topography
- Access requirements for driveways, ramps, etc.
- Location of local streets in relation to the proposed project
- Other noise sources in the area
- Safety considerations

Tables I-2 and I-3 show the sound levels at the sensitive receptors for with and without wrap-around wall scenarios. Underlined noise levels represent a minimum of 5 dBA in noise reduction resulting from the noise barrier height listed.

Based on the noise attenuation values shown in Tables I-2 and I-3, minimum noise reductions of 5 dBA have been achieved for the impacted receivers for NB-1, NB-2, NB-3, NB-4, NB-5, NB-9, NB-10, and NB-11. Table I-4 lists the feasible noise barriers for both with and without wrap-around wall scenarios. It should be noted that NB-7 and NB-8 were determined to be not feasible because these barriers would not reduce noise levels by 5 dBA or more and are therefore not shown in Table I-4. Table I-4 also lists the feasible noise barriers and the noise barrier heights, approximate lengths, and locations, as well as the beginning and ending noise wall station numbers and the locations of noise barriers in the figures included in this noise analysis.

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Table I-2 Summary of Predicted Noise Levels (With Wrap-Around Wall)[1]

No.	SW No.	Rec No.	Land Use	Activity Category	Existing Noise Levels	Future (Worst-Case)	With Barrier H = 2.4 m (8 ft)		With Barrier H = 3.05 m (10 ft)		With Barrier H = 3.7 m (12 ft)		With Barrier H = 4.3 m (14 ft)		With Barrier H = 4.9 m (16 ft)		Critical Receiver No.
							L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	
Eastbound Side																	
1	NB-1	1	SFR[3]	B(67)	**70.9**[4]	**72.8**	**68.0**	4.8	65.2	7.6[5]	63.1	9.7	61.5	11.3	60.2	12.6	1
2	NB-1	1A	SFR	B(67)	58.4	60.3	--[6]	--	--	--	--	--	--	--	--	--	
3	NB-1	2	SFR	B(67)	61.8	63.7	--	--	--	--	--	--	--	--	--	--	
4	NB-1	2A	SFR	B(67)	55.9	57.8	--	--	--	--	--	--	--	--	--	--	
5	NB-1	2B	SFR	B(67)	55.4	57.3	--	--	--	--	--	--	--	--	--	--	
6	NB-1	3A	SFR	B(67)	54.0	55.9	--	--	--	--	--	--	--	--	--	--	
7	NB-1	R-2 K-1	SFR	B(67)	60.5	62.1	--	--	--	--	--	--	--	--	--	--	
8	NB-1	4	SFR	B(67)	60.2	61.8	--	--	--	--	--	--	--	--	--	--	
9	NB-1	4A	SFR	B(67)	54.2	55.9	--	--	--	--	--	--	--	--	--	--	
10	NB-1	5	SFR	B(67)	59.7	61.3	--	--	--	--	--	--	--	--	--	--	
11	NB-1	5B	SFR	B(67)	62.7	64.5	--	--	--	--	--	--	--	--	--	--	
12	NB-2	6	SFR	B(67)	**68.6**	**70.1**	64.8	5.3	63.1	7.0	61.5	8.6	60.2	9.9	59.2	10.9	
13	NB-2	6A	SFR	B(67)	56.7	58.6	56.6	2.0	55.5	3.1	54.6	4.0	53.8	4.8	53.5	5.1	
14	NB-2	7	SFR	B(67)	**70.6**	**71.4**	65.3	6.1	63.5	7.9	61.9	9.5	60.5	10.9	59.4	12.0	7
15	NB-2	7A	SFR	B(67)	55.8	57.4	55.7	1.7	54.5	2.9	53.2	4.2	52.1	5.3	51.3	6.1	
16	NB-2	8	SFR	B(67)	**65.8**	**65.7**	62.2	3.5	60.7	5.0	59.4	6.3	58.3	7.4	57.5	8.2	
17	NB-2	8A	SFR	B(67)	57.5	58.7	55.3	3.4	53.8	4.9	52.4	6.3	51.3	7.4	50.4	8.3	
18	NB-2	9	SFR	B(67)	**67.0**	**66.0**	63.6	2.4	61.9	4.1	60.4	5.6	59.1	6.9	58.0	8.0	
19	NB-2	10	SFR	B(67)	**69.6**	**70.1**	**65.8**	4.3	63.8	6.3	62.1	8.0	60.6	9.5	59.3	10.8	
20	NB-2	10A	SFR	B(67)	58.4	59.4	57.4	2.0	56.1	3.3	54.6	4.8	53.4	6.0	52.4	7.0	
21	NB-3[7]	11	SFR	B(67)	**70.2**	**70.4**	**66.5**	3.9	64.4	6.0	62.6	7.8	61.1	9.3	61.0	9.4	11
22	NB-3[7]	11A	SFR	B(67)	57.9	59.2	57.9	1.3	57.0	2.2	56.1	3.1	55.4	3.8	55.2	4.0	
23	NB-3[7]	12	SFR	B(67)	64.2	65.2	62.3	2.9	60.7	4.5	59.4	5.8	58.2	7.0	57.8	7.4	
24	NB-3[7]	13	SFR	B(67)	65.2	**66.2**	63.4	2.8	61.8	4.4	60.4	5.8	59.2	7.0	58.5	7.7	
25	NB-3[7]	13A	SFR	B(67)	56.6	58.2	56.7	1.5	55.2	3.0	53.7	4.5	52.4	5.8	51.8	6.4	
26	NB-3[7]	14	SFR	B(67)	64.3	**65.5**	63.1	2.4	61.6	3.9	60.2	5.3	59.0	6.5	58.0	7.5	
27	NB-3[7]	14A	SFR	B(67)	54.0	55.6	54.9	0.7	53.6	2.0	52.2	3.4	51.0	4.6	50.3	5.3	
28	NB-3[7]	R-1	SFR	B(67)	63.6	64.8	62.7	2.1	61.1	3.7	59.8	5.0	58.7	6.1	57.8	7.0	
29	NB-3[7]	15	SFR	B(67)	62.9	64.2	62.2	2.0	60.7	3.5	59.5	4.7	58.5	5.7	57.8	6.4	
30	NB-3[7]	15A	SFR	B(67)	53.1	54.8	54.2	0.6	53.0	1.8	51.7	3.1	50.6	4.2	49.8	5.0	
31	NB-3[7]	16 K-3	SFR	B(67)	65.1	**66.2**	62.9	3.3	61.3	4.9	59.9	6.3	58.8	7.4	57.8	8.4	
32	NB-3[7]	16A	SFR	B(67)	53.9	55.6	54.9	0.7	53.7	1.9	52.5	3.1	51.5	4.1	50.8	4.8	
33	NB-3[7]	17	SFR	B(67)	64.1	65.3	63.1	2.2	61.5	3.8	60.1	5.2	58.9	6.4	57.9	7.4	
34	NB-3[7]	17B	SFR	B(67)	65.2	**66.6**	**66.3**	0.3	**65.7**	0.9	65.2	1.4	64.9	1.7	64.7	1.9	
35	NB-4	17A	SFR	B(67)	59.2	60.5	59.1	1.4	58.0	2.5	56.8	3.7	55.8	4.7	55.0	5.5	

Table I-2 Summary of Predicted Noise Levels (With Wrap-Around Wall)[1]

No.	SW No.	Rec No.	Land Use	Activity Category	Existing Noise Levels	Future (Worst-Case)	With Barrier H = 2.4 m (8 ft)		With Barrier H = 3.05 m (10 ft)		With Barrier H = 3.7 m (12 ft)		With Barrier H = 4.3 m (14 ft)		With Barrier H = 4.9 m (16 ft)		Critical Receiver No.
							L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	
36	NB-4	18	SFR	B(67)	**66.9**	**66.9**	63.9	3.0	62.1	4.8	60.5	6.4	59.2	7.7	58.1	8.8	18
37	NB-4	18A	SFR	B(67)	56.6	58.4	56.5	1.9	55.2	3.2	54.1	4.3	53.2	5.2	52.5	5.9	
38	NB-4	19	SFR	B(67)	63.6	64.3	62.2	2.1	60.6	3.7	59.2	5.1	58.1	6.2	57.3	7.0	
39	NB-5	19A	SFR	B(67)	54.9	56.7	56.3	0.4	55.6	1.1	54.8	1.9	54.2	2.5	53.7	3.0	
40	NB-5	20	SFR	B(67)	62.8	64.3	62.5	1.8	60.8	3.5	59.3	5.0	58.1	6.2	57.2	7.1	
41	NB-5	21	SFR	B(67)	63.7	**65.7**	63.5	2.2	62.0	3.7	60.7	5.0	59.5	6.2	58.5	7.2	21
42[8]	NB-6	21M	SFR	B(67)	**69.5**	**71.8**	**69.1**	2.7	**68.7**	3.1	**67.2**	4.6	**66.1**	5.7	65.3	6.5	21M
43	NB-6A	21N	SFR	B(67)	**66.2**	**68.3**	**67.3**	1.0	**68.1**	0.2	**66.4**	1.9	**66.0**	2.3	**65.7**	2.6	
Westbound Side																	
1	NB-7	22	SFR	B(67)	**69.3**	**71.3**	**70.7**	0.6	**70.5**	0.8	**69.5**	1.8	**69.1**	2.2	**68.0**	3.3	
2	NB-7	23	SFR	B(67)	**66.3**	**68.4**	**67.9**	0.5	**67.7**	0.7	**67.2**	1.2	**66.7**	1.7	**66.2**	2.2	
3	NB-7	24	SFR	B(67)	62.2	64.1	64.1	0.0	64.0	0.1	63.6	0.5	63.3	0.8	63.1	1.0	
4	NB-7	25	SFR	B(67)	**65.8**	**67.9**	**67.4**	0.5	**67.1**	0.8	**66.5**	1.4	**66.1**	1.8	65.3	2.6	
5	NB-7	26	SFR	B(67)	**67.6**	**69.6**	**69.5**	0.1	**69.0**	0.6	**68.7**	0.9	**67.8**	1.8	**67.0**	2.6	
6	NB-8	27	SFR	B(67)	63.4	**65.5**	65.0	0.5	64.7	0.8	64.2	1.3	63.8	1.7	63.1	2.4	
7	NB-9	28 K4	SFR	B(67)	**67.2**	**69.6**	**68.4**	1.2	**68.0**	1.6	**67.4**	2.2	**67.2**	2.4	**66.8**	2.8	
8	NB-9	29	SFR	B(67)	**69.9**	**72.5**	**69.9**	2.6	**69.1**	3.4	**68.0**	4.5	**67.2**	5.3	**66.1**	6.4	29
9	NB-10	30	SFR	B(67)	**71.1**	**73.0**	**71.5**	1.5	**70.1**	2.9	**68.9**	4.1	**67.5**	5.5	**65.9**	7.1	30
10	NB-10	31 K5	SFR	B(67)	**71.4**	**77.1**	**74.4**	2.7	**73.5**	3.6	**72.3**	4.8	**71.1**	6.0	**70.2**	6.9	
11	NB-11	32	SFR	B(67)	**68.5**	**73.8**	**72.2**	1.6	**70.5**	3.3	**69.0**	4.8	**67.9**	5.9	**67.1**	6.7	32
12	NB-12	33	SFR	B(67)	**68.0**	**73.0**	**70.5**	2.5	**69.2**	3.8	**68.1**	4.9	**67.3**	5.7	**66.7**	6.3	
13	NB-12	34	SFR	B(67)	**69.1**	**73.6**	**72.1**	1.5	**70.7**	2.9	**69.2**	4.4	**67.7**	5.9	**66.6**	7.0	34
14	NB-13	35	SFR	B(67)	**68.6**	**73.5**	**71.6**	1.9	**69.9**	3.6	**68.4**	5.1	**67.1**	6.4	**66.0**	7.5	35

Source: LSA Associates, Inc., Final Technical Noise Impact Analysis Addendum, July 2008.

1 With wrap-around wall for the west end of NB-1, east end of NB-2, and west end of NB-3.

2 I.L.: Insertion Loss.

3 SFR = Single-Family Residence

4 Numbers in bold represent noise levels that approach or exceed the NAC.

5 Numbers underlined have been attenuated by at least 5 dBA (i.e., feasible wall height)

6 No barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.

7 Noise barrier modeling for NB-3 under the 16 ft height column was modeled with a 4.3 m (14 ft) high wall from STA 27+06 to STA 28+43 and a 4.9 m (16 ft) high wall from STA 28+43 to STA 30+76.5. Station number STA 28+43 is based on current design plans provided by the Department District 12 Design Branch.

8 Shaded row indicate that receptors are located outside of the project limits and was not evaluated.

dBA = A-weighted decibels ft = feet m = meters NAC = Noise Abatement Criteria

Table I-3 Summary of Predicted Noise Levels (Without Wrap-Around Wall)[1]

No.	SW No.	Rec No.	Land Use	Activity Category	Existing Noise Levels	Future (Worst-Case)	With Barrier H = 2.4 m (8 ft)		With Barrier H = 3.05 m (10 ft)		With Barrier H = 3.7 m (12 ft)		With Barrier H = 4.3 m (14 ft)		With Barrier H = 4.9 m (16 ft)		Critical Receiver No.
							L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	
Eastbound Side																	
1	NB-1	1	SFR[3]	B(67)	**70.9**[4]	**72.8**	**68.0**	4.8	**65.5**	7.3[5]	63.6	9.2	62.2	10.6	61.3	11.5	1
2	NB-1	1A	SFR	B(67)	58.4	60.3	--[6]	--	--	--	--	--	--	--	--	--	
3	NB-1	2	SFR	B(67)	61.8	63.7	--	--	--	--	--	--	--	--	--	--	
4	NB-1	2A	SFR	B(67)	55.9	57.8	--	--	--	--	--	--	--	--	--	--	
5	NB-1	2B	SFR	B(67)	55.4	57.3	--	--	--	--	--	--	--	--	--	--	
6	NB-1	3A	SFR	B(67)	54.0	55.9	--	--	--	--	--	--	--	--	--	--	
7	NB-1	R-2 K-1	SFR	B(67)	60.5	62.1	--	--	--	--	--	--	--	--	--	--	
8	NB-1	4	SFR	B(67)	60.2	61.8	--	--	--	--	--	--	--	--	--	--	
9	NB-1	4A	SFR	B(67)	54.2	55.9	--	--	--	--	--	--	--	--	--	--	
10	NB-1	5	SFR	B(67)	59.7	61.3	--	--	--	--	--	--	--	--	--	--	
11	NB-1	5B	SFR	B(67)	62.7	64.5	--	--	--	--	--	--	--	--	--	--	
12	NB-2	6	SFR	B(67)	**68.6**	**70.1**	64.8	5.3	63.1	7.0	61.5	8.6	60.2	9.9	59.1	11.0	
13	NB-2	6A	SFR	B(67)	56.7	58.6	56.6	2.0	55.5	3.1	54.6	4.0	53.8	4.8	53.3	5.3	
14	NB-2	7	SFR	B(67)	**70.6**	**71.4**	65.3	6.1	63.5	7.9	61.9	9.5	60.5	10.9	59.3	12.1	7
15	NB-2	7A	SFR	B(67)	55.8	57.4	55.7	1.7	54.6	2.8	53.3	4.1	52.2	5.2	51.3	6.1	
16	NB-2	8	SFR	B(67)	**65.8**	**65.7**	62.2	3.5	60.7	5.0	59.4	6.3	58.3	7.4	57.4	8.3	
17	NB-2	8A	SFR	B(67)	57.5	58.7	55.3	3.4	53.9	4.8	52.7	6.0	51.7	7.0	50.9	7.8	
18	NB-2	9	SFR	B(67)	**67.0**	**66.0**	64.0	2.0	62.6	3.4	61.6	4.4	60.8	5.2	60.2	5.8	
19	NB-2	10	SFR	B(67)	**69.6**	**70.1**	66.2	3.9	64.7	5.4	63.6	6.5	62.8	7.3	62.2	7.9	
20	NB-2	10A	SFR	B(67)	58.4	59.4	57.9	1.5	56.8	2.6	55.8	3.6	55.0	4.4	54.4	5.0	
21	NB-3[7]	11	SFR	B(67)	**70.2**	**70.4**	**67.1**	3.3	**65.7**	4.7	64.7	5.7	64.0	6.4	63.9	6.5	11
22	NB-3[7]	11A	SFR	B(67)	57.9	59.2	58.4	0.8	57.7	1.5	57.1	2.1	56.6	2.6	56.4	2.8	
23	NB-3[7]	12	SFR	B(67)	64.2	65.2	62.4	2.8	60.9	4.3	59.7	5.5	58.7	6.5	58.4	6.8	
24	NB-3[7]	13	SFR	B(67)	65.2	**66.2**	63.4	2.8	61.8	4.4	60.4	5.8	59.2	7.0	58.5	7.7	
25	NB-3[7]	13A	SFR	B(67)	56.6	58.2	56.7	1.5	55.2	3.0	53.8	4.4	52.5	5.7	52.0	6.2	
26	NB-3[7]	14	SFR	B(67)	64.3	**65.5**	63.1	2.4	61.6	3.9	60.2	5.3	59.0	6.5	58.0	7.5	
27	NB-3[7]	14A	SFR	B(67)	54.0	55.6	54.9	0.7	53.6	2.0	52.3	3.3	51.1	4.5	50.3	5.3	
28	NB-3[7]	R-1	SFR	B(67)	63.6	64.8	62.7	2.1	61.1	3.7	59.8	5.0	58.7	6.1	57.8	7.0	
29	NB-3[7]	15	SFR	B(67)	62.9	64.2	62.2	2.0	60.7	3.5	59.5	4.7	58.5	5.7	57.8	6.4	
30	NB-3[7]	15A	SFR	B(67)	53.1	54.8	54.2	0.6	53.0	1.8	51.7	3.1	50.6	4.2	49.8	5.0	
31	NB-3[7]	16 K-3	SFR	B(67)	65.1	**66.2**	62.9	3.3	61.3	4.9	59.9	6.3	58.8	7.4	57.8	8.4	
32	NB-3[7]	16A	SFR	B(67)	53.9	55.6	54.9	0.7	53.7	1.9	52.5	3.1	51.5	4.1	50.8	4.8	

Table I-3 Summary of Predicted Noise Levels (Without Wrap-Around Wall)[1]

No.	SW No.	Rec No.	Land Use	Activity Category	Existing Noise Levels	Future (Worst-Case)	With Barrier H = 2.4 m (8 ft)		With Barrier H = 3.05 m (10 ft)		With Barrier H = 3.7 m (12 ft)		With Barrier H = 4.3 m (14 ft)		With Barrier H = 4.9 m (16 ft)		Critical Receiver No.
							L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	
33	NB-3[7]	17	SFR	B(67)	64.1	65.3	63.1	2.2	61.5	3.8	60.1	5.2	58.9	6.4	57.9	7.4	
34	NB-3[7]	17B	SFR	B(67)	65.2	**66.6**	**66.3**	0.3	**65.7**	0.9	65.2	1.4	64.9	1.7	64.7	1.9	

Source: LSA Associates, Inc., Final Technical Noise Impact Analysis Report Addendum, July 2008.

1 Without wrap-around wall for the west end of NB-1, east end of NB-2, and west end of NB-3.

2 I.L.: Insertion Loss.

3 SFR = Single-Family Residence

4 Numbers in bold represent noise levels that approach or exceed the NAC.

5 Numbers underlined have been attenuated by at least 5 dBA (i.e., feasible wall height)

6 No barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.

7 Noise barrier modeling for NB-3 under the 16 ft height column was modeled with a 4.3 m (14 ft) high wall from STA 27+12 to STA 28+43 and a 4.9 m (16 ft) high wall from STA 28+43 to STA 30+76.5. Station number STA 28+43 is based on current design plans provided by the Department District 12 Design Branch.

dBA = A-weighted decibels
ft = feet
m = meters
NAC = Noise Abatement Criteria

Table I-4 Feasible Noise Barriers

Noise Barrier No.	Height m (ft)	Approximate Length m (ft)	Location	Top of the Barrier Elevations[1]	Station Number[2]		Location of Noise Barrier in Report Graphics
					Begin	End	
With Wrap-Around Wall[3]							
NB-1	3.05 (10)	66 (215)	Eastbound Side Right-of-way	Plus 3.05 m (10 ft)	21+58	22+20	Figure 2.2.7-1 Sheet 1
	3.7 (12)	66 (215)		Plus 3.7 m (12 ft)			
	4.3 (14)	66 (215)		Plus 4.3 m (14 ft)			
	4.9 (16)	66 (215)		Plus 4.9 m (16 ft)			
NB-2	2.4 (8)	228 (747)	Eastbound Side Right-of-way	Plus 2.4m (8 ft)	24+65	26+86	Figure 2.2.7-1 Sheet 2
	3.05 (10)	228 (747)		Plus 3.05 m (10 ft)			
	3.7 (12)	228 (747)		Plus 3.7 m (12 ft)			
	4.3 (14)	228 (747)		Plus 4.3 m (14 ft)			
	4.9 (16)	228 (747)		Plus 4.9 m (16 ft)			
NB-3	3.05 (10)	228 (747)	Eastbound Side Right-of-way	Plus 3.05 m (10 ft)	27+06/ 28+43[5]	28+43[5]/ 30+76.5	Figure 2.2.7-1 Sheet 3
	3.7 (12)	374 (1,228)		Plus 3.7 m (12 ft)			
	4.3 (14)	374 (1,228)		Plus 4.3 m (14 ft)			
	4.3/4.9 (14/16)[4]	374 (1,228)		Plus 4.3/4.9 m (14/16 ft)			
NB-4	3.7 (12)	103 (338)	Eastbound Side Right-of-way	Plus 3.7 m (12 ft)	30+93	31+92	Figure 2.2.7-1 Sheet 4
	4.3 (14)	103 (338)		Plus 4.3 m (14 ft)			
	4.9 (16)	103 (338)		Plus 4.9 m (16 ft)			
NB-5	3.7 (12)	123 (404)	Eastbound Side Right-of-way	Plus 3.7 m (12 ft)	32+13.5	33+29	Figure 2.2.7-1 Sheet 4
	4.3 (14)	123 (404)		Plus 4.3 m (14 ft)			
	4.9 (16)	123 (404)		Plus 4.9 m (16 ft)			
NB-6[6]	4.3 (14)	85 (279)	Eastbound Side Right-of-way	Plus 4.3 m (14 ft)	35+38	36+23	Figure 2.2.7-1 Sheet 5
	4.9 (16)	85 (279)		Plus 4.9 m (16 ft)			
NB-9	4.3 (14)	161 (529)	Westbound Side Right-of-way	Plus 4.3 m (14 ft)	25+91	27+53	Figure 2.2.7-1 Sheet 2
	4.9 (16)	161 (529)		Plus 4.9 m (16 ft)			
NB-10	4.3 (14)	145 (475)	Westbound Side Right-of-way	Plus 4.3 m (14 ft)	27+60	29+6.3	Figure 2.2.7-1 Sheet 3
	4.9 (16)	145 (475)		Plus 4.9 m (16 ft)			
NB-11	4.3 (14)	59 (195)	Westbound Side Right-of-way	Plus 4.3 m (14 ft)	29+17	29+74	Figure 2.2.7-1 Sheet 3
	4.9 (16)	59 (195)		Plus 4.9 m (16 ft)			
NB-12	4.3 (14)	168 (552)	Westbound Side Right-of-way	Plus 4.3 m (14 ft)	35+20	36+88.5	Figure 2.2.7-1 Sheet 5
	4.9 (16)	168 (552)		Plus 4.9 m (16 ft)			
NB-13	3.7 (12)	104 (343)	Westbound Side Right-of-way	Plus 3.7 m (12 ft)	36+96	38+00	Figure 2.2.7-1 Sheet 5
	4.3 (14)	104 (343)		Plus 4.3 m (14 ft)			
	4.9 (16)	104 (343)		Plus 4.9 m (16 ft)			
Without Wrap-Around Wall[7]							
NB-1	3.05 (10)	55 (179)	Eastbound Side Right-of-way	Plus 3.05 m (10 ft)	21+65	22+20	Figure 2.2.7-2 Sheet 3
	3.7 (12)	55 (179)		Plus 3.7 m (12 ft)			
	4.3 (14)	55 (179)		Plus 4.3 m (14 ft)			
	4.9 (16)	55 (179)		Plus 4.9 m (16 ft)			
NB-2	2.4 (8)	215 (707)	Eastbound Side Right-of-way	Plus 3.05 m (10 ft)	24+65	26+78	Figure 2.2.7-2 Sheet 2
	3.05 (10)	215 (707)		Plus 3.7 m (12 ft)			
	3.7 (12)	215 (707)		Plus 4.3 m (14 ft)			
	4.3 (14)	215 (707)		Plus 4.9 m (16 ft)			
	4.9 (16)	215 (707)		Plus 3.05 m (10 ft)			

Table I-4 Feasible Noise Barriers

Noise Barrier No.	Height m (ft)	Approximate Length m (ft)	Location	Top of the Barrier Elevations[1]	Station Number[2]		Location of Noise Barrier in Report Graphics
					Begin	End	
NB-3	3.7 (12)	366 (1,202)	Eastbound Side Right-of-way	Plus 3.7 m (12 ft)	27+12/ 28+43[5]	28+43[5]/ 30+76.5	Figure 2.2.7-2 Sheet 3
	4.3 (14)	366 (1,202)		Plus 4.3 m (14 ft)			
	4.3/4.9 (14/16)[8]	366 (1,202)		Plus 4.3/4.9 m (14/16 ft)			

Source: LSA Associates, Inc., Final Technical Noise Impact Analysis Report Addendum, July 2008.

1 From the existing elevation.

2 The station numbers are based on the Department station designation numbering in metric units, as shown on the figures.

3 With wrap-noise barrier for the west end of NB-1, east end of NB-2, and west end of NB-3.

4 With wrap-around scenario for NB-3 from station number 27+06 to 28+43 is less than 4.5 m (15 ft) from the nearest travel lane, and therefore the maximum height is 4.3 m (14 ft).

5 This station number is based on current design plans provided by the Department District 12 Design Branch.

6 Shaded rows indicate that noise barriers are located outside of the project limits and were not evaluated.

7 Without wrap-around barrier for the west end of NB-1, east end of NB-2, and west end of NB-3.

8 Without wrap-around scenario for NB-3 from station number 27+12 to 28+43 is less than 4.5 m (15 ft) from the nearest travel lane, and therefore th maximum height is 4.3 m (14 ft).

ft = feet m = meters

Reasonableness

The overall reasonableness of noise abatement is determined by considering a multitude of factors, including but not necessarily limited to, the following:

- Cost of the abatement
- Absolute noise levels
- Change in noise levels
- Noise abatement benefits
- Date of development along the highway
- Lifecycle of abatement measures
- Environmental impact of abatement construction
- Views (opinions) of impacted residents
- Input from the public and local agencies
- Social, economic, environmental, legal, and technological factors

The lifecycle of the noise abatement (above factor [f]) is a consideration in the preliminary reasonableness decision. It is normally not reasonable to construct a wall where planned future use would limit its useful life to less than 20 years.

Section 3 of the Protocol states that a preliminary reasonableness determination of providing noise abatement for the exteriors of residential areas in Activity Category B

(which includes residential areas) begins with a $36,000 base allowance[1] per benefited residence. The $36,000 base allowance is adjusted using the following five factors in order to determine the total reasonable allowance per residence:

- Absolute noise level
- Design year increase over existing noise levels
- Achievable noise reduction
- New highway construction or pre-1978 residences
- Total reasonableness allowance versus project cost

It should be noted that noise abatement is not normally designed for the second-floor level (Caltrans 1998a). However, noise abatement designed to provide a 5 dBA noise reduction for the second-floor level without exceeding the modified allowance is considered within the scope of reasonableness.

NB-1 through NB-5 and NB-9 though NB-11 have been assessed for feasibility based on providing a minimum of 5 dBA or more noise reduction. Cost effectiveness was then evaluated for the feasible noise barriers. These noise barriers provide noise abatement for the residential structures with frequent outdoor/human activities and are assessed based on the number of benefited residences for the residential area.

Based on the critical design receiver, the impacted receptor for which the absolute noise levels, build versus existing noise levels, or achievable noise reduction will be at a maximum when the noise abatement is considered. Table I-5 summarizes the reasonableness of each noise barrier. The estimated noise barrier construction cost was provided by the Department District 12 Design Branch. These costs also include excavation for pile caps; pile caps; masonry blocks; 400-millimeter (mm) CIDH pilings; 15 percent for drainage, traffic, and landscape; and a 10 percent contingency.

Table I-5 shows that NB-2 at 3.7 meters (m) (12 ft) to 4.9 m (16 ft) under the with wrap-around barrier scenario and 3.05 m (10 ft) to 4.9 m (16 ft) under the without wrap-around barrier scenario were determined to be reasonable because the estimated noise barrier construction cost does not exceed the total reasonable allowance. Also, NB-3 with a 4.3 m (14 ft) barrier from STA 27+06 to STA 28+43 and 4.9 m (16 ft) barrier from STA 28+43 to STA 30+76.5 under both the with and without wrap-around barrier scenarios was determined to be reasonable. It should be

[1] Source: Caltrans Traffic Noise Analysis Protocol, August 2006.

Table I-5 Total Reasonable Allowance per Noise Barrier

Noise Barrier No.	Height m (ft)	Approximate Length m (ft)	Noise Attenuation (dBA)	Number of Benefited Residences[1]	Reasonable Allowance per Residence	Total Reasonable Allowance	Estimated Noise Barrier Construction Cost[2]	Station Number[3]		Reasonable?
								Begin	End	
With Wrap-Around Wall[4]										
NB-1	3.05 (10)	66 (215)	7.9	1	$52,000	$52,000	$93,150	21+58	22+20	No
	3.7 (12)	66 (215)	10.0	1	$54,000	$54,000	$110,590			No
	4.3 (14)	66 (215)	11.7	1	$54,000	$54,000	$128,580			No
	4.9 (16)	66 (215)	12.9	1	$54,000	$54,000	$142,030			No
NB-2	2.4 (8)	228 (747)	6.0	3	$52,000	$156,000	$272,000	24+65	26+86	No
	3.05 (10)	228 (747)	7.8	6	$52,000	$312,000	$321,390			No
	3.7 (12)	228 (747)	9.3	8	$54,000	$432,000	$381,560			Yes
	4.3 (14)	228 (747)	10.7	11	$54,000	$594,000	$443,620			Yes
	4.9 (16)	228 (747)	11.9	13	$56,000	$728,000	$490,030			Yes
NB-3	3.05 (10)	374 (1,228)	6.1	1	$42,000	$42,000	$528,390	27+06/ 28+43[6]	28+43[6]/ 30+76.5	No
	3.7 (12)	374 (1,228)	7.9	12	$42,000	$504,000	$627,320			No
	4.3 (14)	374 (1,228)	9.4	14	$44,000	$616,000	$729,360			No
	4.3/4.9 (14/16)[5]	374 (1,228)	9.4	19	$44,000	$836,000	$788,060			Yes
NB-4	3.7 (12)	103 (338)	6.4	2	$40,000	$80,000	$172,580	30+93	31+92	No
	4.3 (14)	103 (338)	7.7	3	$40,000	$120,000	$200,660			No
	4.9 (16)	103 (338)	8.8	4	$40,000	$160,000	$221,650			No
NB-5	3.7 (12)	123 (404)	5.0	2	$48,000	$96,000	$206,100	32+13.5	33+29	No
	4.3 (14)	123 (404)	6.2	2	$50,000	$100,000	$239,620			No
	4.9 (16)	123 (404)	7.2	2	$50,000	$100,000	$264,690			No
NB-6[7]	4.3 (14)	85 (279)	5.7	1	$50,000	$50,000	$165,590	35+38	36+23	No
	4.9 (16)	85 (279)	6.5	1	$52,000	$52,000	$182,910			No
NB-9	4.3 (14)	161 (529)	5.3	1	$50,000	$50,000	$313,650	25+91	27+53	No
	4.9 (16)	161 (529)	6.4	1	$52,000	$52,000	$346,460			No
NB-10	4.3 (14)	145 (475)	5.5	2	$56,000	$112,000	$282,480	27+60	29+6.3	No
	4.9 (16)	145 (475)	7.1	2	$56,000	$112,000	$312,030			No
NB-11	4.3 (14)	59 (195)	5.9	1	$52,000	$52,000	$114,940	29+17	29+74	No
	4.9 (16)	59 (195)	6.7	1	$54,000	$54,000	$126,960			No
NB-12	4.3 (14)	168 (552)	5.9	2	$52,000	$104,000	$327,280	35+20	36+88.5	No
	4.9 (16)	168 (552)	7.0	2	$54,000	$108,000	$361,520			No

Table I-5 Total Reasonable Allowance per Noise Barrier

Noise Barrier No.	Height m (ft)	Approximate Length m (ft)	Noise Attenuation (dBA)	Number of Benefited Residences[1]	Reasonable Allowance per Residence	Total Reasonable Allowance	Estimated Noise Barrier Construction Cost[2]	Station Number[3]		Reasonable?
								Begin	End	
NB-13	3.7 (12)	104 (343)	5.1	1	$52,000	$52,000	$174,260	36+96	38+00	No
	4.3 (14)	104 (343)	6.4	1	$54,000	$54,000	$202,600			No
	4.9 (16)	104 (343)	7.5	1	$54,000	$54,000	$223,800			No
Without Wrap-Around Wall[8]										
NB-1	3.05 (10)	55 (179)	7.9	1	$52,000	$52,000	$77,620	21+65	22+20	No
	3.7 (12)	55 (179)	10.0	1	$54,000	$54,000	$92,160			No
	4.3 (14)	55 (179)	11.7	1	$54,000	$54,000	$107,150			No
	4.9 (16)	55 (179)	12.9	1	$54,000	$54,000	$118,360			No
NB-2	2.4 (8)	215 (707)	6.0	3	$52,000	$156,000	$257,290	24+65	26+78	No
	3.05 (10)	215 (707)	7.8	6	$52,000	$312,000	$304,010			Yes
	3.7 (12)	215 (707)	9.3	7	$54,000	$378,000	$360,930			Yes
	4.3 (14)	215 (707)	10.7	10	$54,000	$540,000	$419,630			Yes
	4.9 (16)	215 (707)	11.8	13	$56,000	$728,000	$463,530			Yes
NB-3	3.7 (12)	366 (1,202)	5.7	12	$40,000	$480,000	$613,840	27+12/ 28+43[6]	28+43[6]/ 30+76.5	No
	4.3 (14)	366 (1,202)	6.4	14	$42,000	$588,000	$713,680			No
	4.3/4.9 (14/16)[9]	366 (1,202)	6.5	19	$42,000	$798,000	$742,550			Yes

Source: LSA Associates, Inc., Final Technical Noise Impact Analysis Report Addendum, July 2008.

1 Number of residences that are attenuated by 5 dBA or more by the modeled barrier.

2 Construction cost calculations provided by the Department District 12 Design Branch. These costs include excavation for pile caps; pile caps; masonry blocks; 400mm CIDH pilings; 15 percent for drainage; traffic, and landscape; and 10 percent contingency.

3 The station numbers are based on the Department station designation numbering in metric units, as shown on the figures.

4 With wrap-around barrier for the west end of NB-1, east end of NB-2, and west end of NB-3.

5 With wrap-around scenario for NB-3 from station number 27+06 to 28+43 is less than 4.5 m (15 ft) from the nearest travel lane, and therefore the maximum height is 4.3 m (14 ft).

6 This station number is based on current design plans provided by the Department District 12 Design Branch.

7 Shaded row indicate that noise barriers are located outside of the project limits and was not evaluated.

8 Without wrap-around barrier for the west end of NB-1, east end of NB-2, and west end of NB-3.

9 Without wrap-around scenario for NB-3 from station number 27+12 to 28+43 is less than 4.5 m (15 ft) from the nearest travel lane, and therefore the maximum height is 4.3 m (14 ft).

CIDM = case-in-drilled hole
dBA = A-weighted decibels
ft = feet
m = meters

noted the NB-3 from STA 27+06 to STA 28+43 is located less than 4.5 m (15 ft) from the nearest travel lane; therefore, the maximum noise barrier height is 4.3 m (14 ft). NB-1, NB-4, NB-5, NB-9, NB-10, NB-11, and the remaining noise barrier heights for NB-2 and NB-3 for both with and without the wrap-around barrier scenarios were determined to be not reasonable because the estimated noise barrier construction cost exceeds the total reasonable allowance.

Parallel Barriers

Parallel barrier effects occur when noise barriers or retaining walls are located on both sides of the roadway, reflecting traffic noise back and forth across the roadway multiple times and building up a reverberant sound field between them. This reverberation increases noise levels at nearby receptors on both sides of the roadway, compared to what would exist without the opposite-side barrier. These noise level increases would also potentially reduce a noise barrier's noise attenuation performance. To avoid a reduction in the performance of parallel reflective barriers, the width-to-height ratio of the roadway section to the barriers should be at least 10:1.

Based on the project plans, parallel barriers would be located along Ortega Highway from Palm Hill Drive to Via Errecarte. The project proposes retaining walls on the north side of Ortega Highway and noise barriers (NB-2 and NB-3) on the south side of Ortega Highway. The distances between the retaining walls and noise barriers range from 30.5 m (100 ft) to 54.8 m (125 ft). As the proposed noise barrier heights range from 4.3 m (14 ft) to 4.9 m (16 ft), the width-to-height ratio of the roadway section to the barriers would be less than 10:1. Therefore, parallel barriers along Ortega Highway from Palm Hill Drive to Via Errecarte would potentially create noise level increases due to noise reflections and reduce the noise barrier's noise attenuation performance. However, as a project feature, the project proposes as an option to construct noise barriers with absorptive material (Sound Fighter Systems) on the interior side facing the traffic to reduce or eliminate noise reflections. The Sound Fighter System is rated to have a noise reduction coefficient (NRC) of 1.05, which would absorb 100 percent of the reflective noise. Therefore, no measureable noise level increases would occur as a result of parallel barriers, and noise barrier noise attenuation performance would not be reduced due to parallel barriers.

Preliminary Noise Abatement Decision and Recommendations

Based on this study so far accomplished and consistent with the guidelines in the Department Traffic Noise Analysis Protocol, noise abatement measures in the form of NB-2 and NB-3 are proposed to be constructed as part of the proposed project. Table

I-6 shows NB-2 and NB-3 along with their height, approximate length, location, and beginning and ending station numbers. Figures I-1 and I-2 show the location of NB-2 and NB-3 on Sheets 2 and 3, respectively. It should be noted that the maximum barrier height should not exceed 4.3 m (14 ft) in height (measured from the pavement surface at the face of the safety-shape barrier) when located 4.5 m (15 ft) or less from the edge of the traveled way and should not exceed 4.9 m (16 ft) in height above the ground line when located more than 4.5 m (15 ft) from the traveled way. In addition, noise barriers in this report are not a commitment (see Section 2.2.7 for noise analysis) and are only recommended for consideration. The final decision concerning the noise barriers will be made upon completion of the project design and public involvement process. Based on the Traffic Noise Analysis Protocol, "Noise abatement will not be provided if 50 percent or more of the affected residents do not want it."

Table I-6 Preliminary Reasonable and Feasible Noise Barriers

Noise Barrier No.	Land Use	Highway Side	Height m (ft)	Beginning and Ending Top of Barrier Elevation (ft)		Beginning and Ending Station Number[1]	
				Begin	End	Begin	End
With Wrap-Around Barrier[2]							
NB-2	SFR	South	3.7 (12)	161.3	151.4	24+65	26+86
	SFR	South	4.3 (14)	163.3	153.4		
	SFR	South	4.9 (16)	165.3	155.4		
NB-3[3]	SFR	South	4.3(14)/4.9(16)	158.4(160.4)/ 167.3(169.3)	167.3(169.3)/ 178(180)	27+06/ 28+43[4]	28+43[4]/ 30+76.5
Without Wrap-Around Barrier[5]							
NB-2	SFR	South	3.05 (10)	159.3	155.4	24+65	26+78
	SFR	South	3.7 (12)	161.3	157.4		
	SFR	South	4.3 (14)	163.3	159.4		
	SFR	South	4.9 (16)	165.3	161.4		
NB-3[6]	SFR	South	4.3(14)/4.9(16)	160(162)/ 167.3(169.3)	167.3(169.3)/ 178(180)	27+12/ 28+43[4]	28+43[4]/ 30+76.5

Source: LSA Associates, Inc., July 2008.

1 The station numbers are based on the Department station designation numbering in metric units, as shown on the figures.

2 With wrap-around barrier for the west end of NB-1, east end of NB-2, and west end of NB-3.

3 With wrap-around scenario for NB-3 from station number 27+06 to 28+43 is less than 4.5 m (15 ft) from the nearest travel lane and therefore the maximum height is 4.3 m (14 ft).

4 This station number is based on current design plans provided by the Department District 12 Design Branch.

5 Without wrap-around barrier for the west end of NB-1, east end of NB-2, and west end of NB-3.

6 Without wrap-around scenario for NB-3 from station number 27+12 to 28+43 is less than 4.5 m (15 ft) from the nearest travel lane and therefore the maximum height is 4.3 m (14 ft).

ft = feet

m = meters

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Appendix J City of San Juan Capistrano Tree Removal Ordinance

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Sec. 9-2.349. Tree removal permit.

(a) Purpose and intent. The purpose and intent of this section is to provide for the preservation of existing trees within the City while permitting reasonable use and development of properties containing such trees. For the purposes of this section, "tree" shall mean a living woody perennial plant having a trunk diameter greater than six (6) inches measured at a point three (3) feet above the ground.

(b) Tree removal permit procedures.

(1) No removal without permit. No tree, unless specifically exempted by subsection (e) of this section, shall be removed without prior approval of a tree removal permit pursuant to the requirements of this section. Said action on the approval or denial of the tree removal permit shall require specific findings based on the factors outlined in subsection (c). Applications for tree removal may be filed with the Department of Planning Services. The Planning Director shall prescribe the form of application and the supporting information required to initiate the tree removal application review. Once an application is received by the Department of Planning Services, the application will be reviewed for completeness. If the Department of Planning Services finds the application to be complete, then the application shall be processed in accordance to the procedure depicted subsections (b)(2) and (b)(3) of this section. If the application is found to be incomplete, the Department of Planning Services will notify the applicant in writing within thirty (30) days what additional information is required, and the application will not be processed until that information is received by the Department of Planning Services.

(2) Removals not associated with new development. Applications for removal of trees on public or private property which are not associated with new development projects shall be approved or denied by the Tree Inspector. Tree removal applications shall be processed in accordance to the procedure depicted in Figure 2-20. The Tree Inspector may require an arborist to prepare and submit a report on the health of the specific tree.

(3) Removal associated with new development. Applications for removal of trees on private property which are associated with new development projects shall be approved or denied by the decisionmaking body for that project. Tree removal applications shall be processed in accordance to the procedure depicted in Figure 2-20. In considering development applications where tree removals are requested, the City may cause to be prepared, a report by an arborculturalist. Such report shall include, as a minimum, an evaluation on the health of the tree(s), identification of measures which can be incorporated into project design to preserve said trees, and any recommended modifications to project design necessary to protect the trees.

(4) Imposition of conditions. The Tree Inspector or decisionmaking body may impose conditions on tree removal permit approvals. Such conditions may include, but are not limited to, the replacement of a tree to be removed with new trees of similar size.

(c) Factors to influence approval or denial. The reviewing body shall consider the following factors in determining whether to approve or deny a tree removal permit application:

(1) The condition of existing trees with respect to disease, general health, and ability to preserve;

(2) Whether a project site plan has been designed to preserve the maximum number of existing trees on the site;

(3) Whether the design and placement of new public utilities and facilities have avoided tree removal;

(4) The topography of the property and the effect of tree removal on erosion, soil retention, and the diversion or increased flow of surface waters;

(5) The adverse visual impacts of tree removals upon surrounding properties and streets the decrease in visual buffering or construction mitigation which would result from a proposed tree removal;

(6) Foundation, slab, wall or other property damage,. or excessive nuisance problems caused by an existing tree

(7) Material interference by an existing tree with the safe and efficient maintenance of an existing electrical, sewer, water, or other utility line;

(8) The health of the tree or trees proposed for removal and their likely remaining life if preserved

(9) Possible future hazards to traffic, pedestrians, general public safety, or property if the trees) is preserved and

(10) The interests of the City in the protection and conservation of trees and other irreplaceable natural resources from pollution impairments or destruction.

(d) Appeals. Any decision regarding tree removal may be appealed by the applicant or by an affected City resident or property owner in accordance with the provisions of Section 9-2.311 Appeals.

(e) Exemptions.

(1) Emergencies. In the event of an emergency wherein a tree is causing an immediate threat to human life or to property, the Tree Inspector, Public Works Director, or the Sheriffs Department, Fire Department, or City employee in charge at the scene may authorize the removal of such tree without issuance of a removal permit.

(2) Orchards. Trees which are growing on property currently in use as a nursery, garden center, tree farm, or orchard, where such trees, or their produce, are being grown for the purposes of sale, and trees which are being completely removed in order to utilize the land for the production of leafy vegetation or open space, shall be exempt from the provisions of this section. (§ 2, Ord. 869)