THE CITY OF SAN DIEGO

DEVELOPMENT SERVICES DEPARTMENT
Date of Notice: Friday, March 12, 2010
PUBLIC NOTICE OF A
DRAFT ENVIRONMENTAL IMPACT REPORT
WSB No. S-00851.02.06

The City of San Diego Entitlements Division has prepared a draft Environmental Impact Report for the following project and is inviting your comments regarding the adequacy of the document. **Your comments must be received by Tuesday, April 27, 2010, to be included in the final document considered by the decision-making authorities.** Please send your written comments to the following address**: E. Shearer-Nguyen, Environmental Planner, City of San Diego Development Services Center, 1222 First Avenue, MS 501, San Diego, CA 92101 or e-mail your comments to DSDEAS@sandiego.gov with the Project Name and Number in the subject line.**

General Project Information:

- Project Name: **STATE ROUTE 163/FRIARS ROAD INTERCHANGE PROJECT**
- Project No. 72782/SCH No. 2005111032
- Community Plan Area: Mission Valley, Linda Vista, Serra Mesa
- Council District: 6

Subject: A SITE DEVELOPMENT PERMIT for improvements to the State Route (SR) 163/Friars Road interchange and adjacent streets in the central portion of Mission Valley in southwestern San Diego County. The City of San Diego (City) is coordinating with the California Department of Transportation (Caltrans) District 11 and the Federal Highway Administration (FHWA) to implement proposed improvements. Project improvements would encompass SR 163 from the merge with Interstate (I-) 8 in the south to the SR 163/Genesee Avenue interchange in the north, as well as the Friars Road corridor from west of Avenida de las Tiendas to west of Mission Center Road. The total length of the Project is approximately 2.1 miles along the SR 163 mainline and 0.8 mile on Friars Road. The Project would include construction of new at-grade lanes (also referred to as "collector-distributor") on the west side of southbound SR 163 approaching Friars Road, connecting to westbound I-8/Hotel Circle North. Additional design elements would involve modifications to the existing SR 163/Friars Road interchange partial cloverleaf, including the addition of a flyover bridge from Ulric Street to southbound SR 163 and the widening of Friars Road and the Friars Road Bridge. The Friars Road Bridge would be widened over SR 163 from 6 to 10 lanes, and sidewalks would be added along both sides of the bridge. Friars Road east of the northbound SR 163 on-ramp would be widened. The west side of Frazee Road immediately north and south of Friars Road also would be widened. The median in Avenida de las Tiendas would be removed and the roadway would be restriped to provide three southbound lanes and three northbound lanes. Traffic signals would either be installed or upgraded at Friars Road/Ulric Street, Ulric Street/southbound SR 163 on-ramp, Friars Road/northbound SR 163 on-ramp, Frazee Road/Murray Canyon Road. Fifteen retaining walls and 10 noise attenuation barriers would be constructed along SR 163 and Friars

Road. The study area lies within the boundaries of three City of San Diego community plans: Mission Valley, Linda Vista and Serra Mesa.

Applicant: City of San Diego, Engineering and Capital Improvement Projects Department, Transportation and Drainage Design Division.

Recommended Finding: The draft Environmental Impact Report concludes that the project would result in significant environmental impacts to the following areas: TRAFFIC/CIRCULATION, LAND USE/MULTIPLE SPECIES CONSERVATION PROGRAM (MSCP), AESTHETICS/NEIGHBORHOOD CHARACTER/VISUAL QUALITY BIOLOGICAL RESOURCES, NOISE, AND AIR QUALITY.

Availability in Alternative Format: To request this Notice, the draft Environmental Impact Report, Initial Study, and/or supporting documents in alternative format, call the Development Services Department at 619-446-5460 or (800) 735-2929 (TEXT TELEPHONE).

Additional Information: For environmental review information, contact E. Shearer-Nguyen at (619) 446-5369. The draft Environmental Impact Report, Initial Study, and supporting documents may be reviewed, or purchased for the cost of reproduction, at the Fifth floor of the Development Services Center. If you are interested in obtaining additional copies of either the Compact Disk (CD) or a hard-copy of the draft Environmental Impact Report, they can be purchased for an extra cost of $3.00 for the CD and $80.00 for a hardcopy of the Environmental Impact Report. For copies of the separately bound technical appendices, please contact EAS for the cost of reproduction. For information regarding public meetings/hearings on this project, contact Jeannette Temple at (619) 557-7908. This notice was published in the SAN DIEGO DAILY TRANSCRIPT, placed on the City of San Diego web-site (http://clerkdoc.sannet.gov/Website/publicnotice/pubnotceqa.html), and distributed on Friday, March 12, 2010.

Cecilia Gallardo, AICP
Assistant Deputy Director
Development Services Department

City of San Diego
Development Services

Land Development
Review Division
(619) 446-5460

ENVIRONMENTAL IMPACT REPORT

Project No. 72782
SCH No. 2005111032

SUBJECT: STATE ROUTE 163/FRIARS ROAD INTERCHANGE PROJECT: A SITE DEVELOPMENT PERMIT for improvements to the State Route (SR) 163/Friars Road interchange and adjacent streets in the central portion of Mission Valley in southwestern San Diego County. The City of San Diego (City) is coordinating with the California Department of Transportation (Caltrans) District 11 and the Federal Highway Administration (FHWA) to implement proposed improvements. Project improvements would encompass SR 163 from the merge with Interstate (I-) 8 in the south to the SR 163/Genesee Avenue interchange in the north, as well as the Friars Road corridor from west of Avenida de las Tiendas to west of Mission Center Road. The total length of the Project is approximately 2.1 miles along the SR 163 mainline and 0.8 mile on Friars Road. The Project would include construction of new at-grade lanes (also referred to as "collector-distributor") on the west side of southbound SR 163 approaching Friars Road, connecting to westbound I-8/Hotel Circle North. Additional design elements would involve modifications to the existing SR 163/Friars Road interchange partial cloverleaf, including the addition of a flyover bridge from Ulric Street to southbound SR 163 and the widening of Friars Road and the Friars Road Bridge. The Friars Road Bridge would be widened over SR 163 from 6 to 10 lanes, and sidewalks would be added along both sides of the bridge. Friars Road east of the northbound SR 163 on-ramp would be widened. The west side of Frazee Road immediately north and south of Friars Road also would be widened. The median in Avenida de las Tiendas would be removed and the roadway would be restriped to provide three southbound lanes and three northbound lanes. Traffic signals would either be installed or upgraded at Friars Road/Ulric Street, Ulric Street/southbound SR 163 on-ramp, Friars Road/northbound SR 163 on-ramp, Frazee Road/Murray Canyon Road. Fifteen retaining walls and 10 noise attenuation barriers would be constructed along SR 163 and Friars Road. The study area lies within the boundaries of three City of San Diego community plans: Mission Valley, Linda Vista and Serra Mesa. Applicant: City of San Diego, Engineering and Capital Improvement Projects Department, Transportation and Drainage Design Division.

CONCLUSIONS:

This Environmental Impact Report (EIR) analyzes the environmental impacts of the proposed Project. The proposed discretionary actions consist of a Site Development Permit (City), temporary and permanent land and easement acquisitions (City), Noise Control Permit (City), Right-of-Entry Permit (City), Section 404 Permit (U.S. Army Corps of Engineers), Section 7 consultation (informal) (U.S. Fish and Wildlife Service), longitudinal encroachment permits (Caltrans District 11), Section 106 consultation (State Historic Preservation Officer), Section 1602 Streambed Alteration Agreement (California Department of Fish and Game), Section 401 Certification (California Regional Water Quality Control Board [RWQCB]), conformance with Municipal Storm Water Permit (RWQCB), conformance with General Groundwater Extraction Waste Discharge Permit (RWQCB), conformance with Caltrans Permit for Storm Water Discharges from Caltrans Properties, Facilities, and Activities (State Water Resources Control Board [SWRCB]), General Construction Activity Storm Water Permit (SWRCB), and approval of a bus turnout at the northwest and southeast corners of Friars Road/Frazee Road (Metropolitan Transit System).

Implementation of the proposed Mitigation Monitoring and Reporting Program (MMRP) included in Chapter 12.0 of the EIR would reduce the environmental effects of the Project. Direct impacts related to Aesthetics, Noise and Air Quality, however, are considered significant and unmitigated. Mitigation proposed for biological, historical and paleontological resources and public services and facilities is considered adequate to reduce direct impacts to below a level of significance.

SIGNIFICANT UNMITIGATED IMPACTS:

AESTHETICS/NEIGHBORHOOD CHARACTER/VISUAL QUALITY

The Project would affect visual quality, especially with regard to views from public roadways, as a result of several Project elements. The Project would improve roads located immediately adjacent to developed uses, private property, sensitive biological habitat and steep terrain. These right-of-way constraints result in a number of retaining walls exceeding 6 feet in height or 50 feet in length (which is the significance threshold) in order to minimize property take or extensive encroachment into the sensitive habitat and steep hillsides abutting southbound SR 163. The majority of these walls would be screened by Project landscaping, substantial enough to reduce visual impacts to less than significant levels. A significant impact, conservatively is identified for a retaining wall (Retaining Wall No. 24) on the south side of Friars Road and east of SR 163 due to both the removal of existing landscape and an inability to install consistent Project landscape due to limited right-of-way. A 1,493-foot-long and (maximum) 32-foot-high retaining wall (Soil Nail Wall No. 75) along SR 163 also would result in significant impacts under City criteria due to its very high visibility and the lack of complete wall screening anticipated under the Project. Additionally, construction-period effects (up to an assumed six years) would result in significant visual impacts related to the creation of a "disorganized appearance" until materials, fencing, equipment, etc., are removed and wall-screening vegetation takes hold. No feasible mitigation is available for these impacts.

NOISE

The City has identified a need for nighttime construction activities throughout the Project area due to high daytime traffic volumes on Friars Road and SR 163. This is necessary to minimize potential traffic congestion that could result from temporary elimination of lanes during the day. The Municipal Code specifies that the nighttime noise impacts to single-family residences shall not exceed a property line impact of 40 A-weighted decibels (dBA; hourly) between 10:00 p.m. and 7:00 a.m. and 45 dBA for the same hours for multi-family residential. The ambient nighttime noise levels at area residences are already elevated, with hourly noise levels ranging from approximately 65 to 75 dBA time-averaged sound level (L_{eq}) at residences without noise barriers adjacent to SR 163 and a normal lowest level nighttime impact of from 64 to 66 dBA L_{eq}. Although the existing elevated noise levels may somewhat diminish the relative impact of construction period noise, it is acknowledged that the nighttime construction would not comply with the City's allowable hours for construction activities, and that nighttime construction noise levels would exceed the City thresholds identified for the property line. Nighttime construction noise impacts are therefore considered significant. Property line barriers would need to be constructed of very thick material and in excess of 250 feet in height (estimated since normal barrier analysis is not applicable to this height of barrier) to reduce the noise impacts to below 40 dBA L_{eq}. Therefore, no form of reasonable mitigation is available which would reduce noise impacts to less than 40 dBA L_{eq} at the impacted residences.

Mitigation Measure N-2 would include implementation of appropriate noise attenuation measures to reduce noise impacts at the first floor of residences in the vicinity of construction activities to 65 dBA L_{eq} or less, if residents agree to have a temporary wall placed at the edge of their property. While Mitigation Measure N-2 would reduce impacts associated with nighttime construction, such impacts would remain significant.

AIR QUALITY

The Project would result in short-term significant impacts related to emissions of oxides of nitrogen (NO_X) during the construction period. Mitigation Measure AQ-1 would partially mitigate significant short-term emissions of NO_X. Although it would not reduce impacts to below a level of significance, it is considered to represent the maximum feasible mitigation at this time. The requirement that 10 percent of the construction fleet be retrofitted and/or repowered was determined to be a reasonable requirement based on the amount of contractors whose fleets have already been retrofitted and engines repowered as a result of the local and neighboring Carl Moyer Programs. However, the impact remains significant and unmitigated.

ALTERNATIVES:

The alternatives described below were reviewed in detail in the EIR. Project alternatives considered but rejected included locational and system design options, as well as the No Project Alternative. These rejected alternatives include all of the potential alternatives developed for the Project. This is unusual, but does not result in any inadequacy under CEQA. There are no potential build

alternatives that would reduce significant environmental effects of the Project because (1) the Project is severely constrained by the surrounding topography, natural resources and land uses; and (2) the Project development process consisted of extensive engineering and environmental evaluation of alternative project elements in an effort to provide the least impacting, most efficient design.

ALTERNATIVE 6

Alternative 6 was based on the same northbound interchange design as the Project, but incorporated the southbound design element considered least impactive prior to design of the Project's southbound portion. Alternative 6 would have implemented all of the upgrades to SR 163 through lanes and Friars Road/Ulric Street local roads discussed under the Project. Improvements to the northbound on- and off-ramps in the eastern quadrants also would have been the same as those described for the Project. Many elements were similar to the Project; including the flyover and retaining walls. A major design element specific to Alternative 6 would have been the construction of a collector lanes/bypass viaduct structure. A "viaduct structure" is a combination retaining wall and bridge structure. A viaduct structure is useful in areas where bridges are constructed near steep hillsides. The bypass structure would have crossed over the existing Friars Road Bridge and under the elevated San Diego Trolley Bridge before crossing the San Diego River parallel to the existing SR 163 Bridge. The southbound SR 163 exit lanes for eastbound and westbound Friars Road would have passed under this structure and the Friars Road Bridge. Implementation of Alternative 6 would have required the relocation of two or more electrical transmission towers.

Because the construction footprints for Alternative 6 and the Project are similar, impacts to land use, historical resources, hydrology/water quality, geology/seismicity/soils, paleontological resources, hazardous materials, and utilities and solid waste would be anticipated to be similar. For each of these topics, ultimate impacts would be less than significant for either alternative. With regard to biological resources, riparian effects would be identical and differences in impacts to non-native grassland and other non-native vegetation would be negligible. Impacts associated with aesthetics, noise and air quality would have been more significant under Alternative 6 than under the Project.

Alternative 6 was, overall, similar to the Project in terms of alternative benefits and footprint impacts. When this similarity was combined with greater adverse noise, air quality and visual effects, and the need for transmission tower relocation, as well as an extended construction period and delayed benefits, Alternative 6 was eliminated from further consideration.

REDUCED FOOTPRINT ALTERNATIVE

The Reduced Footprint Alternative would have improved City streets as designated in the *Mission Valley Community Plan* (City 1985). The Reduced Footprint Alternative had three components that would include southbound SR 163 improvements, including on- and off-ramps; northbound SR 163 improvements, including on- and off-ramps; and Friars Road and Ulric Street improvements. Improvements to SR 163 would have been limited to the interchange with Friars Road; no improvements to the SR 163 mainlines would have occurred.

Because the construction footprint for the Reduced Footprint Alternative was smaller than that of the Project, potential adverse effects would have been incrementally reduced to land use, historical resources, hydrology/water quality, geology/seismicity/soils, paleontological resources, hazardous materials, and public facilities and services. In addition, impacts associated with aesthetics and construction-period air quality would have been reduced under this alternative. Impacts to traffic (and associated operational-period air quality) would have increased relative to the proposed Project if the Reduced Footprint Alternative was implemented. Impacts associated with biological resources and noise would have been similar overall under both the Reduced Footprint Alternative and Project, although they would have varied in type (the Reduced Footprint Alternative would have avoided any impacts associated with crossing the San Diego River, but would have resulted in increased impacts to Diegan coastal sage scrub and non-native grassland).

Although environmental impacts would have been generally similar to or less than those assessed for the Project due to the more limited footprint, the Reduced Footprint Alternative would have failed to achieve the Project's objectives. The alternative would not have alleviated unacceptable freeway weave operations on southbound SR 163 north of Friars Road in the future, relieved unacceptable ramp merge operations on southbound SR 163 at Friars Road or maintained acceptable freeway mainline operations on southbound SR 163 north of Friars Road. This alternative was eliminated from further review, therefore, because it would not have met Project objectives, being that it would not have achieved acceptable levels of service on the interchange through year 2030 nor sufficiently relieved traffic congestion, delays and queues.

NO PROJECT ALTERNATIVE

The No Project Alternative assumes that the SR 163/Friars Road interchange would not be improved, and no major roadway construction would occur within the study area. Existing maintenance activities would continue. No approvals from the City or other agencies would be required (although a General Plan Amendment/Community Plan Amendment to delete the currently planned improvements potentially could be pursued).

Because the No Project Alternative would not involve any physical improvements, it would avoid potential impacts related to hydrology/water quality, biological resources, historical resources, geology/seismicity/soils, paleontological resources, aesthetics/neighborhood character/visual quality, utilities and hazardous materials. The No Project Alternative would result in a significant and unmitigated impact to land use, traffic, noise and air quality. The No Project Alternative would not, however, meet the basic Project objectives or comply with the applicable planning documents, and would result in some increased impacts over the Project as proposed (i.e., traffic, noise, air quality).

MITIGATION, MONITORING AND REPORTING PROGRAM INCORPORATED INTO THE PROJECT:

A series of mitigation measures are identified in the EIR to reduce environmental impacts. These measures are summarized below. The detailed mitigation measures are contained in Chapter 12.0 of the EIR.

BIOLOGICAL RESOURCES (DIRECT AND INDIRECT)

Sensitive Habitats

The Project would result in direct impacts to disturbed southern willow scrub, southern cottonwood-willow riparian forest, Diegan coastal sage scrub and non-native grassland; such impacts are considered significant. Implementation of Mitigation Measures BR-1, BR-2, BR-3 and BR-4 would offset these impacts. Impacts to disturbed southern willow scrub and southern cottonwood-willow riparian forest would be mitigated at a 3:1 ratio with a minimum 1:1 creation component (BR-1 and BR-2). This 1:1 creation component would result in no net loss of these two wetland habitats. Impacts to Diegan coastal sage scrub and non-native grassland would be mitigated at 1:1 and 0.5:1 ratios, respectively, via contribution to the City's Habitat Acquisition Fund (BR-3). This fund would be used to acquire and conserve habitat within the City. Impacts to sensitive habitats outside of the proposed construction area would be avoided through the delineation of Multi-Habitat Planning Area (MHPA) boundaries on all construction documents and the presence of a biological monitor full-time during construction activities (BR-4 and BR-5). Therefore, implementation of Mitigation Measures BR-1, BR-2, BR-3 and BR-4 and BR-5 would reduce direct impacts to sensitive habitat to below a level of significance.

Jurisdictional Waters

The Project would result in impacts to jurisdictional areas. Mitigation Measure BR-6 requires the evidence of compliance, pursuant to Sections 401 and 404 of the Clean Water Act and Section 1600 et seq. of the California Fish and Game Code. With this mitigation measure, impacts to jurisdictional areas would be reduced to below of level of significance.

Sensitive Plants

The Project would result in direct impacts to two San Diego barrel cacti. Mitigation Measure BR-7 requires that the two San Diego barrel cacti be salvaged and relocated to areas of suitable habitat within the biological study area. Implementation of this mitigation measure would avoid impacts to this species; therefore, impacts would be reduced to below a level of significance.

General Avian

Development of the Project could potentially result in impacts to bird species if grading/brush management were to occur in or adjacent to native habitat during the typical bird breeding season (February 1 to September 15). Mitigation Measure BR-8 would require that the Project biologist conduct a pre-grading survey for active nests in the development area and within 300 feet of it. If active nests are detected, or considered likely, a letter report summarizing the conclusions of the survey would include mitigation in conformance with the City's Biology Guidelines (i.e., appropriate follow-up surveys, monitoring schedules, construction and noise barriers/buffers, etc.). Therefore, implementation of Mitigation Measure BR-8 would reduce impacts to nesting birds to below a level of significance.

Raptors

Development of the Project could potentially result in impacts to raptor species if grading occurs within 500 feet of an active raptor nest during the raptor breeding season (February 1 through September 15). Mitigation Measure BR-9 would require that the Project biologist conduct a pre-grading survey for active nests within 500 feet of the development area. If active nests are detected, a letter report summarizing the conclusions of the survey would include mitigation in conformance with the City's Biology Guidelines (i.e., appropriate buffers, monitoring schedules, etc.). Therefore, implementation of Mitigation Measure BR-9 would reduce impacts to raptors to below a level of significance.

Listed Avian Species

Development of the Project could potentially result in impacts to the least Bell's vireo and southwestern willow flycatcher if construction activities would result in noise levels exceeding 60 A-weighted decibel (dB[A]) hourly average at the edge of occupied habitat. Implementation of Mitigation Measures BR-10 and BR-11 would include pre-construction surveys for the presence of the least Bell's vireo and southwestern willow flycatcher by a qualified biologist of wetland areas that would be subject to construction noise levels exceeding 60 dB(A) hourly average. If these species are present, no clearing, grubbing or grading of occupied habitat would be permitted during the species' breeding seasons (March 15 through September 15 for least Bell's vireo and May 1 through September 1 for southwestern willow flycatcher). In addition, during the species' breeding seasons, no construction activities would occur within any portion of the site where such activities would result in noise levels exceeding 60 dB(A) hourly average at the edge of occupied habitat. Noise attenuation measures (e.g., berms, walls) would be implemented to ensure that noise levels resulting from construction activities would not exceed 60 dB(A) hourly average at the edge of habitat occupied by the least Bell's vireo and/or southwestern willow flycatcher. Therefore, implementation of Mitigation Measures BR-10 and BR-11 would reduce impacts to least Bell's vireo and southwestern willow flycatcher to below a level of significance.

HISTORICAL RESOURCES (DIRECT)

No significant effects to archaeological or structural resources were identified or are anticipated. Nonetheless, in accordance with current City protocols, a significant but mitigable potential impact is identified based on the potential for unknown buried resources to exist within the alluvial portions of the Area of Potential Effect associated with the San Diego River. Mitigation Measures HR-1 through HR-6 would require the presence of an archaeological monitor and Native American monitor during grading activities. The archaeological monitor would be present full-time. The Native American monitor would determine the extent of their own presence during construction-related activities. In the event of a discovery, the archaeological monitor would direct the contractor to temporarily divert trenching activities in the area of discovery. If human remains are discovered, work would halt in that area and the procedures as set forth in the California Public Resources Code (Section 5097.98) and State Health and Safety Code (Section 7050.5) would be undertaken. Therefore, implementation of Mitigation Measures HR-1 through HR-6 would reduce potential impacts to unknown buried cultural resources to below a level of significance.

PALEONTOLOGICAL RESOURCES (DIRECT)

The Project could affect sensitive paleontological resources due to excavation. Mitigation Measures PR-1 through PR-5 would require the presence of a qualified paleontologist full-time during grading/excavation/trenching activities that could result in impacts to formations with high and/or moderate resource sensitivity. In the event of a discovery, the paleontological monitor would direct the contractor to temporarily divert trenching activities in the area of discovery. All fossil remains collected would be cleaned, catalogued and permanently curated with an appropriate institution. Therefore, implementation of Mitigation Measures PR-1 through PR-5 would reduce impacts to paleontological resources to below a level of significance.

NOISE (DIRECT)

Temporary, short-term impacts associated with vibratory pile installation would be significant. Mitigation Measure N-1 would require the contractor to baffle vibratory pile installation equipment and/or reduce the number of hours per day the equipment is in operation to achieve a 12-hour average noise level of 75 dBA or less at the closest home, if such equipment is proposed to be used within 500 feet of a residence. Therefore, implementation of Mitigation Measure N-1 would reduce temporary, short-term impacts associated with vibratory pile installation to below a level of significance.

Nighttime construction noise also would be significant. Mitigation Measure N-2 requires that a qualified acoustician prepare and submit to the City Manager (or designee) specifications of appropriate noise attenuation measures to reduce noise impacts at the first floor of residences in the vicinity of construction activities to 65 dBA L_{eq} or less. All nighttime noise attenuation measures agreed to by the residents and specified by the City Manager would be implemented during the construction period. While Mitigation Measure N-2 would reduce impacts associated with nighttime

construction, such impacts would remain significant. There are no feasible mitigation measures available to reduce nighttime construction noise impacts to below a level of significance, as stated above.

AIR QUALITY (DIRECT)

The Project would result in short-term significant impacts related to emissions of NO_x during the construction period. Mitigation Measure AQ-1 would require that 10 percent of the Project construction fleet use any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters and/or California Air Resources Board certified Tier I, II or III equipment. Although Mitigation Measure AQ-1 would not reduce impacts to below a level of significance, it is considered to represent the maximum feasible mitigation at this time, as stated above.

PUBLIC FACILITIES AND SERVICES (DIRECT)

Temporary impacts associated with demolition and construction waste disposal would be significant. Mitigation Measure PF-1 would require the preparation and implementation of a Waste Management Plan, which would minimize the Project's solid waste impact and ensure compliance with applicable policies and regulations. Therefore, implementation of Mitigation Measure PF-1 would reduce impacts associated with demolition and construction waste disposal to below a level of significance.

PUBLIC REVIEW:

The following individuals, organizations and agencies received a copy or notice of the draft EIR and were invited to comment on its accuracy and sufficiency.

Distribution:

FEDERAL
United States of Transportation (2)
United States Environmental Protection Agency (19)
United States Fish & Wildlife Service (23)
United States Army Corps of Engineers (26)

STATE
California Department of Transportation Planning (31)
California Department of Transportation Planning, Division of Aeronautics (51)
California Dept. of Fish & Game 32)
California Environmental Protection Agency (37A)
California Department of Parks and Recreation, Office of Historic Preservation (41)
California Natural Resources Agency (43)
California Regional Water Quality Control Board (44)

STATE (CONTINUED)
State Clearinghouse (46) [15 CDs/Executive Summary – 15 Copies]
California Air Resources Board (49)
Native American Heritage Commission (56)
California Department of Highway Patrol (58)

COUNTY
Air Pollution Control District (65)
Department of Environmental Health (MS D-561)

CITY OF SAN DIEGO
Mayor's Office, MS 11A
Councilmember Lightner/District 1, MS 10A
Councilmember Faulconer/District 2 MS 10A
Councilmember Gloria/District 3, MS 10A
Councilmember Young/District 4, MS 10A
Councilmember DeMaio/District 5, MS 10A
Councilmember Frye/District 6, MS 10A
Councilmember Emerald/District 7, MS 10A
Council District Hueso/District 8, MS 10A
Transportation Development (78, 78A)
Fire and Life Safety Services (79)
Environmental Services Department (80)
Library Department – Government Documents (81)
Central Library (81A)
Linda Vista Library (81M)
Mission Valley Library (81R)
Serra Mesa Library (81GG)
Police Research and Analysis (84)
Real Estate Assets Department (85)
Engineering and Capital Projects (86)
Historical Resources Board (87)
Park & Recreation Deptartment (89)
Community Forest Advisory Board (90)
Wetland Advisory Board (91A)
General Services (92)
Park Development (93)
Environmental Services (93A)
Wetland Advisory Board (171/MS 35)
Facilities Financing (MS 606F)
Gus Brown, Storm Water Department (MS 44)
Drew Kleis, Storm Water Department (MS 1900)
Government Relations (MS 51M)

CITY OF SAN DIEGO (CONTINUED)
Niki McGinnis, Public Utilities (MS 906)
Mike Elling, Public Utilities (MS 901)
Mike Tussey, Airports Department (MS 14)
Development Services Department
    EAS, E Shearer-Nguyen/M Herrmann) (MS 501)
    Planning Review, R Abalos (MS 501)
    Flood Plain Administrator, S Lindsay (MS 501)
    Transportation, V Huffman/A Gonsalvez (MS 501)
    Geology, Pat Thomas (MS 401)
Community Planning and Community Investment Department
    MSCP, J Krosch (MS5A)
    Parks, J Harkness (MS5A)
    Long-Range, B Schoenfish (MS4A)
    Parks , Robin Shifflet (MS 5A)
Water Review, Chris Gascon (MS908A)
Wastewater Review, Bobbi Salvini (MS 922)
Engineering and Capital Improvements, Linda Marabian (MS609)
Engineering and Capital Improvements, Farah Mahzari (MS609)
City Attorney [2 Copies] (MS56A)

OTHER ORGANIZATIONS AND INTERESTED INDIVIDUALS
City of Santee (104)
SANDAG (108)
San Diego Transit Corporation (112)
San Diego Gas & Electric (114)
Metropolitan Transit Systems (115)
San Diego City Schools (132)
San Diego Community College District (133)
University of California San Diego Library (134)
San Diego River Park Foundation (163)
Environmental Law Society (164)
Sierra Club (165)
Sierra Club (165A)
San Diego Natural History Museum (166)
San Diego Audubon Society (167)
Mr. Jim Peugh (167A)
San Diego River Conservancy 168)
California Native Plant Society (170)
Stuart Hurlbert (172)
Center for Biological Diversity (176)
Endangered Habitats League (182)
Carmen Lucas (206)

OTHER ORGANIZATIONS AND INTERESTED INDIVIDUALS (CONTINUED)
South Coastal Information Center (210)
San Diego Historical Society (211)
San Diego Archaeological Center (212)
Save Our Heritage Organisation (214)
Ron Christman (215)
Clint Linton (215B)
Louie Guassac (215A)
San Diego County Archaeological Society Inc. (218)
Kumeyaay Cultural Repatriation Committee (225)
Native American Distribution [NOTICE ONLY] (225A – R)
Serra Mesa Planning Group (263A)
Mary Johnson (263B)
Serra Mesa Community Council (264)
Linda Vista Community Planning Committee (267)
San Diego Mesa College (268)
Mission Valley Center Association (328)
Hazard Center (328A)
Mission Valley Community Council (328C)
Friends of Mission Valley Preserve (330B)
Mission Valley Unified Planning Org (331)
Fashion Valley (332)
Lynn Mulholland (333)
River Valley Preservation Project (334)
Mark Koll, City of San Diego
Lisa Capper, Helix Environmental
Andrea Bitterling, Helix Environmental
Gerard Lumabas, Dokken Engineering
Marco Sessa, Sudberry Properties, Inc.
David Tait, The Tait Group, Inc.
Senica Revocable Family Trust 01-05-96
Steven W Bridgeman
Florentino C & Soria Venus C Tong
Lamarr & Shelley Hawkins
Betty J Marchant
Indo Nguyen
Thomas R & Alvarez Patricia L Charlton
Steven & Unjoo Myers
James M & Deborah J Lindsay
Nhut & Tran Huong Thi Nguyen
Carole A Cameron
Charles N & Toczko-Edwards Mary L Edwards
Randy Gibson

OTHER ORGANIZATIONS AND INTERESTED INDIVIDUALS (CONTINUED)

Terry T Tilton
James D Davenport
Carolann G Fowler
Anthony Padua
Robert W & Pamela J Looney
Knupp Family Trust 05-13-97
Gary W & Carol Davis
Clark Family Trust 10-01-02
Johannes E & Eko S Verheyden
Robert R Belchez
Stephen P & Candace A Eller
Manuel M & Maryjane Coito
Eduardo E & Silvia C Johnson

VII. RESULTS OF PUBLIC REVIEW

( ) No comments were received during the public input period.

( ) Comments were received but did not address the draft Mitigated Negative Declaration finding or the accuracy/completeness of the Initial Study. No response is necessary. The letters are attached.

( ) Comments addressing the findings of the draft Mitigated Negative Declaration and/or accuracy or completeness of the Initial Study were received during the public input period. The letters and responses follow.

Copies of the draft ENVIRONMENTAL IMPACT REPORT, the Mitigation Monitoring and Reporting Program and any Initial Study material are available in the office of the Entitlements Division for review, or for purchase at the cost of reproduction.

Cecilia D. Gallardo, AICP
Assistant Deputy Director

March 12, 2010
Date of Draft Report

Date of Final Report

Analyst: E. SHEARER-NGUYEN

SR 163/ FRIARS ROAD INTERCHANGE PROJECT

DRAFT ENVIRONMENTAL IMPACT REPORT

City of San Diego Project No. 72782

State Clearinghouse No. 2005111032

LEAD AGENCY:

CITY OF SAN DIEGO
Entitlements Division
1222 First Avenue
San Diego, CA 92101

MARCH 2010

SR 163/FRIARS ROAD INTERCHANGE
DRAFT ENVIRONMENTAL IMPACT REPORT

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APPENDIX B Traffic Evaluation Report
Traffic Evaluation Report – Addendum

APPENDIX C Preliminary Water Resources Report
San Diego River Location Hydraulic Study
Storm Water Data Report
Storm Water Requirements Applicability Checklist
Water Quality Technical Report

APPENDIX D Natural Environment Study (includes the Biological Technical Report)

APPENDIX E Archaeological Resources Inventory
Historical Resource Research Report
Archaeological Survey Report: Biological Mitigation Parcel

APPENDIX F Soil and Geologic Reconnaissance
Geotechnical Design Report
Structure Foundation Design Report
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APPENDIX G Visual Impact Assessment

APPENDIX H Acoustical Assessment Report
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APPENDIX I Air Quality Technical Report

APPENDIX J Waste Management Form

APPENDIX K Hazardous Waste Initial Site Assessment
Report of Environmental Site Assessment for Aerially Deposited Lead

LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AC	asbestos-cement
ADL	aerially deposited lead
ADD	Assistant Deputy Director
ADRP	Archaeological Data Recovery Program
ADT	average daily traffic
AE	approaches or exceeds
AEP	Association of Environmental Professionals
a.m. or AM	morning
AME	Archaeological Monitoring Exhibit
AMSL	above mean sea level
APCD	Air Pollution Control District
APE	area of potential effect
BA	Biological Assessment
Basin Plan	Water Quality Control Plan for the San Diego Basin
BAT	best available technology
BCT	best conventional pollutant control technology
BI	Building Inspector
BMI	benthic macroinvertebrate
BMPs	best management practices
BMSL	below mean sea level
BOD	biochemical oxygen demand
BSA	biological study area
BSO	building, structure and object
BTR	Biological Technical Report
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Cal-IPC	California Invasive Plant Council
Caltrans	California Department of Transportation
CAP	corrugated aluminum pipe
CARB	California Air Resources Board
CASP	corrugated aluminized steel pipe
CDFG	California Department of Fish and Game
CDMG	California Division of Mines and Geology
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
cfs	cubic feet per second
CGS	California Geologic Survey
CH_4	methane

LIST OF ACRONYMS AND ABBREVIATIONS (cont.)

CIDH	cast-in-drilled hole
City	City of San Diego
CM	Construction Manager
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
COD	chemical oxygen demand
Corps	U.S. Army Corps of Engineers
County	County of San Diego
CRHR	California Register of Historic Resources
CSVRF	Consultant Site Visit Record Forms
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibels
DEH	Department of Environmental Health
DoT	Department of Transportation
DSD	Development Services Department
EAS	Environmental Analysis Section
EIR	Environmental Impact Report
EMS	emergency medical services
ESL	Environmentally Sensitive Lands
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FPF	Floodplain Fringe Overlay (zone)
FSDRIP	First San Diego River Improvement Project
FW	Floodway (zone)
GC	Grading Contractor
GHGs	greenhouse gases
gpd	gallons per day
GWP	global warming potential
H_2S	hydrogen sulfide
HA	Hydrologic Area
HAZWOPER	Hazardous Waste Operations and Emergency Response
HRG	Historical Resources Guidelines
HU	Hydrologic Unit

LIST OF ACRONYMS AND ABBREVIATIONS (cont.)

I-8	Interstate 8
ICBO	International Conference of Building Officials
in/sec	inch(es) per second
ISA	Initial Site Assessment
kV	kilovolt
LA	Landscape Architect
LAS	Landscape Architecture Section
LCD	Landscape Construction Documents
LDR	Land Development Review
L_{eq}	time-averaged sound level
$L_{eq}(h)$	hourly average sound level
LL&G	Linscott, Law & Greenspan
LOS	level of service
LRT	light rail transit
MEC	MEC Analytical, Inc.
mg/kg	milligrams per kilogram
mg/l	milligrams per liter
mg/m^3	milligrams per cubic meter
MHPA	Multi-Habitat Planning Area
MLD	Most Likely Descendent
MLS	Mass Loading Station
MMC	Mitigation Monitoring Coordination
MMRP	mitigation, monitoring and reporting program
mph	miles per hour
MRZs	Mineral Resource Zones
MSCP	Multiple Species Conservation Program
MWWD	City of San Diego Metropolitan Wastewater Department
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAC	noise abatement criteria
NADR	Noise Abatement Decision Report
NAHC	Native American Heritage Commission
NB	northbound
NCCP	Natural Communities Conservation Program
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NOC	Notice of Completion
NOP	Notice of Preparation
NO	nitric oxide

LIST OF ACRONYMS AND ABBREVIATIONS (cont.)

NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	U.S. Natural Resource Conservation Service
NRHP	National Register of Historic Places
NTP	Notice to Proceed
O_3	ozone
Pb	lead
p.m. or PM	afternoon
$PM_{2.5}$	fine particulate matter with a diameter of 2.5 microns or less
PM_{10}	particulate matter with a diameter of 10 microns or less
PME	Paleontological Monitoring Exhibit
ppm	parts per million
PQB	Principal Qualified Biologist
PRP	Paleontological Recovery Program
PRS	Principal Restoration Specialist
PSR	Project Study Report
PVC	polyvinyl chloride
QBM	Qualified Biological Monitor
Qln	Quaternary Lindavista Formation
RAQS	Regional Air Quality Strategy
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act
RE	Resident Engineer
READ	Real Estate Assets Department
RIC	Revegetation Installation Contractor
RMC	Revegetation Maintenance Contractor
ROC	reactive organic compounds
RRME	revegetation/restoration monitoring exhibit
RTIP	*Regional Transportation Improvement Program*
RTP	*Regional Transportation Plan*
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SANDAG	San Diego Association of Governments
SARA	Superfund Amendments and Reauthorization Act
SB	southbound
SCAQMD	South Coast Air Quality Management District
SCS	U.S. Soil Conservation Service

LIST OF ACRONYMS AND ABBREVIATIONS (cont.)

SDAB	San Diego Air Basin
SDG&E	San Diego Gas & Electric
SDP	Site Development Permit
SDPD	San Diego Police Department
SDWD	City of San Diego Water Department
sf	square feet
SFHA	Special Flood Hazard Area
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_X	Sulfur oxides
SR	State Route
STIP	*State Transportation Improvement Program*
SUSMP	Standard Urban Storm Water Mitigation Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SWSAS	Storm Water Sampling and Analysis Strategy
TCMs	Transportation Control Measures
TDM	Transportation Demand Management
TDS	total dissolved solids
TER	Traffic Evaluation Report
TMDL	total maximum daily load
Tmv	Tertiary Mission Valley Formation
TSM	Transportation System Management
TSS	total suspended solids
Tst	Tertiary Stadium Conglomerate
UBC	Uniform Building Code
URMPs	Urban Runoff Management Programs
USFWS	U.S. Fish and Wildlife Service
USEPA	U.S Environmental Protection Agency
USGS	United States Geological Service
UST	underground storage tank
V/C	volume-to-capacity ratio
VCP	vitrified clay pipe
VIA	Visual Impact Assessment
yd^3	cubic yards

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

This summary provides a brief synopsis of the State Route (SR) 163/Friars Road Interchange Project description, the results of the environmental analysis, and Project alternatives considered within the Environmental Impact Report (EIR). The summary does not contain the extensive background and analysis found in the document. Therefore, the reader should review the entire document to fully understand the Project and its environmental consequences.

ES-1 PROJECT LOCATION AND DESCRIPTION

The City of San Diego (City), in coordination with the California Department of Transportation (Caltrans) District 11 and the Federal Highway Administration (FHWA), proposes improvements to the SR 163/Friars Road interchange and adjacent streets (Project). The study area is located in the central portion of Mission Valley in southwestern San Diego County.

Improvements would center on the interchange of the eight-lane north-south trending freeway and the generally six-lane east-west Friars Road that crosses above the freeway on a 390-foot-long bridge. Other roadways affected by the Project include the four-lane Frazee Road, four-lane Ulric Street and five-lane Avenida de las Tiendas, the main entrance to Fashion Valley Center. The improvements would occur on the following portions of these roadways:

- SR 163 from Genesee Avenue to Interstate (I-) 8.
- Friars Road from approximately 350 feet west of Avenida de las Tiendas to approximately 700 feet east of Frazee Road.
- Frazee Road from Friars Road to approximately 660 feet north of Friars Road and to approximately 450 feet south of Friars Road.
- Ulric Street from Friars Road to approximately 720 feet north of Friars Road.
- Avenida de las Tiendas.

Major Project elements include a new separate facility for southbound SR 163 traffic to exit onto westbound I-8 (including a new bridge over the San Diego River), a new flyover bridge to connect Ulric Street to southbound SR 163, widening Friars Road Bridge, widening and/or restriping other roads and freeway ramps, relocating medians and changing various traffic movements, while minimizing adverse effects on current circulation during construction.

ES-2 ENVIRONMENTAL ANALYSIS

This EIR contains an environmental analysis of the potential impacts associated with implementing the Project in accordance with the California Environmental Quality Act (CEQA). The issues that are addressed in detail in the EIR include land use, traffic/circulation, hydrology/water quality, biological resources, historical resources, geology/seismicity/soils, paleontological resources, aesthetics/neighborhood character/

visual quality, noise, air quality, public facilities/services and hazardous materials. The analysis contained in this EIR concluded that the Project would not have significant impacts related to land use, traffic/circulation, hydrology/water quality, geology/ seismicity/soils, public facilities/services and hazardous materials. The analysis concluded that significant, direct impacts could occur with respect to biological resources, historical resources, paleontological resources, aesthetics/neighborhood character/visual quality, noise and air quality. Significant, cumulative impacts would occur with respect to noise and air quality.

Table ES-1 summarizes the Project's potentially significant environmental impacts and proposed mitigation measures by issue, as analyzed in Section 5 of this EIR. The last column of the table indicates whether the impact would be reduced to below a level of significance after implementation of the proposed mitigation measures. With the exception of aesthetics/neighborhood character/visual quality, noise and air quality, all significant impacts would be reduced to below a level of significance by proposed mitigation measures.

The City anticipates the use of federal funds during Project construction. Early in the environmental review process, it was anticipated that a joint CEQA/National Environmental Policy Act (NEPA) document would be prepared and the issue statements contained in the NOP were based on that assumption. Some issue statements contained in this EIR have since been modified to address only City standards, and all analysis contained in this EIR is conducted pursuant to the City's Significance Determination Thresholds.

A separate NEPA environmental document that meets the guidelines of FHWA and Caltrans is being prepared by Caltrans. The technical studies prepared for the Project, which are included as appendices to this EIR, were prepared to both City CEQA and FHWA NEPA standards. Because the Project consists of a roadway, federal modeling was used in some instances to complete technical analyses and determine Project features, as the federal highway standards provide a more applicable framework for addressing these roadway-specific issues.

ES-3 EFFECTS FOUND NOT TO BE SIGNIFICANT

Based on initial environmental review of the Project, the City has determined that the Project would not have the potential to cause significant adverse effects in the following areas: agricultural resources, mineral resources, energy, population/housing, public services and facilities and water conservation.

ES-4 PROJECT ALTERNATIVES

Chapter 11.0 of this EIR presents potential alternatives to the Project and evaluates them as required by the California Environmental Quality Act (CEQA). As described in detail in that chapter, alternatives considered but rejected included locational and system design

options as well as the No Project. These rejected alternatives include all of the potential alternatives developed for the Project.

The absence of potential build alternatives analyzed in detail in this EIR is the direct result of the design history of this Project. The Project is severely constrained by the surrounding topography, natural resources and land uses. Although active planning for additional upgrades to the system began in the last decade, the current process consists of engineering and environmental evaluation of alternative project elements in an effort to provide the least impacting, most efficient design. In an effort to identify this most effective and least impactive project, numerous design configurations for specific northbound and southbound roadway elements were developed and screened based on Project objectives, future traffic demands, engineering feasibility and environmental effects.

This screening process led to identification of three potential system alternatives (including the Project), which were analyzed in the Project technical studies and reviewed with regard to compliance with Project objectives, engineering feasibility and environmental impacts. The build alternatives, along with the No Project Alternative, are summarized below. Based on the technical studies analyses and other considerations detailed in Chapter 11.0, they were eliminated from further consideration.

The No Project Alternative would be the environmentally superior alternative because no development would occur, thereby eliminating impacts associated with the Project. However, State CEQA Guidelines Section 15126.6(e)(2), states, "If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." The Project and Alternative 6 have the fewest significant and unmitigable impacts of the alternatives analyzed. While both of these alternatives would have significant and unmitigable visual impacts, Alternative 6 would have increased adverse visual effects over the Project. The Project would alleviate existing and projected congestion on both SR 163 on- and off-ramps and Friars Road; provide highest levels of service on SR 163 mainlines in the future; and comply with the intent of the *Mission Valley Community Plan* in the most expeditious manner and with the least impact to users. The City Entitlements Division therefore considers this to be the environmentally superior alternative.

Alternative 6

Alternative 6 would have implemented the same upgrades to SR 163 through lanes and Friars Road/Ulric Street local roads as the Project. Improvements to the northbound on- and off-ramps in the eastern quadrants also would have been the same as those described for the Project. A major design element specific to Alternative 6 would have been the construction of a collector lanes/bypass viaduct structure[1], which would have crossed over the existing Friars Road Bridge and under the elevated San Diego Trolley Bridge before crossing the San Diego River parallel to the existing SR 163 Bridge. The

[1] A "viaduct structure" is a combination retaining wall and bridge structure. A viaduct structure is useful in areas where bridges are constructed near steep hillsides.

southbound SR 163 exit lanes for eastbound and westbound Friars Road would have passed under this structure and the Friars Road Bridge. The bypass structure over Friars Road would have directly conflicted with the lowest set of regional electrical conduits that cross SR 163. To rectify this, either two new and taller towers would have had to be constructed at the original site or the towers would have had to be relocated to a different site.

A summary of the environmental impacts of this alternative as compared to the Project and other alternatives is provided in Table ES-2 and analysis is provided in Section 11.3. Alternative 6 was, overall, similar to the Project in terms of alternative benefits and footprint impacts. It would result in significant but mitigable impacts to utilities that would not occur with the Project. Additionally, it would result in greater adverse noise, air quality and visual effects (which would be significant and unmitigable for the Project).

Reduced Footprint Alternative

The Reduced Footprint Alternative would have involved improvement of Friars Road and Ulric Street as designated in the *Mission Valley Community Plan* (City 1985, as amended). Under this alternative, the Friars Road Bridge would have been widened on the south side to provide four through lanes in each direction plus two left-turn lanes to northbound SR 163 on-ramp. Improvements to SR 163 would have been limited to its interchange with Friars Road; no improvements to the SR 163 mainlines would have occurred.

Environmental impacts would have been generally similar to or less than those assessed for the Project due to the more limited footprint. In particular, the potential for significant but mitigable impacts to historical resources has been identified for the Project would not occur under this alternative, due to the lack of disturbance in the San Diego River. While it would have improved future traffic conditions relative to the No Project Alternative, this alternative would not have alleviated unacceptable freeway weave operations on southbound SR 163 north of Friars Road in the future, relieved unacceptable ramp merge operations on southbound SR 163 at Friars Road or maintained acceptable freeway mainline operations on southbound SR 163 north of Friars Road.

No Project Alternative

The No Project Alternative assumes that the SR 163/Friars Road interchange would not be improved, and no major roadway construction would occur within the study area. Existing maintenance activities would continue. No approvals from the City or other agencies would be required (although a General Plan Amendment/Community Plan Amendment to delete the currently planned improvements potentially could be pursued).

Because the No Project Alternative would not involve any physical improvements, it would avoid potential impacts related to hydrology/water quality, biological resources, historical resources, geology/seismicity/soils, paleontological resources, aesthetics/

neighborhood character/visual quality, utilities and hazardous materials. Roadway capacity and operational deficiencies would not be corrected and Project objectives would not be met with the implementation of the No Project Alternative. Accordingly, the No Project Alternative would not be consistent with the General Plan, and Mission Valley and Linda Vista Community Plans. This would represent a significant and unmitigated impact related to land use and traffic/circulation, which would not occur with the Project. Although significant construction-related noise and air quality impacts would be avoided under this alternative, long-term impacts to these issue areas would be significant and unmitigated.

ES-5 AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

The City distributed a Notice of Preparation (NOP) of an EIR on November 4, 2005 to applicable federal, state, regional and local governments; government agencies; interested organizations; community planning groups; and individuals expressing an interest in the Project. The NOP also was published in the *Daily Transcript*. The City's Entitlements Division conducted the public scoping meeting on Monday, November 28, 2005. Two members of the public gave oral testimony and one comment letter was received. A total of seven letters were received in response to the NOP. Commentors are identified below in alphabetical order within federal, state agency and local interest groups, and a private individual. Letters were submitted by:

- U.S. Fish and Wildlife Service
- California Department of Fish and Game
- California Department of Toxic Substances Control
- Native American Heritage Commission
- San Diego County Archaeological Society, Inc.
- San Diego Gas and Electric
- Randy Berkman

The primary issues of controversy raised by those commenting on the NOP include potential impacts related to traffic, biological resources, historical resources, electrical/natural gas facilities and hazardous materials. These issues are addressed in Sections 5.2, 5.4, 5.5, 5.11 and 5.12, respectively.

Table ES-1 IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
General Requirements		
Not Applicable	1. Prior to issuance of any construction permit the Assistant Deputy Director (ADD) Environmental Designee of the Entitlements Division shall verify that Mitigation Measures **Land Use/Multiple Species Conservation Program (MSCP), Historical Resources, Biological Resources, Paleontological Resources, Solid Waste Generation/Disposal, and Health and Safety** have been included in entirety on the submitted construction documents and contract specifications, and included under the heading, "Environmental Mitigation Requirements." In addition, the requirements for a Preconstruction Meeting (Precon) shall be noted on all construction documents. 2. Prior to the commencement of work, a Precon Meeting shall be conducted and include the City of San Diego's Mitigation Monitoring Coordination (MMC) Section, Resident Engineer, Building Inspector, Project Consultant (Biologist and Paleontologist), Applicant and other parties of interest. 3. Evidence of compliance with other permitting authorities is required, if applicable. Evidence shall include either copies of permits issued, letters of resolution issued by the Responsible Agency documenting compliance, or other evidence documenting compliance and deemed acceptable by the ADD Environmental Designee.	Not Applicable

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES		
Direct impacts to southern willow scrub, southern cottonwood-willow riparian forest, Diegan coastal sage scrub and non-native grassland are considered significant.	**BR-1** Impacts to 0.26 acre (consisting of 0.11 acre of temporary impact and 0.15 acre of permanent impact) of disturbed southern willow scrub shall be mitigated at a 3:1 ratio (with a minimum 1:1 creation component) through the creation of 0.26 acre and the restoration/enhancement of 0.52 acre of southern willow scrub, for a total of 0.78 acre, as detailed in Appendix D. If mitigation in accordance with the plan contained in Appendix D is determined not to be feasible, the City shall identify and implement an appropriate alternate mitigation program, subject to approval by the ADD, ACOE and CDFG. **BR-2** Impacts to 0.43 acre total (consisting of 0.20 acre of temporary impact and 0.23 acre of permanent impact) of southern cottonwood-willow riparian forest shall be mitigated at a 3:1 ratio (with a minimum 1:1 creation component) through the creation of 0.43 acre and the restoration/enhancement of 0.86 acre of southern cottonwood-willow riparian forest, for a total of 1.29 acres, as detailed in Appendix D. If mitigation in accordance with the plan contained in Appendix D is determined not to be feasible, the City shall identify and implement an appropriate alternate mitigation program, subject to approval by the ADD, ACOE and CDFG.	Not Significant

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	BR-3 Prior to issuance of a Notice to Proceed (NTP) or any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits, and Building Plans/Permits, the owner/permittee shall contribute to the City of San Diego Habitat Acquisition Fund (HAF) to mitigate for the loss of 0.3 acre of Diegan coastal sage scrub (Tier II) and 1.8 acres of non-native grassland (Tier IIIB). This fee is based on mitigation ratios, per the City of San Diego Biology Guidelines, of 1:1 for Diegan coastal sage scrub and 0.5:1 for non-native grassland impacts (of which both impacts occurred outside the MHPA, yet mitigation would be required inside the MHPA). Therefore, the resulting total mitigation required for direct Project impacts is for a total of 1.2 acres equivalent contribution to the City's Habitat Acquisition Fund (HAF [fee amount subject to change]) plus a 10 percent administrative fee. **BR-4** Prior to the issuance of a Notice to Proceed (NTP) or any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits, and Building Plans/Permits, the ADD or Environmental Designee of the City's Entitlements Division shall incorporate the following mitigation measures into the Project design and include them verbatim on all appropriate construction documents.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	Prior to Permit Issuance A. Entitlements Division Plan Check 1. Prior to the NTP or issuance for any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits, and Building Plans/Permits, whichever is applicable, the ADD or environmental designee shall verify that the requirements for the revegetation/restoration plans and specifications, including mitigation of direct impacts to southern willow scrub (0.26 acre) and southern cottonwood-willow riparian forest (0.43 acre) have been shown and noted on the appropriate landscape construction documents. The landscape construction documents and specifications must be found to be in conformance with the Wetland Restoration Plan prepared by HELIX Environmental Planning, November 2009, the requirements of which are summarized below: B. Revegetation/Restoration Plan(s) and Specifications 1. Landscape Construction Documents (LCD) shall be prepared on D-sheets and submitted to the City of San Diego Development Services Department, Landscape Architecture Section (LAS) for review and approval. LAS shall consult with Mitigation Monitoring Coordination (MMC) and obtain concurrence prior to approval of LCD. The LCD shall consist of revegetation/restoration, planting, irrigation, and erosion control plans, including all required graphics, notes, details, specifications, letters, and reports, as outlined below.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	2. Landscape Revegetation/Restoration Planting and Irrigation Plans shall be prepared in accordance with the San Diego Land Development Code (LDC) Chapter 14, Article 2, Division 4, the LDC Landscape Standards submittal requirements, and Attachment "B" (General Outline for Revegetation/Restoration Plans) of the City of San Diego's LDC Biology Guidelines (July 2002). The Principal Qualified Biologist (PQB) shall identify and adequately document all pertinent information concerning the revegetation/restoration goals and requirements, such as but not limited to, plant/seed palettes, timing of installation, plant installation specifications, method of watering, protection of adjacent habitat, erosion and sediment control, performance/success criteria, inspection schedule by City staff, document submittals, reporting schedule, etc. The LCD shall also include comprehensive graphics and notes addressing the ongoing maintenance requirements (after final acceptance by the City). 3. The Revegetation Installation Contractor (RIC), Revegetation Maintenance Contractor (RMC), Construction Manager (CM), and Grading Contractor (GC), where applicable, shall be responsible to ensure that for all grading and contouring, clearing and grubbing, installation of plant materials, and any necessary maintenance activities or remedial actions required during installation and the 120-day plant establishment period are done per approved LCD. The following procedures at a minimum, but not limited to, shall be performed:	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	a. The RMC shall be responsible for the maintenance of the wetland mitigation areas for a minimum period of 120 days. Maintenance visits shall be conducted on a weekly basis throughout the plant establishment period. b. At the end of the 120 day period, the PQB shall review the mitigation area to assess the completion of the short-term plant establishment period and submit a report for approval by the MMC. c. The MMC will provide approval in writing to begin the five-year long-term establishment/maintenance and monitoring program. d. Existing indigenous/native species shall not be pruned, thinned, or cleared in the revegetation/mitigation area. e. The revegetation site shall not be fertilized. f. The RIC is responsible for reseeding (if applicable) if weeds are not removed, within one week of written recommendation by the PQB. g. Weed control measures shall include the following: (1) hand removal, (2) cutting, with power equipment, and (3) chemical control. Hand removal of weeds is the most desirable method of control and will be used wherever possible. h. Damaged areas shall be repaired immediately by the RIC/RMC. Insect infestations, plant diseases, herbivory, and other pest problems will be closely monitored throughout the five-year maintenance period. Protective mechanisms such as metal wire netting shall be used as necessary. Diseased and infected plants shall be immediately disposed of off site in a legally-acceptable	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	manner at the discretion of the PQB or Qualified Biological Monitor (QBM; City approved). Where possible, biological controls will be used instead of pesticides and herbicides. 4. If a Brush Management Program is required, the revegetation/restoration plan shall show the dimensions of each brush management zone and notes shall be provided describing the restrictions on planting and maintenance and identify that the area is impact-neutral and shall not be used for habitat mitigation/credit purposes. C. Letters of Qualification Have Been Submitted to ADD 1. The applicant shall submit, for approval, a letter verifying the qualifications of the biological professional to the MMC. This letter shall identify the PQB, Principal Restoration Specialist (PRS), and QBM, where applicable, and the names of all other persons involved in the implementation of the revegetation/restoration plan and biological monitoring program, as they are defined in the City of San Diego Biological Review References. Resumes and the biology worksheet should be updated annually. 2. The MMC will provide a letter to the applicant confirming the qualifications of the PQB/PRS/QBM and all City-approved persons involved in the revegetation/restoration plan and biological monitoring of the Project.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	3. Prior to the start of work, the applicant must obtain approval from the MMC for any personnel changes associated with the revegetation/restoration plan and biological monitoring of the Project. 4. The PBQ must also submit evidence to the MMC that the PQB/QBM has completed Storm Water Pollution Prevention Program training. <u>Prior to Start of Construction</u> A. PQB/PRS Shall Attend Precon Meetings 1. Prior to beginning any work that requires monitoring: a. The owner/permittee or their authorized representative shall arrange and perform a Precon Meeting that shall include the PQB or PRS, CM, and/or GC, Landscape Architect (LA), RIC, RMC, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. b. The PQB shall also attend any other grading/excavation-related Precon Meeting to make comments and/or suggestions concerning the revegetation/restoration plan(s) and specifications with the RIC, CM, and/or GC. c. If the PQB is unable to attend the Precon Meeting, the owner shall schedule a focused Precon Meeting with the MMC, PQB/PRS, CM, BI, LA, RIC, RMC, RE, and/or BI, if appropriate, prior to the start of any work associated with the revegetation/ restoration phase of the Project, including site grading preparation.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	2. Where Revegetation/Restoration Work Will Occur a. Prior to the start of any work, the PQB/PRS shall also submit a revegetation/restoration monitoring exhibit (RRME) based on the appropriate reduced LCD (reduced to 11" x 17" format) to the MMC and RE, identifying the areas to be revegetated/restored, including the delineation of the limits of any disturbance/grading and any excavation. b. The PQB shall coordinate with the construction superintendent to identify appropriate BMPs on the RRME. 3. When Biological Monitoring Will Occur a. Prior to the start of any work, the PQB/PRS shall also submit a monitoring procedures schedule to the MMC and RE indicating when and where biological monitoring and related activities will occur. 4. PQB Shall Contact MMC to Request Modification a. The PQB may submit a detailed letter to the MMC prior to the start of work or during construction requesting a modification to the revegetation/restoration plans and specifications. This request shall be based on relevant information (such as other sensitive species not listed by federal and/or state agencies and/or not covered by the MSCP and to which any impacts may be considered significant under CEQA), which may reduce or increase the potential for biological resources to be present.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	During Construction A. PQB or QBM Present During Construction/Grading/Planting 1. The PQB or QBM shall be present full-time during construction activities, including but not limited to, site preparation, cleaning, grading, excavation, and landscape establishment in association with Project construction and/or grading activity which could result in impacts to sensitive biological resources as identified in the LCDs and on the RRME. **The RIC and/or QBM is responsible for notifying the PQB/PRS of changes to any approved construction plans, procedures, and/or activities. The PQB/PRS is responsible to notify the CM, LA, RE, BI, and MMC of the changes.** 2. The PQB or QBM shall document field activity via the Consultant Site Visit Record Forms (CSVR). The CSVR shall be faxed by the CM on the first day of monitoring, the last day of monitoring, monthly, and in the event that there is a deviation from conditions identified within the LCD and/or biological monitoring program. The RE shall forward copies to MMC. 3. The PQB or QBM shall be responsible for maintaining and submitting the CSVR at the time that CM responsibilities end (i.e., upon the completion of construction activity other than that associated with biology). 4. All construction activities (including staging areas) shall be restricted to the development areas as shown on the LCD. The PQB/PRS or QBM staff shall monitor construction activities as needed, with MMC	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	concurrence on method and schedule. This is to ensure that construction activities do not encroach into biologically sensitive areas beyond the limits of disturbance as shown on the approved LCD. 5. The PQB or QBM shall supervise the placement of orange construction fencing or City approved equivalent along the limits of potential disturbance adjacent to (or at the edge of) all sensitive habitats (southern willow scrub, southern cottonwood-willow riparian forest, Diegan coastal sage scrub and non-native grassland), as shown on the approved LCD. 6. The PBQ shall provide a letter to the MMC indicating that limits of potential disturbance have been surveyed, staked, and that the construction fencing is installed properly. 7. The PQB or QBM shall oversee implementation of BMPs, such as gravel bags, straw logs, silt fences or equivalent erosion control measures, as needed, to ensure prevention of any significant sediment transport. In addition, the PQB/QBM shall be responsible for verifying the removal of all temporary construction BMPs upon completion of construction activities. Removal of temporary construction BMPs shall be verified in writing on the final construction phase CSVR. 8. The PQB shall verify in writing on the CSVR that no trash stockpiling or oil dumping, fueling of equipment, storage of hazardous wastes or construction equipment/material, parking, or other construction-related activities shall occur adjacent to sensitive habitat. These activities shall occur only within the designated staging area located outside the area defined as biological sensitive area.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	9. The long-term establishment inspection and reporting schedule per LCD must all be approved by the MMC prior to the issuance of the Notice of Completion or any bond release. B. Disturbance/Discovery Notification Process 1. If unauthorized disturbances occur or sensitive biological resources are discovered that where not previously identified on the LCD and/or RRME, the PQB or QBM shall direct the contractor to temporarily divert construction in the area of disturbance or discovery and immediately notify the RE or BI, as appropriate. 2. The PQB shall also immediately notify the MMC by telephone of the disturbance and report the nature and extent of the disturbance and recommend the method of additional protection, such as fencing and appropriate BMPs. After obtaining concurrence with the MMC and RE, the PQB and CM shall install the approved protection and agreement on BMPs. 3. The PQB shall also submit written documentation of the disturbance to the MMC within 24 hours by fax or email with photos of the resource in context (e.g., show adjacent vegetation). C. Determination of Significance 1. The PQB shall evaluate the significance of disturbance and/or discovered biological resource and provide a detailed analysis and recommendation in a letter report with the appropriate photo documentation to the MMC to obtain concurrence and formulate a plan of action that may include fines, fees, and supplemental mitigation costs.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	2. The MMC shall review this letter report and provide the RE with MMC's recommendations and procedures. <u>Post Construction</u> A. Mitigation Monitoring and Reporting Period 1. Five-Year Mitigation Establishment/Maintenance Period a. The RMC shall be retained to complete maintenance monitoring activities throughout the five-year mitigation monitoring period. b. Maintenance visits will be conducted twice per month for the first six months, once per month for the remainder of the first year, and quarterly thereafter. c. Maintenance activities will include all items described in the LCD. d. Plant replacement will be conducted as recommended by the PQB (note: plants shall be increased in container size relative to the time of initial installation or establishment or maintenance period may be extended to the satisfaction of the MMC). 2. Five-Year Biological Monitoring a. All biological monitoring and reporting shall be conducted by a PQB or QBM, as appropriate, consistent with the LCD. b. Monitoring shall involve both qualitative horticultural monitoring and quantitative monitoring (i.e., performance/success criteria). Horticultural monitoring shall focus on soil conditions (e.g., moisture and fertility), container plant health, seed germination	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	rates, presence of native and non-native (e.g., invasive exotic) species, any significant disease or pest problems, irrigation repair and scheduling, trash removal, illegal trespass, and any erosion problems. c. After plant installation is complete, qualitative monitoring surveys will occur monthly during year one and quarterly during years two through five. d. Upon the completion of the 120-days short-term plant establishment period, quantitative monitoring surveys shall be conducted at 0, 6, 12, 24, 36, 48, and 60 months by the PQB or QBM. The revegetation/restoration effort shall be quantitatively evaluated once per year (in spring) during years three through five, to determine compliance with the performance standards identified on the LCD. All plant material must have survived without supplemental irrigation for the last two years. e. Quantitative monitoring shall include the use of fixed transects and photo points to determine the vegetative cover within the revegetated habitat. Collection of fixed transect data within the revegetation/restoration site shall result in the calculation of percent cover for each plant species present, percent cover of target vegetation, tree height and diameter at breast height (if applicable), and percent cover of non-native/non invasive vegetation. Container plants will also be counted to determine percent survivorship. The data will be used to determine attainment of performance/success criteria identified within the LCD.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	f. Biological monitoring requirements may be reduced if, before the end of the fifth year, the revegetation meets the fifth year criteria and the irrigation has been terminated for a period of the last two years. g. The PQB or QBM shall oversee implementation of post-construction BMPs, such as gravel bags, straw logs, silt fences, or equivalent erosion control measure, as needed to ensure prevention of any significant sediment transport. In addition, the PBQ/QBM shall be responsible for verifying the removal of all temporary post-construction BMPs upon completion of construction activities. Removal of temporary post-construction BMPs shall be verified in writing on the final post-construction phase CSVR. B. Submittal of Draft Monitoring Report 1. A draft monitoring letter report shall be prepared to document the completion of the 120-day plant establishment period. The report shall include discussion on weed control, horticultural treatments (pruning, mulching, and disease control), erosion control, trash/debris removal, replacement planting/reseeding, site protection/signage, pest management, vandalism, and irrigation maintenance. The revegetation/ restoration effort shall be visually assessed at the end of a 120-day period to determine mortality of individuals. 2. The PQB shall submit two copies of the Draft Monitoring Report that describes the results, analysis, and conclusions of all phases of the Biological Monitoring and Reporting Program (with appropriate	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	graphics) to the MMC for review and approval within 30 days following the completion of monitoring. Monitoring reports shall be prepared on an annual basis for a period of five years. Site progress reports shall be prepared by the PQB following each site visit and provided to the owner, RMC and RIC. Site progress reports shall review maintenance activities, qualitative and quantitative (when appropriate) monitoring results (including progress of the revegetation relative to the performance/success criteria), and the need for any remedial measures. 3. Draft annual reports (three copies) summarizing the results of each progress report (including quantitative monitoring results and photographs taken from permanent viewpoints) shall be submitted to the MMC for review and approval within 30 days following the completion of monitoring. 4. The MMC shall return the Draft Monitoring Report to the PQB for revision or for preparation of each report. 5. The PQB shall submit a revised Monitoring Report to the MMC (with a copy to the RE) for approval within 30 days. 6. The MMC will provide written acceptance to the PQB and RE of the approved report. C. Final Monitoring Reports(s) 1. The PQB shall prepare a Final Monitoring upon achievement of the fifth year performance/success criteria and completion of the five-year maintenance period.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	a. This report may occur before the end of the fifth year if the revegetation meets the fifth year performance /success criteria and the irrigation has been terminated for a period of the last two years. b. The Final Monitoring report shall be submitted to the MMC for evaluation of the success of the mitigation effort and final acceptance. A request for a pre-final inspection shall be submitted at this time, which the MMC will schedule after review of the report. c. If any of the revegetated area fails to meet the Project's final success standards, the applicant must consult with the MMC. This consultation shall take place to determine whether the Revegetation effort is acceptable. The applicant understands that failure of any significant portion of the revegetation/restoration area may result in a requirement to replace or renegotiate that portion of the site and/or extend the monitoring and establishment/maintenance period until all success standards are met. **BR-5** Prior to the issuance of any construction permits, the ADD Environmental Designee shall verify that all MHPA boundaries and limits of disturbance have been delineated on all construction documents. A. Prior to the first Precon Meeting, the Owner/Permittee shall provide a letter of verification to the Mitigation Monitoring Coordination Section stating that a qualified Biologist, as defined in the City of San Diego	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	Biological Review References, has been retained to implement the projects MSCP monitoring Program. The letter shall include the names and contact information of all persons involved in the Biological Monitoring of the Project. B. At least thirty days prior to the Precon Meeting, the qualified Biologist shall submit all required documentation to MMC, verifying that any special reports, maps, plans and time lines, such as but not limited to, revegetation plans, plant relocation requirements and timing, MSCP requirements, avian or other wildlife protocol surveys, impact avoidance areas or other such information has been completed and updated. C. The qualified biologist (Project biologist) shall attend the first Precon Meeting and discuss the Project's biological monitoring program. D. In addition the following mitigation measures related to the MHPA Land Use Adjacency Guidelines shall be implemented: 1. Prior to initiation of any construction-related grading, the construction foreman and/or Project biologist shall discuss the sensitive nature of the adjacent habitat with the crew and subcontractor. 2. The limits of grading shall be clearly delineated by a survey crew prior to brushing, clearing or grading. The limits of grading, as shown on approved Exhibit A, shall be defined with silt fencing or orange construction fencing and checked by the biological monitor before	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	initiation of construction grading. All native plants or species of special concern, (i.e. the coast barrel cactus) as identified in the biological technical report, shall be staked, flagged and avoided within Brush Management Zone 2. 3. Invasive non-native plant species shall not be introduced into areas adjacent to the MHPA. Landscape plans shall contain non-invasive native species adjacent to sensitive biological areas as shown on approved Exhibit A. 4. All lighting adjacent to the MHPA shall be shielded, unidirectional, low pressure sodium illumination (or similar) and directed away from preserve areas using appropriate placement and shields. If lighting adjacent to the MHPA is required for nighttime construction, it shall be directed away from the preserve and the tops of adjacent trees with potentially nesting raptors, using appropriate placement and shielding. 5. All construction activities (including staging areas and/or storage areas) shall be restricted to the development area as shown on the approved Exhibit A. No equipment maintenance shall be conducted within or near the adjacent open space and/or sensitive areas and shall be restricted to the development area as shown on the approved Exhibit A and shall not encroach into sensitive biological areas within either the open space and/or MHPA areas. The Project biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas beyond the limits of disturbance as shown on the approved Exhibit A.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	6. Natural drainage patterns shall be maintained as much as possible during construction. Erosion control techniques, including the use of sandbags, hay bales, and/or the installation of sediment traps, shall be used to control erosion and deter drainage during construction activities into the adjacent open space. Drainage from all development areas adjacent to the MHPA shall be directed away from the MHPA, or if not possible, must not drain directly into the MHPA, but instead into sedimentation basins, grassy swales, and/or mechanical trapping devices as specified by the City Engineer. 7. No trash, oil, parking or other construction-related activities shall be allowed outside the established limits of grading, as shown on approved Exhibit A. All construction-related debris shall be removed off site to an approved disposal facility. **BR-6** Pursuant to Sections 401 and 404 of the CWA and Section 1600 et seq. of the California Fish and Game Code, evidence of compliance is required. Evidence shall include either copies of permits issued, letters of resolution issued by the Responsible Agency documenting compliance, or other evidence documenting compliance and deemed acceptable by the ADD or Environmental Designee.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
Direct impacts to San Diego barrel cactus, San Diego County viguiera and orange-throated whiptail would be significant.	**BR-7** Prior to the Precon Meeting, the two San Diego barrel cacti within the Project footprint shall be salvaged and relocated to areas of suitable habitat within the BSA.	Not Significant
Potential indirect impacts to western bluebird and yellow-breasted chat are considered significant.	**BR-8** If Project grading is proposed during the avian breeding season (February 1 to July 30), the Project biologist shall conduct a pre-grading survey for active avian nests within 500 feet of the development area and submit a letter report to the Mitigation Monitoring Coordinator prior to the Precon Meeting. A. If active avian nests are detected, the report shall include mitigation in conformance with the City's Biology Guidelines (i.e. appropriate buffers, monitoring schedules, etc.) to the satisfaction of the ADD of the Entitlements Division or Environmental Designee. Mitigation requirements determined by the Project biologist and the ADD of Entitlements Division shall be incorporated into the Project's Biological Construction Monitoring Exhibit and monitoring results incorporated in to the final biological construction monitoring report. B. If no nesting avian species are detected during the pre-grading survey, no mitigation is required.	Not Significant

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION			
IMPACT	**MITIGATION MEASURES**		**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)			
Potential indirect impacts to raptors are considered significant.	**BR-9**	If Project grading is proposed during the raptor breeding season (February 1 through September 15), the Project biologist shall conduct a pre-grading survey for active raptor nests in within 500 feet of the development area and submit a letter report to the Mitigation Monitoring Coordinator prior to the Precon Meeting. A. If active raptor nests are detected, the report shall include mitigation in conformance with the City's Biology Guidelines (i.e. appropriate buffers, monitoring schedules, etc.) to the satisfaction of the ADD of the Entitlements Division or Environmental Designee. Mitigation requirements determined by the Project biologist and the ADD of Entitlements Division shall be incorporated into the Project's Biological Construction Monitoring Exhibit and monitoring results incorporated in to the final biological construction monitoring report. B. If no nesting raptors are detected during the pre-grading survey, no mitigation is required.	Not Significant
Potential indirect impacts to least Bell's vireo are considered significant.	**BR-10**	Prior to the Precon Meeting, the ADD or Environmental Designee shall verify that the following Project requirements regarding the least Bell's vireo are shown on the construction plans: No clearing, grubbing, or other construction activities shall occur between March 15 and September 15, the breeding season of the least Bell's vireo,	Not Significant

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	until the following requirements have been met to the satisfaction of the ADD or Environmental Designee: A. A Qualified Biologist (possessing a valid Endangered Species Act Section 10(a)(l)(A) Recovery Permit) shall survey those wetland areas that would be subject to construction noise levels exceeding 60 dB(A) hourly average for the presence of the least Bell's vireo. Surveys for the least Bell's vireo shall be conducted pursuant to the protocol survey guidelines established by the USFWS within the breeding season prior to the commencement of construction. If the least Bell's vireo is present, then the following conditions must be met: I. Between March 15 and September 15, no clearing, grubbing, or grading of occupied least Bell's vireo habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a QB; and II. Between March 15 and September 15, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB(A) hourly average at the edge of occupied least Bell's vireo habitat. An analysis showing that noise generated by construction activities would not exceed 60 dB(A) hourly average at the edge of occupied habitat must be completed by a Qualified Acoustician (possessing current	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	noise engineer license or registration with monitoring noise level experience with listed animals) and approved by the ADD Environmental Designee at least two weeks prior to the commencement of construction activities. Prior to the commencement of construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a QB; or III. At least two weeks prior to the commencement of any construction activities, under the direction of a Qualified Acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) hourly average at the edge of habitat occupied by the least Bell's vireo. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring* shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the Qualified Acoustician or Biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (September 15).	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	* Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the ADD or Environmental Designee, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment. B. If least Bell's vireo are not detected during the protocol survey, the QB shall submit substantial evidence to the ADD or Environmental Designee and applicable resource agencies which demonstrates whether or not mitigation measures such as noise walls are necessary between March 15 and September 15 as follows: I. If this evidence indicates the potential is high for least Bell's vireo to be present based on historical records or site conditions, then condition A.III shall be adhered to as specified above. II. If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
Potential indirect impacts to southwestern willow flycatcher are considered significant.	**BR-11** Prior to the Precon Meeting, the ADD Environmental Designee shall verify that the following Project requirements regarding the southwestern willow flycatcher are shown on the construction plans: No clearing, grubbing, or other construction activities shall occur between May 1 and September 1, the breeding season of the southwestern willow flycatcher, until the following requirements have been met to the satisfaction of the ADD or Environmental Designee: A. A QB (possessing a valid Endangered Species Act Section 10(a)(l)(A) Recovery Permit) shall survey those wetland areas that would be subject to construction noise levels exceeding 60 dB(A) hourly average for the presence of the southwestern willow flycatcher. Surveys for this species shall be conducted pursuant to the protocol survey guidelines established by the USFWS within the breeding season prior to the commencement of any construction. If the southwestern willow flycatcher is present, then the following in conditions must be met: I. Between May 1 and September 1, no clearing, grubbing, or grading of occupied southwestern willow flycatcher habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a QB; AND	Not Significant

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	II. Between May 1 and September 1, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB(A) hourly average at the edge of occupied southwestern willow flycatcher habitat. An analysis showing that noise generated by construction activities would not exceed 60 dB(A) hourly average at the edge of occupied habitat must be completed by a Qualified Acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the ADD or Environmental Designee at least two weeks prior to the commencement of construction activities. Prior to the commencement of construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a QB; or III. At least two weeks prior to the commencement of any construction activities, under the direction of a Qualified Acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) hourly average at the edge of habitat occupied by the southwestern willow flycatcher. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring* shall be conducted at the edge of the occupied habitat area to ensure	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	that noise levels do not exceed 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the Qualified Acoustician or QB, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (September 1). * Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the ADD Environmental Designee, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment. B. If southwestern willow flycatcher are not detected during the protocol survey, the qualified biologist shall submit substantial evidence to the ADD or Environmental Designee and applicable resource agencies which demonstrates whether or not mitigation measures such as noise wall are necessary between May 1 and September 1 as follows:	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
BIOLOGICAL RESOURCES (cont.)		
	I. If this evidence indicates the potential is high for southwestern willow flycatcher to be present based on historical records or site conditions, then condition A.III shall be adhered to as specified above. II. If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
HISTORICAL RESOURCES		
The potential for the Project to impact unknown buried resources within the alluvial portions of the area of potential effect associated with the San Diego River is considered a potentially significant impact.	**HR-1** Prior to Permit Issuance or Bid Opening/Bid Award A. Entitlements Plan Check 1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring have been noted on the appropriate construction documents. The requirement for monitoring will be determined prior to the Precon meeting, based on the construction technique to be implemented in alluvial areas along the San Diego River (i.e., whether the selected construction technique would return spoil to the surface for evaluation). B. Letters of Qualification have been submitted to ADD 1. Prior to Bid Award, the applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the Project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego Historical Resources Guidelines (HRG). If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training with certification documentation. 2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the Project. 3. Prior to the start of work, the applicant must obtain approval from MMC for any personnel changes associated with the monitoring program.	Not Significant

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
HISTORICAL RESOURCES (cont.)		
	HR-2 Prior to Start of Construction A. Verification of Records Search 1. The PI shall provide verification to MMC that a site specific records search (¼ mile radius) has been completed. Verification includes, but is not limited to a copy of a confirmation letter from South Coast Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed. 2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities. 3. The PI may submit a detailed letter to MMC requesting a reduction to the ¼ mile radius. B. PI Shall Attend Precon Meetings 1. Prior to beginning any work that requires monitoring; the applicant shall arrange a Precon Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist and Native American monitor shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Construction Manager and/or Grading Contractor.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
HISTORICAL RESOURCES (cont.)		
	a. If the PI is unable to attend the Precon Meeting, the applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring. C. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects) The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the archaeological monitoring program. 1. Identify Areas to be Monitored a. Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) based on the appropriate construction documents (reduced to 11x17) to MMC for approval identifying the areas to be monitored including the delineation of grading/excavation limits. b. The AME shall be based on the results of a site specific records search as well as information regarding the age of existing pipelines, laterals and associated appurtenances and/or any known soil conditions (native or formation). c. MMC shall notify the PI that the AME has been approved. 2. When Monitoring Will Occur a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
HISTORICAL RESOURCES (cont.)		
	b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as age of existing pipe to be replaced, depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present. 3. Approval of AME and Construction Schedule After approval of the AME by MMC, the PI shall submit to MMC written authorization of the AME and Construction Schedule from the CM. **HR-3** During Construction A. Monitor Shall be Present During Grading/Excavation/Trenching 1. The Archaeological monitor shall be present full-time during grading/excavation/trenching activities including, but not limited to mainline, laterals, jacking and receiving pits, services and all other appurtenances associated with underground utilities as identified on the AME and as authorized by the CM. The Native American monitor shall determine the extent of their presence during construction related activities based on the AME and provide that information to the PI and MMC. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities.**	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
HISTORICAL RESOURCES (cont.)		
	2. The monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVRs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC. 3. The PI may submit a detailed letter to the CM and/or RE for concurrence and forwarding to MMC during construction requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous trenching activities, presence of fossil formations, or when native soils are encountered may reduce or increase the potential for resources to be present. B. Discovery Notification Process 1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate. 2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery. 3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
HISTORICAL RESOURCES (cont.)		
	C. Determination of Significance 1. The PI and Native American monitor shall evaluate the significance of the resource. If Human Remains are involved, protocol in HR 1-4 below shall be followed. a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) and obtain written approval of the program from MMC, CM and RE. ADRP and any mitigation must be approved by MMC, RE and/or CM before ground disturbing activities in the area of discovery will be allowed to resume. c. If the resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required. **HR-4** Discovery of Human Remains If human remains are discovered, work shall halt in that area and the following procedures as set forth in the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
HISTORICAL RESOURCES (cont.)		
	A. Notification 1. The Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS). 2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone. B. Isolate discovery site 1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenience of the remains. 2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenience. 3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin. C. If Human Remains **ARE** determined to be Native American 1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, **ONLY** the Medical Examiner can make this call. 2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
HISTORICAL RESOURCES (cont.)		
	3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with the California Public Resource and Health & Safety Codes. 4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods. 5. Disposition of Native American Human Remains shall be determined between the MLD and the PI, IF: a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being notified by the Commission; OR; b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner. c. To protect these sites, the landowner shall do one or more of the following: (1) Record the site with the NAHC; (2) Record an open space or conservation easement; or (3) Record a document with the County. d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity,	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
HISTORICAL RESOURCES (cont.)		
	the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to Mitigation 1-4.A.5.c., above. D. If Human Remains are **NOT** Native American 1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial. 2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98). 3. If the remains are of historic origin, they shall be appropriately removed and conveyed to the Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS, the applicant department and/or Real Estate Assets Department (READ) and the Museum of Man. **HR-5** Night and/or Weekend Work A. If night and/or weekend work is included in the contract	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
HISTORICAL RESOURCES (cont.)		
	1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Precon Meeting. 2. The following procedures shall be followed. a. No Discoveries In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVR and submit to MMC via fax by 8AM of the next business day. b. Discoveries All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction, and IV – Discovery of Human Remains. c. Potentially Significant Discoveries If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed. d. The PI shall immediately contact the RE and MMC, or by 8:00 a.m. of the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made. B. If night and/or weekend work becomes necessary during the course of construction	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
HISTORICAL RESOURCES (cont.)		
	1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin. 2. The RE, or BI, as appropriate, shall notify MMC immediately. C. All other procedures described above shall apply, as appropriate. **HR-6** Post Construction A. Submittal of Draft Monitoring Report 1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Historical Resources Guidelines (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC via the RE for review and approval within 90 days following the completion of monitoring, a. For significant archaeological resources encountered during monitoring, the Archaeological Data Recovery Program shall be included in the Draft Monitoring Report. b. Recording Sites with State of California Department of Parks and Recreation The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Monitoring Report.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
HISTORICAL RESOURCES (cont.)		
	2. MMC shall return the Draft Monitoring Report to the PI via the RE for revision or, for preparation of the Final Report. 3. The PI shall submit revised Draft Monitoring Report to MMC via the RE for approval. 4. MMC shall provide written verification to the PI of the approved report. 5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals. B. Handling of Artifacts 1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued 2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate. C. Curation of artifacts: Accession Agreement and Acceptance Verification 1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this Project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable. 2. The PI shall submit the Accession Agreement and catalogue record(s) to the RE or BI, as appropriate for donor signature with a copy submitted to MMC.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
HISTORICAL RESOURCES (cont.)		
	3. The RE or BI, as appropriate shall obtain signature on the Accession Agreement and shall return to PI with copy submitted to MMC. 4. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC. D. Final Monitoring Report(s) 1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC of the approved report. 2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.	
PALEONTOLOGICAL RESOURCES		
The potential for sensitive paleontological resources to be encountered during excavation is considered significant.	**PR-1** Prior to Permit Issuance or Bid Opening/Bid Award A. Entitlements Plan Check 1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate construction documents.	Not Significant

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
PALEONTOLOGICAL RESOURCES (cont.)		
	B. Letters of Qualification have been submitted to ADD 1. Prior to Bid Award, the applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the Project and the names of all persons involved in the paleontological monitoring program, as defined in the City of San Diego Paleontology Guidelines. 2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the Project. 3. Prior to the start of work, the applicant shall obtain approval from MMC for any personnel changes associated with the monitoring program. **PR-2** Prior to Start of Construction A. Verification of Records Search 1. The PI shall provide verification to MMC that a site specific records search has been completed. Verification includes, but is not limited to a copy of a confirmation letter from San Diego Natural History Museum, other institution or, if the search was in-house, a letter of verification from the PI stating that the search was completed. 2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
PALEONTOLOGICAL RESOURCES (cont.)		
	B. PI Shall Attend Precon Meetings 1. Prior to beginning any work that requires monitoring, the Applicant shall arrange a Precon Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified paleontologist shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the Construction Manager and/or Grading Contractor. a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring. 2. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects) The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the paleontological monitoring program. 3. Identify Areas to be Monitored a. Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate construction documents (reduced to 11x17) to MMC for approval identifying the areas to be monitored including the delineation of grading/excavation limits.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
PALEONTOLOGICAL RESOURCES (cont.)		
	b. The PME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation). c. MMC shall notify the PI that the PME has been approved. 4. When Monitoring Will Occur a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur. b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as depth of excavation and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present. 5. Approval of PME and Construction Schedule After approval of the PME by MMC, the PI shall submit to MMC written authorization of the PME and Construction Schedule from the CM. **PR-3** During Construction A. Monitor Shall be Present During Grading/Excavation/Trenching 1. The monitor shall be present full-time during grading/excavation/trenching activities including, but not limited to	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
PALEONTOLOGICAL RESOURCES (cont.)		
	mainline, laterals, jacking and receiving pits, services and all other appurtenances associated with underground utilities as identified on the PME and as authorized by the CM that could result in impacts to formations with high and/or moderate resource sensitivity at depths of 10 feet or greater and as authorized by the construction manager. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities.** 2. The monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVRs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC. 3. The PI may submit a detailed letter to the CM and/or RE for concurrence and forwarding to MMC during construction requesting a modification to the monitoring program when a field condition such as trenching activities that do not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present. B. Discovery Notification Process 1. In the event of a discovery, the Paleontological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
PALEONTOLOGICAL RESOURCES (cont.)		
	2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery. 3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible. C. Determination of Significance 1. The PI shall evaluate the significance of the resource. a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI. b. If the resource is significant, the PI shall submit a Paleontological Recovery Program (PRP) and obtain written approval of the program from MMC, MC and/or RE. PRP and any mitigation must be approved by MMC, RE and/or CM before ground disturbing activities in the area of discovery will be allowed to resume. c. If the resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils) the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The Paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
PALEONTOLOGICAL RESOURCES (cont.)		
	d. The PI shall submit a letter to MMC indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required. **PR-4** Night and/or Weekend Work A. If night and/or weekend work is included in the contract 1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Precon Meeting. 2. The following procedures shall be followed. a. No Discoveries In the event that no discoveries were encountered during night and/or weekend work, The PI shall record the information on the CSVR and submit to MMC via the RE via fax by 8:00 a.m. on the next business day. b. Discoveries All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction. c. Potentially Significant Discoveries If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
PALEONTOLOGICAL RESOURCES (cont.)		
	d. The PI shall immediately contact the RE and MMC, or by 8:00 a.m. on the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made. B. If night and/or weekend work becomes necessary during the course of construction 1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin. 2. The RE, or BI, as appropriate, shall notify MMC immediately. C. All other procedures described above shall apply, as appropriate. **PR-5** Post Construction A. Preparation and Submittal of Draft Monitoring Report 1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Paleontological Guidelines which describes the results, analysis, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to MMC via the RE for review and approval within 90 days following the completion of monitoring, a. For significant paleontological resources encountered during monitoring, the Paleontological Recovery Program shall be included in the Draft Monitoring Report. b. Recording Sites with the San Diego Natural History Museum The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
PALEONTOLOGICAL RESOURCES (cont.)		
	encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report. 2. MMC shall return the Draft Monitoring Report to the PI via the RE for revision or, for preparation of the Final Report. 3. The PI shall submit revised Draft Monitoring Report to MMC via the RE for approval. 4. MMC shall provide written verification to the PI of the approved report. 5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals. B. Handling of Fossil Remains 1. The PI shall be responsible for ensuring that all fossil remains collected are cleaned and catalogued. C. Curation of artifacts: Deed of Gift and Acceptance Verification 1. The PI shall be responsible for ensuring that all fossil remains associated with the monitoring for this Project are permanently curated with an appropriate institution. 2. The PI shall submit the Deed of Gift and catalogue record(s) to the RE or BI, as appropriate for donor signature with a copy submitted to MMC. 3. The RE or BI, as appropriate shall obtain signature on the Deed of Gift and shall return to PI with copy submitted to MMC.	

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
PALEONTOLOGICAL RESOURCES (cont.)		
	4. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC. D. Final Monitoring Report(s) 1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC of the approved report. 2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.	
AESTHETICS/NEIGHBORHOOD CHARACTER/VISUAL QUALITY		
Two retaining walls for which adequate vegetative screening cannot be accomplished are conservatively assessed as resulting in significant visual impacts.	No feasible mitigation is available.	Significant

Table ES-1 (cont.) IMPACTS AND PROPOSED MITIGATION		
IMPACT	**MITIGATION MEASURES**	**ANALYSIS OF SIGNIFICANCE AFTER MITIGATION**
AESTHETICS/NEIGHBORHOOD CHARACTER/VISUAL QUALITY		
Project construction activities creating "disorganized appearance" are considered to result in a temporary significant impact.	No feasible mitigation is available.	Significant

Table ES-1 (cont.)
IMPACTS AND PROPOSED MITIGATION

IMPACT	MITIGATION MEASURES		ANALYSIS OF SIGNIFICANCE AFTER MITIGATION
NOISE			
Temporary, short-term direct impacts associated with vibratory pile installation and nighttime construction noise would be significant.	**N-1**	If vibratory pile installation equipment is proposed to be used within 500 feet of a residence, the contractor shall baffle the equipment and/or reduce the number of hours per day the equipment is in operation to achieve a 12-hour noise level of 75 dBA L_{eq} or less at the closest home. Concurrent with the commencement of vibratory pile installation, noise monitoring shall be conducted at the property line of the nearest home to ensure that noise levels do not exceed 75 dBA L_{eq}. If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician, then the associated activities shall cease until such time that adequate noise attenuation is achieved.	Not Significant
Temporary, short-term direct impacts associated with nighttime construction noise would be significant.	**N-2**	Based on final nighttime construction specifications, a qualified acoustician shall prepare and submit to the City Manager (or designee) specifications of appropriate noise attenuation measures to reduce noise impacts at the first floor of residences in the vicinity of construction activities to 65 dBA L_{eq} or less. The submittal shall include the results of coordination with residents to determine whether they agree to having a temporary wall placed at the edge of their property. All nighttime noise attenuation measures agreed to by the residents and specified by the City Manager shall be implemented during the construction period.	Significant

Table ES-1 (cont.)
IMPACTS AND PROPOSED MITIGATION

IMPACT	MITIGATION MEASURES	ANALYSIS OF SIGNIFICANCE AFTER MITIGATION
AIR QUALITY		
Short-term direct impacts related to the emissions of NO_x during the construction period would be significant.	**AQ-1** Ten percent of the Project construction fleet shall use any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters and/or CARB certified Tier I, II or III equipment.	Significant
Temporary impacts associated with demolition and construction waste disposal are considered significant.	**PF-1** The Project shall implement a Waste Management Plan, which would minimize the Project's solid waste impact and ensure compliance with applicable policies and regulations. The plan shall address demolition and construction phases of the Project, as applicable. Measures may include reducing waste disposal and/or implementing compensatory measures, such as use of materials with post-consumer content. The plan must be approved by the City's Environmental Services Department.	Not Significant

Table ES-2
COMPARISON OF ENVIRONMENTAL EFFECTS OF THE PROJECT WITH FULL-SYSTEM ALTERNATIVES

Environmental Issue	Proposed Project	Alternative 6	Reduced Footprint Alternative	No Project Alternative
Land Use	LS	LS	LS	SU
Traffic/Circulation	LS (B[1])	LS (B[1])	SU (B)[2]	SU
Hydrology/Water Quality	LS	LS	LS	N
Biological Resources	SM	SM	SM	N
Historical Resources	SM	SM	N	N
Geology/Seismicity/Soils	LS	LS	LS	N
Paleontological Resources	SM	SM	SM	N
Aesthetics/Neighborhood Character/ Visual Quality	SU	SU	SU	N
Noise	SU	SU	SU	N
Air Quality	SU	SU	SU	SU
Public Facilities and Services	SM	SM	SM	N
Hazardous Materials	LS	LS	LS	N

SU=Significant and unmitigated; SM=Significant but mitigable; LS=Less than significant; N=No impact; B=Beneficial.
[1]This alternative would alleviate traffic congestion by improving Project area roadways.
[2]This alternative would alleviate local traffic congestion through improvements to City streets, but it would not achieve acceptable levels of service associated with the interchange and SR 163.

CHAPTER 1.0

INTRODUCTION

1.0 INTRODUCTION

1.1 PROJECT SCOPE

The City of San Diego (City), in coordination with the California Department of Transportation (Caltrans) District 11 and the Federal Highway Administration (FHWA), proposes improvements to the State Route (SR) 163/Friars Road interchange and adjacent streets (Project). The study area is located in the central portion of Mission Valley in southwestern San Diego County (Figure 1-1, Regional Location Map).

Improvements would center on the interchange of the eight-lane north-south trending freeway and the generally six-lane east-west Friars Road that crosses above the freeway on a 390-foot-long bridge. Other roadways affected by the Project include the four-lane Frazee Road, four-lane Ulric Street and five-lane Avenida de las Tiendas, the main entrance to Fashion Valley Center (Figure 1-2, Project Location Map). The improvements would occur on the following portions of these roadways:

- SR 163 from Genesee Avenue to Interstate (I-) 8.
- Friars Road from approximately 350 feet west of Avenida de las Tiendas to approximately 700 feet east of Frazee Road.
- Frazee Road from Friars Road to approximately 660 feet north of Friars Road and to approximately 450 feet south of Friars Road.
- Ulric Street from Friars Road to approximately 720 feet north of Friars Road.
- Avenida de las Tiendas.

Major Project elements include a new separate facility for southbound SR 163 traffic to exit onto westbound I-8 (including a new bridge over the San Diego River), a new flyover bridge to connect Ulric Street to southbound SR 163, widening Friars Road Bridge, widening and/or restriping other roads and freeway ramps, relocating medians and changing various traffic movements, while minimizing adverse effects on current circulation during construction.

Existing roadway characteristics and conditions within the study area are discussed in Chapter 2.0, Project Setting. Details on the purpose/objectives and description of the Project are presented in Chapter 3.0, Project Description.

1.2 DOCUMENT PURPOSE AND LEGAL AUTHORITY

This document is a Project Environmental Impact Report (EIR) as defined by Section 15161 of the California Environmental Quality Act (CEQA) Guidelines. The purpose of this EIR is to provide detailed information about the effects the Project is likely to have on the environment, list ways in which significant effects may be minimized and evaluate reasonable alternatives to the Project. This EIR is an informational document intended to be used by the City and other agencies with decisions to make about the Project, as well as to inform the general public about Project-related beneficial effects or adverse impacts.

The City of San Diego is the Lead Agency, as defined by Section 15051(b)(1) of the State CEQA Guidelines, for the Project evaluated in this EIR. Under CEQA, the public agency with the greatest responsibility for supervising or approving the project or the first public agency to take discretionary action to proceed with a proposed project should ordinarily act as the "lead agency." The lead agency is responsible for preparing the EIR and has primary responsibility for approving the project. The City is the Lead Agency for the SR 163/Friars Road Project because the roadways affected are located within City boundaries, the Project is being proposed by the Engineering and Capital Projects Department (the Project Applicant), and the City must issue a Site Development Permit (SDP) due to impacts to Environmentally Sensitive Lands. The City has entered into a cooperative agreement with Caltrans for the design and design oversight of this Project. Another cooperative agreement between the two entities would be prepared for implementation of the construction contract.

This document has been prepared in accordance with the criteria, standards and procedures of CEQA of 1970 as amended (California Public Resources Code Sections 21000 et seq. as amended), the State CEQA Guidelines (California Administrative Code Sections 15000 et seq.), the City of San Diego Environmental Impact Report Guidelines updated December 2005, and the City of San Diego Development Services Department CEQA Significance Determination Thresholds dated January 2007. It represents the independent judgment of the City as Lead Agency under CEQA (State CEQA Guidelines Section 15050).

Should the Project be approved, as noted in Section 1.1 above, the Project would involve construction on City right-of-way and the state highway system. The City also anticipates the use of federal funds during construction, which would require agreement of Project need and approval of environmental review by the FHWA. Permit decisions from federal agencies are also required. As a result, the Project must comply with the National Environmental Policy Act (NEPA) as well as CEQA. The environmental review, consultation and any other action required in accordance with applicable federal laws for this Project is being carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327. A separate NEPA environmental document that meets the guidelines of FHWA and Caltrans will be prepared by Caltrans, relying upon technical studies prepared for the Project overall.

1.3 SCOPE OF THE EIR

The City Environmental Analysis Section (EAS) of the Entitlements Division conducted an Initial Study for the Project and determined that it could have significant effects on the environment. The City distributed a Notice of Preparation (NOP) of an EIR on November 4, 2005 to applicable federal, state, regional and local governments; government agencies; interested organizations; community planning groups; and individuals expressing an interest in the Project. The NOP also was published in the *Daily Transcript*. The NOP (refer to Appendix A) provided a brief description of the Project and announced a public scoping meeting. A total of seven letters were received in response to the NOP. Commentors are identified below in alphabetical order within

federal, state agency and local interest groups, and a private individual. Letters were submitted by:

- U.S. Fish and Wildlife Service
- California Department of Fish and Game
- California Department of Toxic Substances Control
- Native American Heritage Association
- San Diego County Archaeological Society, Inc.
- San Diego Gas and Electric
- Randy Berkman

The City's Entitlements Division conducted the public scoping meeting on Monday, November 28, 2005 at the Mission Valley Library at 2123 Fenton Parkway. Caltrans staff, consulting engineer and consulting environmental staff also were present to answer questions from the public. A total of 15 members of the public attended the meeting, which was held with an open house format followed by a presentation by City EAS, Transportation Engineering Division, and Engineering and Capital Projects Department staff. The consulting Project engineer described the Project. Two members of the public gave oral testimony following the City's presentation. Both people spoke about traffic concerns. One comment letter also was received during the meeting.

Verbal and written comments received by the City during the scoping process have been taken into consideration during the preparation of this EIR. A copy of the scoping letter, sign-in sheet, comment letters and transcript of the scoping meeting also is included in Appendix A.

This Project EIR addresses Project effects associated with the following 12 issue areas in Chapter 5.0, Environmental Analysis:

- Land Use
- Traffic/Circulation
- Hydrology/Water Quality
- Biological Resources
- Historical Resources
- Geology/Seismicity/Soils
- Paleontological Resources
- Aesthetics/Neighborhood Character/Visual Quality
- Noise
- Air Quality
- Public Facilities and Services
- Hazardous Materials

Several environmental issues were identified for which the Project would not result in significant impacts. These topics, briefly addressed in Chapter 10.0, include:

- Agricultural Resources
- Mineral Resources
- Energy
- Population/Housing
- Public Services and Facilities
- Water Conservation

Other mandatory sections required in the State CEQA Guidelines are included in the later sections of this EIR, described in Section 1.4, below.

State CEQA Guidelines Section 15126.2(a) requires that an EIR "identify and focus on the significant environmental effects" of a proposed project. "Effects" and "impacts" mean the same under CEQA and are used interchangeably in this EIR. Project-related consequences were determined by describing existing conditions, superimposing the Project on this setting, and then analyzing the effects that could occur if the Project was implemented. The analysis was conducted utilizing City CEQA significance thresholds. At the conclusion of the analysis for each potential impact, the effect is determined to be one of the following:

- Less than significant
- Significant but mitigable
- Significant and unmitigable

"Mitigable" means measures are available to reduce the impact to below a level of significance. "Unmitigable" means the impact cannot be reduced to below a level of significance, although some mitigation measures may be proposed. Unmitigable impacts under CEQA are important because the decision-makers must balance the benefits of a proposed project against any unmitigable environmental impacts in determining whether to approve the project. A project may be approved despite unmitigable impacts under CEQA. The lead agency must make findings about mitigation measures and alternatives, however, and must prepare a Statement of Overriding Considerations to specify the reasons supporting its decision. In accordance with State CEQA Guidelines Section 15093, if specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse effects may be considered "acceptable."

1.4 ORGANIZATION OF THE EIR

As stated above, the content and format of this EIR are in accordance with the most recent guidelines and amendments to CEQA and the City EIR Guidelines. The document is divided into 15 chapters. The content of each chapter is summarized below.

> **Chapter S: Summary**. This chapter presents an overview of the EIR; discussing the Project description, conclusions of the environmental analysis and alternatives. The conclusions focus on those impacts determined to be significant but mitigated, as well as impacts identified as significant and unmitigated.

Impacts and mitigation measures are summarized in tabular format. In addition, the Summary includes a discussion of areas of controversy known to the City, including those issues identified by other agencies and the public.

Chapter 1: Introduction. This chapter provides a brief description of the Project, the purpose of the EIR, the scope of the document and the legal basis for its preparation, key discretionary City actions, permits and approvals required of/by other agencies, and an explanation of the document format.

Chapter 2: Environmental Setting. This chapter describes the physical environmental conditions in the vicinity of the Project as they existed at the time the Notice of Preparation was published, including relevant planning documents and existing land use designations, as well as any special zones that apply to the study area.

Chapter 3: Project Description. This chapter discusses the purpose and need for the Project; describes design features, construction activities and operational characteristics; and lists the discretionary actions (permits and approvals) required by federal, state, regional and local regulatory agencies.

Chapter 4: History of Project Changes. This chapter chronicles revisions made to the Project design in response to environmental concerns raised during the City's review.

Chapter 5: Environmental Analysis. This chapter presents the detailed evaluation of potential impacts for specific environmental issues. For each issue analyzed in Section 5.0, the following items are presented: a description of existing conditions (including affected environment as relevant to the topic and regulatory setting); the issue question provided in the City Scoping Letter; relevant impact thresholds; the impact analysis based on comparison of the Project effects superimposed on the existing setting in terms of the thresholds specified; a finding as to significance of impact; and specified mitigation measures as relevant and appropriate.

Chapter 6: Significant Environmental Effects Which Cannot Be Avoided If the Proposed Project Is Implemented. This chapter includes a discussion of the significant impacts that are unavoidable if the Project is implemented, and significant impacts that cannot be reduced to below a level of significance.

Chapter 7: Significant Irreversible Environmental Changes. This chapter describes the significant irreversible changes resulting from the Project, including the use of nonrenewable resources.

Chapter 8: Growth Inducement. This chapter evaluates the potential of the Project to foster substantially increased economic or population growth in the surrounding area.

Chapter 9: Cumulative Impacts. This chapter analyzes the incremental effects of the Project when viewed in connection with the effects of past, current and probable future projects.

Chapter 10: Effects Found Not to Be Significant. This chapter lists the environmental issues that were determined not to be significant and therefore not discussed in detail, and briefly describes the reasons for this determination.

Chapter 11: Alternatives. This chapter presents the analysis of potential alternatives to the Project and a comparison of the impacts and operational performance of each.

Chapter 12: Mitigation Monitoring and Reporting Program. This chapter contains the full text of all the mitigation measures identified for the Project in the environmental analysis.

EIR References, Individuals and Agencies Consulted, and EIR Preparers are provided in Chapters 13.0, 14.0 and 15.0, respectively.

1.5 DECISIONS TO BE MADE AND PERMITS REQUIRED

The Draft EIR is available for review by interested agencies, organizations and individuals for 45 days in order to receive comments on "the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the Project might be avoided or mitigated" (State CEQA Guidelines Section 15204). The EIR and all supporting technical studies and documents are available for review at the following San Diego locations: City of San Diego, Development Services Department, 1222 First Avenue, Fifth Floor; the Mission Valley Library, located at 2123 Fenton Parkway; and the Central Library, located at 802 E Street, San Diego.

After the public circulation period for this EIR, all written comments received on the Draft EIR and at the public hearing will be considered during the City's decision on whether to certify the EIR as complete and in compliance with CEQA, as well as whether to approve or deny the Project, or take action on a project alternative. If the City (Planning Commission, or, by appeal, City Council) approves this action, it would prepare Findings for all significant impacts identified, prepare a Statement of Overriding Considerations for impacts that cannot 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 City would then file a Notice of Determination with the County of San Diego Clerk and the State Clearinghouse that would identify whether the Project would have significant impacts with mitigation measures included as conditions of Project approval, and a statement that Findings were made and a Statement of Overriding Considerations was adopted, if applicable.

The City (Planning Commission, or, by appeal, City Council) also must approve a Site Development Permit because the Project site contains Environmentally Sensitive Lands.

As the federal Lead Agency with authority delegated by FHWA, Caltrans will use this document and associated technical studies to support the separate federal NEPA documentation process.

The City will not be able to access federal funds for final design, right-of-way arrangements or construction until both the City's CEQA process and the federal NEPA environmental process are complete.

The environmental review completed as part of preparation of this EIR addressed several build alternatives to the Project. As discussed in Chapter 11.0, Alternatives, based on the technical studies' analyses and other considerations, all alternatives except the Project were eliminated from further consideration for implementation because they would not meet the Project objectives and/or would result in environmental impacts that would be greater in magnitude following implementation of the alternative.
Subsequent to certification of the EIR and approval of a build alternative, other agencies with permitting authority over all or portions of the Project will use this document to make discretionary decisions regarding Project permits in accordance with CEQA and NEPA requirements. These agencies are identified as either "responsible" or "trustee" agencies. Section 15381 of the State CEQA Guidelines defines responsible agencies as those public agencies other than the lead agency with discretionary approval power over a project. Section 15386 defines a trustee agency as a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of California. These agencies and the relevant permits and approvals are summarized in Table 3-3, Permits and Approvals.

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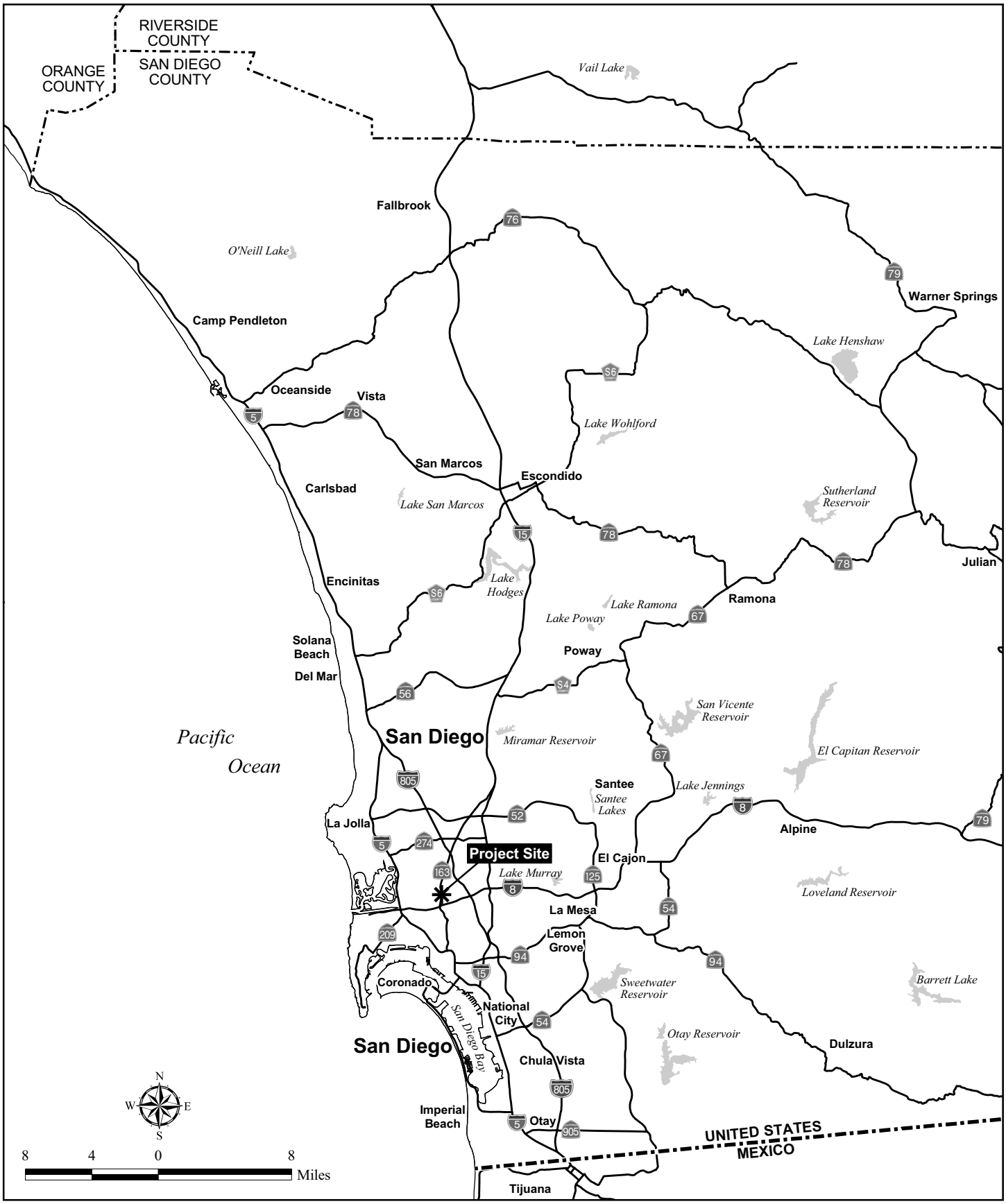

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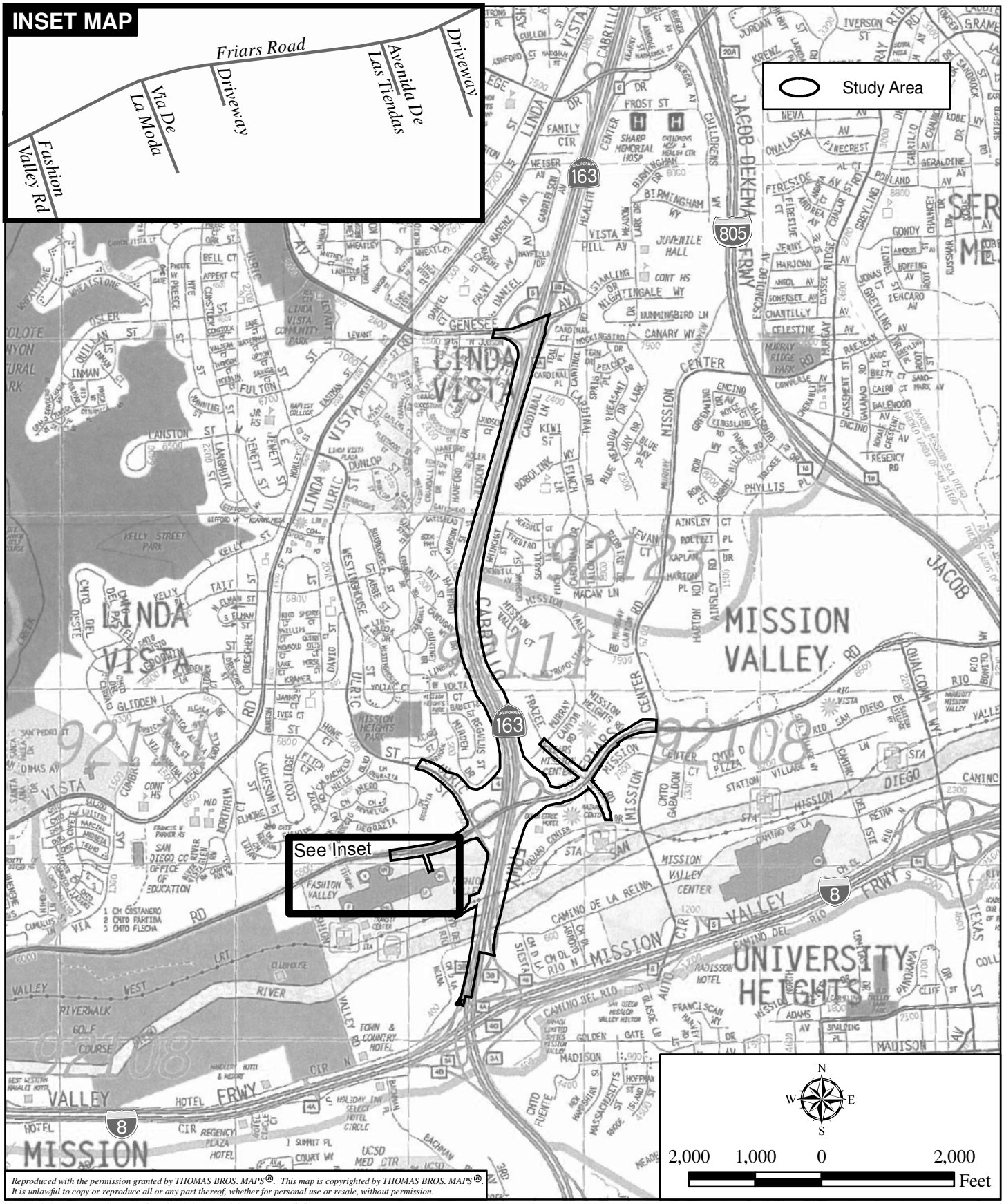
Regional Location Map

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 1-1



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Project Location Map

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 1-2

CHAPTER 2.0

ENVIRONMENTAL SETTING

2.0 ENVIRONMENTAL SETTING

2.1 PROJECT LOCATON AND GEOGRAPHIC SETTING

The SR 163/Friars Road interchange is located in the central portion of Mission Valley in the City of San Diego. The area was once a pastoral valley dotted with dairy farms. Now the floor of Mission Valley is almost fully developed with shopping centers, office buildings, industrial structures and multi-dwelling residential developments. The San Diego River trends through the middle of the valley, with steep slopes and mesas rising to the north and south. Formed through the erosive actions of the San Diego River, the valley itself slopes from approximately 600 feet above mean sea level (AMSL) on the eastern end of the Mission Valley community to sea level at the western end of the valley. The communities of Linda Vista and Serra Mesa are on the hills to the north. On the mesa to the south are the communities of Mission Hills, Hillcrest and University Heights.

The study area is a highly centralized San Diego location, accessible by five major freeways (SR 163, I-805, I-5, I-8 and I-15), major bus routes and a light-rail trolley line. Mission Valley is home to two major regional shopping centers (Fashion Valley Center and Mission Valley Center) and eight community shopping centers (Fenton Market Place, Friars-Mission Center, Hazard Center, Hazard Center East, Mission Valley East, Mission Valley West, Park in the Valley Center, and Rio Vista). The newest of these centers is the 560,000-square-foot Fenton Market Place on Fenton Parkway and Northside Drive, which opened in 2001. In the immediate vicinity of the interchange, Fashion Valley Center is located to the southwest, Hazard Center to the southeast and Friars-Mission Center to the northeast. The Riverwalk Golf Course lies directly south of Friars Road, and straddles the river southwest of the SR 163/Friars Road interchange.

Since the late 1990s, more than 3,000 multi-dwelling residential units have been added in Mission Valley, including Villa Dorado, Rio Vista, Arcadia at Stonecrest, Cambridge, Archstone on Fenton Parkway, The Promenade, and additions to La Mirage. Archstone is a 394-unit apartment community on 47 acres, developed by Shea Homes and Continental Homes. The builders teamed on a master-planned residential community called Escala, consisting of six neighborhoods totaling approximately 780 attached homes. Escala is located on the north side of Friars Road, between Northside Drive and Fenton Parkway. Shea Homes' projects include The Bungalows, The Terraces and The Verandas. Continental Homes also has three neighborhood projects in Escala: The Bridges, The Courtyards and The Villas. Also recently completed in Mission Valley were H.G. Fenton's Portofino apartment project near Fenton Marketplace, the FashionWalk condos north of Fashion Valley Center on Friars Road, and Village at Morena Vista adjacent to the Rio Vista trolley stop. Projects in the planning stage include West End, University High School Site and Quarry Falls. With these residential projects, the Mission Valley community planning area is developing a substantial residential base. Much of this growth is occurring east of SR 163 along Friars Road. SANDAG forecasts that total population for the planning area will increase 137 percent during the 30-year period from 2000 to 2030. In comparison, the populations of the

County and City overall are anticipated to grow a more modest 37 percent and 35 percent, respectively.

Roadways are a dominant feature in Mission Valley. I-8 is the main east-west transportation corridor through the area, connecting with I-5 and Point Loma to the west and I-805, I-15, and SR 125 to the east, as well as points farther east. SR 163 trends perpendicular to I-8, extending from its merge with I-5 on the south to I-15 on the north. Friars Road is a major thoroughfare paralleling I-8 on the northern side of Mission Valley; it extends from I-5 on the west to Mission Gorge Road on the east. Ulric Street, located west of SR 163 and north of Friars Road, provides a north-south link between the community of Linda Vista on the north and Mission Valley on the south. Numerous collector roads, including Fashion Valley Road (west of SR 163), Frazee Road and Mission Center Road (east of SR 163), and Camino de la Reina (south of Friars Road), serve the area.

There are also facilities for other modes of transportation in Mission Valley. A linear paved walkway for pedestrians and bicyclists, the San Diego River Bike Path, parallels both sides of the San Diego River east of SR 163. The bike path west of SR 163 currently terminates at the river crossing. Future extension of the bike path beneath SR 163 is proposed in the San Diego Bicycle Master Plan. Friars Road has a Class I bike path/trail west of Fashion Valley Road and Class II bike lanes on the east and west sides of Fashion Valley Road. Mission Center Road, Ulric Street, Linda Vista Road and Genesee Avenue northwest of Linda Vista Road also have Class II bike lanes.

The San Diego Trolley Green Line extends parallel to and south of Friars Road. The trolley runs along the north side of the river west of SR 163, crosses to the south side of the river at Mission Center Road and crosses back to the north side of the river at Camino del Este. Trolley stations include Fashion Valley west of SR 163, and Hazard Center, Mission Valley and Rio Vista east of SR 163. The Fashion Valley Transit Center is a major station for trolley and bus facilities. Friars Road is also a transit corridor for local bus service from Rancho Mission Road west. Area bus routes include numbers 6, 14, 25, 41, and 928.

The San Diego River is a prominent feature of Mission Valley. The river lies between I-8 on the south and Friars Road on the north. SR 163 crosses over the river on a bridge. Other river crossings include Fashion Valley Road and Avenida del Rio west of SR 163, and Mission Center Road and Camino del Este east of SR 163. Much of the river in Mission Valley has been channelized and vegetated as part of the First San Diego River Improvement Project to accomplish flood protection for adjacent development, but this project did not extend west of SR 163. Vegetation types in the river at the SR 163 Bridge include southern cottonwood-willow riparian forest, open water, non-native grassland, eucalyptus woodland and disturbed areas containing ruderal (weed), ornamental and exotic plants as well as dirt roads. Vegetation types in the study area outside of the river include freshwater marsh/disturbed wetland in a drainage on the east side of SR 163 between the river and Friars Road, eucalyptus woodland and ornamental landscaping inside the loop areas of the interchange and along the freeway, Diegan coastal sage scrub

on slopes north of Friars Road and west of SR 163, and non-native grassland west of SR 163. Biological resources are addressed in detail in Section 5.4.

Within City boundaries, the San Diego River is addressed in the San Diego River Park Draft Master Plan (City 2005a). This Master Plan provides guidance on establishing and managing the San Diego River Park, as discussed in Section 5.1, Land Use, of this EIR. In the vicinity of SR 163, the river is located in the Lower Valley section of the San Diego River Park. This section extends from the eastern edge of the Mission Valley Preserve to I-15. The short-term recommendations relevant to the Project include establishing green gateways along SR 163 and at interchanges throughout the valley by introducing native landscapes along roadways. The plan also recommends a continuous, paved, multi-use trail along the entire river corridor.

2.2 EXISTING ROADWAY FEATURES

2.2.1 SR 163

The SR 163/Friars Road interchange is sited roughly at the middle of the state route length extending from I-5 in downtown San Diego to a merge with I-15 at U.S. Marine Corps Air Station Miramar. The study area, delineated on Figure 1-2, encompasses SR 163 from the Genesee Avenue interchange on the north to the I-8 interchange on the south, and Friars Road from east of Avenida de las Tiendas on the west to west of Mission Center Road on the east. Other roadways included within the Project limits are Ulric Street for about 720 feet north of Friars Road, and Frazee Road from south of Murray Canyon Road on the north to north of Hazard Center Drive on the south.

SR 163 within the study area is an eight-lane freeway with four 12-foot-wide lanes in each direction, 8-foot-wide inside shoulders, and 10-foot-wide outside shoulders. A 24-foot-wide center median has parallel concrete barriers. The existing freeway profile varies from nearly flat south of the Friars Road Bridge to a five percent grade north of Friars Road. There is a large 1:1 (vertical:horizontal) cut slope west of southbound SR 163 between the Genesee Avenue and Friars Road interchanges. A gently sloping graded area 20 feet wide adjacent to the outside shoulder of southbound SR 163 accommodates the standard stopping sight distance for a design speed of 70 miles per hour (mph). The posted speed limit on SR 163 at this location is 65 mph.

The existing SR 163/Friars Road interchange encompasses three looping ramps and one linear ramp that allow drivers to make a variety of traffic movements from and to SR 163 and Friars Road. Picturing the interchange as divided into four parts, or "quadrants," the loops are in the northwest, southwest and northeast quadrants, and constitute a partial "cloverleaf" configuration. The linear ramp is in the southeast quadrant, and constitutes part of a "diamond" configuration. The traffic movements and facility characteristics for each part of the interchange are briefly described below by quadrant, and schematically illustrated in Figure 2-2, Existing Traffic Movements. The quadrant characteristics are also summarized in Table 2-1.

- Southeast Quadrant: This quadrant provides a single-lane diamond, northbound off-ramp to eastbound Friars Road, with a free-right (no stopping) turn.
- Northeast Quadrant: The existing single-lane northbound SR 163 loop off-ramp to Friars Road in this quadrant provides a free-right turn lane for westbound traffic. The existing single-lane northbound SR 163 on-ramp provides freeway access for eastbound Friars Road traffic from a single left-turn lane at a signal and for westbound Friars Road traffic from a short, exit-only, right-turn auxiliary lane before the signal. Traffic turning right must yield to traffic entering the ramp from eastbound Friars Road.
- Northwest Quadrant: An elongated loop in this quadrant allows westbound vehicles on Friars Road to access southbound SR 163 via a free-right turn onto the ramp before the signal at Friars Road and Ulric Street. Drivers on Ulric Street and eastbound vehicles on Friars Road can access the loop on-ramp from Ulric Street. As part of the 1970 interchange reconstruction, a retaining wall was constructed north of the westbound Friars Road to southbound SR 163 loop on-ramp to support a proposed diamond off-ramp connecting southbound SR 163 to Ulric Street. The ramp was later eliminated from the freeway contract. This quadrant therefore lacks a southbound SR 163 diamond off-ramp.
- Southwest Quadrant: A three-lane, southbound on-/off-ramp collector road provides access to eastbound and westbound Friars Road, and northbound Ulric Street from southbound SR 163. The collector passes under the Friars Road Bridge and has a short weaving distance for traffic entering the freeway from the northwest quadrant facilities. ("Weaving" is where motorists driving in parallel directions change lanes in the same area to access their desired entrance or exit points.) If the distance provided for drivers to accomplish their lane changes is relatively short, the weaving maneuver can be difficult. A free-right turn lane is provided from southbound SR 163 to eastbound Friars Road. An on-ramp to southbound SR 163 serves traffic from eastbound Friars Road and southbound Ulric Street. There is a signal at the intersection of Friars Road and Ulric Street that also serves the on-ramp. Traffic entering the on-ramp from eastbound Friars Road has a free right before the signal. Traffic entering the on-ramp from Ulric Street goes through at the signal.

Table 2-1
SUMMARY OF SR 163/FRIARS ROAD INTERCHANGE BY QUADRANT

Quadrant	Configuration	Movement From*	Movement To*	Type of Turn(s)
Southeast	Single-lane diamond	NB SR 163	EB Friars Road	Free right
Northeast	Single-lane loop off-ramp	NB SR 163	WB Friars Road	Free right
Northeast	Single-lane on-ramp	EB and WB Friars Road	NB SR 163	Single left-turn lane from EB Friars Road at signal; right-turn-only auxiliary lane from WB Friars Road before signal
Northwest	Loop ramp	WB Friars Road and Ulric Street	SB SR 163	Free right from Friars Road or turn from Ulric Street to enter ramp, weave to enter SR 163
Southwest	Collector and 3-lane loop ramp	SB SR 163	EB Friars Road	Weave before exit point, free right at top of ramp
Southwest	Collector and 3-lane loop ramp	SB SR 163	WB Friars Road and NB Ulric Street	Weave before exit point, signal at top of ramp
Southwest	Diamond on-ramp	EB Friars Road and SB Ulric Street	SB SR 163	Signal at ramp entrance with free right before the signal for traffic from EB Friars Road

* Movements are defined as follows:
NB = Northbound
SB = Southbound
EB = Eastbound
WB = Westbound

2.2.2 Friars Road

With the exception of a six-lane divided roadway section between Avenida de las Tiendas and Ulric Street, Friars Road in the study area generally consists of two westbound through lanes, a westbound exit lane and three eastbound through lanes. The Friars Road overcrossing bridge is 114 feet wide to accommodate six travel lanes, a 19-foot-wide raised median, outside shoulders and a sidewalk on the south side. The two-span, cast-in-place, concrete bridge is 390 feet long and is super-elevated to

accommodate a horizontal curve over the freeway. There are four signalized intersections along Friars Road in the study area: Avenida de las Tiendas, Ulric Street, northbound SR 163 ramps and Frazee Road. As shown on Figure 2-1, a Class II bike lane is located on Friars Road to the east and west of the SR 163 interchange. A Class II bike lane provides a striped and stenciled lane for one-way travel. Friars Road at the SR 163 interchange is considered a shared roadway for bicycles and automobiles with no bike lane striping or formal bicycle designation.

2.2.3 Other Roadways

Ulric Street is a four-lane undivided roadway within the study area. Curbside parking is prohibited on Ulric Street. Frazee Road has a total of four lanes with a center median. Two lanes each are provided for northbound and southbound traffic, with turning lanes at Friars Road, mid-block, and at Murray Canyon Road. Curbside parking is allowed on both sides of Frazee Road near Murray Canyon Road and near Hazard Center Drive. Avenida de las Tiendas has five lanes with a center median. Currently, there are two southbound lanes and three northbound lanes. No curbside parking is allowed.

2.3 PLANNING CONTEXT (APPLICABLE GENERAL PLAN AND REGIONAL PLANS)

2.3.1 Project Planning Background

The existing Friars Road interchange was completed in 1970 in conjunction with the widening of SR 163 from four to eight lanes in this vicinity. The area has a long history of previous engineering studies to attempt to correct perceived deficiencies. A Project Study Report was prepared in March 1988 to address interchange improvements to accommodate the Hazard Center development. The Project Study Report, issued by Caltrans, examined widening Friars Road on the south side and changing ramps on and off of SR 163.

A second Project Study Report was approved in November 1988 that proposed reconfiguration of the southbound SR 163 off-ramp to a diamond off-ramp connecting to Ulric Street. The primary purpose of the project was to reduce weaving conflicts on the southbound SR 163 on- and off-ramp collector road and to improve traffic operations for the signalized Friars Road/Ulric Street intersection.

In 1992, Caltrans completed a Transportation Concept Report for SR 163. Although the Transportation Concept Report noted that SR 163 was operating at an unacceptable level of service (LOS) during peak traffic periods, the Transportation Concept Report did not recommend additional roadway improvements for SR 163 within the study area. Instead, Transportation Control Measures (TCMs) were recommended to decrease travel demand during peak commute periods. TCMs include ridesharing, staggered work hours, parking management, developer and employer incentives, and implementation of ordinances.

The City approved an updated General Plan on March 10, 2008, which applies only to projects deemed complete after that date. A Draft Project Report was prepared in 1997, describing the engineering features for improvements to both the east and west sides of the interchange at Friars Road, including improvements to Ulric Street. A preliminary draft environmental document was prepared for the SR 163/Friars Road interchange in 1998 that analyzed the project described in the 1997 Draft Project Report, but this document was never completed.

The most recently updated Project Report (Dokken 2009a) addresses the Project as described in Chapter 3.0, as well as alternative projects and alternative design elements described in Chapter 11.0 of this EIR.

2.3.2 General Plan

Consistency of the Project with applicable planning documents, including regional plans and policies such as the General Plan and regional transportation planning documents, is evaluated in detail in Section 5.1, Land Use. In brief, however, the City of San Diego General Plan is the City-wide land use development and planning document that contains guidelines and policies relative to development, open space and infrastructure. The General Plan is a comprehensive, long-term document that sets out a long-range vision and policy framework for how the City could grow and develop, provide public services, and maintain the qualities that define San Diego. Accordingly, the General Plan "provides policy guidance to balance the needs of a growing city while enhancing quality of life for current and future San Diegans." The General Plan is comprised of a Strategic Framework section and 10 elements including: Land Use and Community Planning; Mobility; Urban Design; Economic Prosperity; Public Facilities, Services and Safety; Recreation; Conservation; Historic Preservation; Noise; and Housing. It should be noted that state law requires that a Housing Element be updated at five-year intervals, with the most recent Housing Element updated prior to March 2008 and applicable for fiscal years 2005-2010. Most projects within the City are subject to both the described General Plan and one or more locally specific community plans, with community plans applicable to the study area outlined below.

2.3.3 Community Plans

The discussion below focuses on those plans developed for the specific geographic areas that would be crossed by Project improvements. The study area lies within the boundaries of three City of San Diego community plans: Mission Valley, Linda Vista and Serra Mesa. Boundaries of the community plan areas are illustrated on Figure 5.1-1.

Mission Valley Community Plan

The majority of the study area is located in the *Mission Valley Community Plan* (City 1985, as amended) area. The Transportation Element of the community plan recognizes the need for improved operational flow at the SR 163/Friars Road interchange. Portions of the study area that are within the community plan boundaries are the southwest,

southeast and northeast quadrants of the SR 163/Friars Road interchange; portions of Friars Road (including a portion of the SR 163 Bridge), Frazee Road, Hazard Center Drive, SR 163 and the San Diego River; portions of the parking lots for Fashion Valley Center and Hazard Center; and vegetated slopes adjacent to the east side of SR 163. Within the study area, the community plan proposes widening Friars Road to a six-lane major road between Fashion Valley Road and SR 163 and to an eight-lane primary arterial between SR 163 and Mission Center Road. (A major road is defined as a through street with moderately limited access to adjacent properties; a primary arterial is defined as a through street with significantly limited access to adjacent properties.)

The *Mission Valley Community Plan* (1985) included several recommendations for improvements to Friars Road within the study area. The recommendations contained within the document are as follows:

1. All intersections with access to Friars Road from SR 163 should be restricted to right in/right out movements.
2. Friars Road between the northbound SR 163 interchange ramps and Mission Center Road should ultimately be widened to eight lanes.
3. A southbound SR 163 to westbound Friars Road interchange ramp should be constructed to reduce traffic signal requirements at the intersection of Friars Road and Ulric Street.
4. Either the existing signal for the eastbound Friars Road to northbound SR 163 interchange ramp should be moved to the east to provide additional left-turn storage space or a loop ramp or flyover should be constructed within the southeast quadrant.
5. The median width on the Friars Road overcrossing should be reduced to provide three westbound through lanes and a westbound auxiliary lane between the ramp intersections.
6. The northbound SR 163 to eastbound Friars Road interchange ramp should be widened to provide an additional eastbound lane. Improved signalization would possibly be required to prevent weaving conflicts.

The *Mission Valley Community Plan* Circulation Element was updated through a Community Plan Amendment completed for the Quarry Falls project in 2008. As described in Section 5.1.2.2, these amendments propose roadway configurations that are generally consistent with the Project.

Linda Vista Community Plan

SR 163 forms the eastern boundary of the *Linda Vista Community Plan* (City 1998) area. Portions of the study area within this community plan area include the northwest quadrant of the SR 163/Friars Road interchange; portions of Friars Road (including a portion of the SR 163 Bridge), Ulric Street, Genesee Avenue and SR 163; the southbound on-ramp from eastbound Genesee Avenue; and vegetated slopes adjacent to the west side of SR 163 and to the east of Ulric Street. The *Linda Vista Community Plan* identifies the issues and goals of the community with respect to residential land use; commercial and

industrial land use; open space; community facilities, parks, and services; transportation; and urban design, as addressed in Section 5.1.

Serra Mesa Community Plan

SR 163 forms the western boundary of the *Serra Mesa Community Plan* (City 1977, as amended) area. A portion of SR 163 and the northbound on-ramp from Friars Road are within this community plan area. The *Serra Mesa Community Plan* identifies the issues, objectives and proposals of the community with respect to housing, commercial, parks and recreation, community facilities, employment center, transportation and environmental management, as addressed in Section 5.1.

2.3.4 Existing Land Use Designations and Zoning

The Project involves changes to existing transportation facilities in the public right-of-way. Land use designations and zoning for areas adjacent to the public road rights-of-way are addressed in detail in Section 5.1, and illustrated in Figure 5.1-1 (Existing Land Uses) and Figure 5.1-2 (Existing Zoning). Land use designations include the following:

- *Mission Valley Community Plan* area – "Commercial" south of Friars Road on both sides of SR 163, and north of Friars Road east of SR 163; "Inland Bodies of Water" along the San Diego River; and "Industrial" east of SR 163 north of Murray Canyon Road.
- *Linda Vista Community Plan* area – "Multi-family Residential," "Commercial," and "Park; Open Space" north of Friars Road; and "Single-family Residential," "Multi-family Residential," and "Schools" west of SR 163.
- *Serra Mesa Community Plan* area – "Single-family Residential" east of SR 163.

Zoning within the *Mission Valley Community Plan* portion of the study area includes MVPD-MV-CR (Mission Valley Planned District-Commercial Retail), MVPD-MV-M/SP (Mission Valley Planned District-Multiple Use/Specific Plan), MVPD-MV-CV (Mission Valley Planned District-Commercial Visitor), MVPD-MV-CO (Mission Valley Planned District-Commercial Office), MVPD-MV-I (Mission Valley Planned District-Industrial) and OF-1-1 (Open Space-Floodplain). Portions of the study area are included in the Floodway (FW) Zone and Floodplain Fringe Overlay (FPF) Zone.

Zoning within the *Linda Vista Community Plan* portion of the study area includes OR-1-1 (Open Space-Residential), RM-1-1 (Residential-Multiple Unit [1 dwelling unit for each 3,000 square feet of lot area]) and RS-1-7 (Residential-Single Unit [1 dwelling unit per minimum 5,000-square foot lot]).

Zoning within the *Serra Mesa Community Plan* portion of the study area is RS-1-7 (Residential-Single Unit [1 dwelling unit per minimum 5,000-square foot lot]).

2.3.5 City Multiple Species Conservation Program Multi-Habitat Planning Area

The Multiple Species Conservation Program (MSCP) is a comprehensive biological habitat conservation planning program developed by the City in coordination with state and federal resource agencies. A goal of the MSCP is to preserve a network of habitat and open space, protecting biodiversity. Local jurisdictions, including the City, implement their portions of the MSCP through subarea plans. The City has adopted Biology Guidelines that, together with the City Environmentally Sensitive Lands (ESL) regulations and MSCP Subarea Plan, are used to evaluate project-related impacts and required mitigation. The Biology Guidelines provide for variable mitigation ratios for project impacts for different habitats and the location of the impacted area, and proposed mitigation lands relative to the Multi-Habitat Planning Area (MHPA).

The MHPA is a 56,831-acre area in the City, preservation of which is intended to preserve core biological resource areas and corridors targeted for preservation, and subsequently support preservation of the sensitive species that reside in or use these areas. The MHPA is the area within which the permanent MSCP preserve is planned to be assembled and managed for its biological resources. The MHPA is defined in many areas by mapped boundaries and also is defined by quantitative targets for conservation of vegetation communities, as well as goals and criteria for preserve design. The San Diego River, which would be crossed by a new bridge as part of the Project, is included in the MHPA; therefore, the Project is subject to the Land Use Adjacency Guidelines of the MSCP, as well as its Management Directives. Conformance of the Project to the MSCP Subarea Plan and adjacency guidelines, as well as with the City's ESL regulations, are addressed in Section 5.1.

2.4 EMERGENCY SERVICES

Emergency services include fire protection and emergency medical services (EMS) and police protection. The existing setting for these services is described below.

2.4.1 Fire Protection and Emergency Medical Services

The SR 163/Friars Road interchange is located within the service area of the City of San Diego Fire-Rescue Department. The City's response time goals are based on the National Fire Protection Association 1710 Standard for the initial arrival of fire suppression resources, which is five minutes. The full effective fire force response goal is nine minutes. The City's ambulance standard is 10 minutes.

The two closest fire stations to the study area are Fire Stations 5 and 23; in addition, Fire Stations 8, 28 and 45 are in the vicinity of the study area. Fire Station 5, located at 3902 9th Avenue (approximately 2.0 miles south of the SR 163/Friars Road interchange), serves Hillcrest and surrounding areas and has a battalion chief vehicle, fire engine and utility rig. Fire Station 23 is located about 1.2 miles from the Friars Road/Ulric Street intersection, at 2190 Comstock Street near Linda Vista Road and Ulric Street; this station serves Linda Vista and surrounding areas and has a fire engine. Fire Station 8 is located

at 3974 Goldfinch Street and has one engine. Fire Station 28 is located at 3880 Kearny Villa Road and has an engine, truck, foam tender, water tender, and crash and rescue equipment. Fire Station 45 is located at the Qualcomm Stadium parking lot and has one engine.

For the intersection of Friars Road and Ulric Street, average fire engine response time (from the three nearest fire stations) is approximately 4.5 minutes. Average fire engine response time to the intersection of Linda Vista Road and Ulric Street, a prominent intersection in the Linda Vista Community Planning Area, is approximately 4.3 minutes. Average fire engine response time to the intersection of Murray Ridge Road and Sandrock Road, a prominent intersection in the Serra Mesa Community Planning Area, is approximately 5.0 minutes.

2.4.2 Police Protection Services

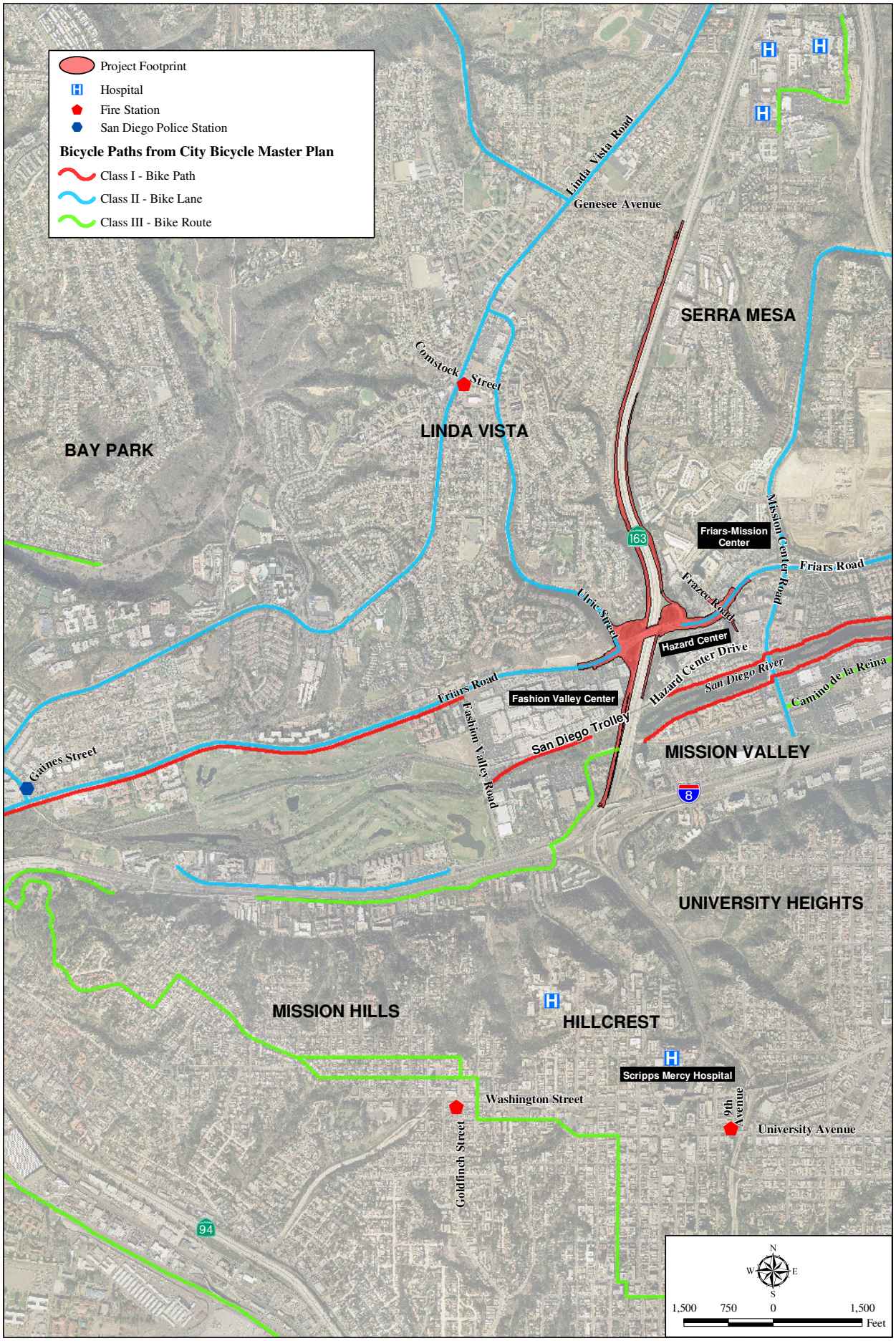
Police protection is provided by the City of San Diego. SR 163 is the dividing line between the Western Division and the Eastern Division of the San Diego Police Department (SDPD). Each of these divisions provides general patrol, traffic enforcement, criminal investigation and clerical support services (per. comm. Marlene Jones 2007).

Study area facilities located on the west side of SR 163 in the neighborhoods of Mission Valley West and Linda Vista are served by the Western Division, located at 5215 Gaines Street (near Friars Road), approximately 1.7 miles west of the SR 163/Friars Road interchange. The Western Division serves a population of 175,985 people and encompasses 25.9 square miles (City website 2008b[1]). The Western Division currently has 214 personnel including sworn officers and non-sworn employees. There are two beats within the Western Division that serve the Project area: Beat 621 (Linda Vista) and Beat 623 (Mission Valley West). Beat 621 has an average priority E (emergency) response time of 7.4 minutes, which is 0.4 minute over the City's emergency response time goal. Priority One response time is 13.6 minutes, which exceeds the City's goal of 12 minutes by 1.6 minutes. Response time goals for the remaining priorities (Two, Three and Four) are met. All response time goals are met for Beat 623, with an average priority E response time of 6.9 minutes.

Study area facilities located on the east side of SR 163 in the neighborhoods of Mission Valley East, Serra Mesa and Birdland are served by the Eastern Division, located at 9225 Aero Drive, approximately 4.3 miles from the SR 163/Friars Road interchange. The Eastern Division serves a population of 122,485 people and encompasses 44.2 square miles (City website 2008b[1]). The Eastern Division currently has 103 sworn personnel, three civilian professional staff and three Police Service Officers. There are three beats within the Eastern Division that serve the Project area: Beat 311 (Serra Mesa), Beat 314 (Birdland) and Beat 326 (Mission Valley East). Beats 314 and 326 have average priority E response times of 8.3 and 7.4 minutes, respectively, which exceed City's emergency response time goal. Priority One response times are 12.8 and 12.6 minutes, respectively,

[1] http://www.sandiego.gov/police/neighborhood/index.shtml

which also exceed the City's goal. Response time goals for the remaining priorities (Two, Three and Four) are met. All response time goals are met for Beat 311, with an average priority E response time of 5.8 minutes.



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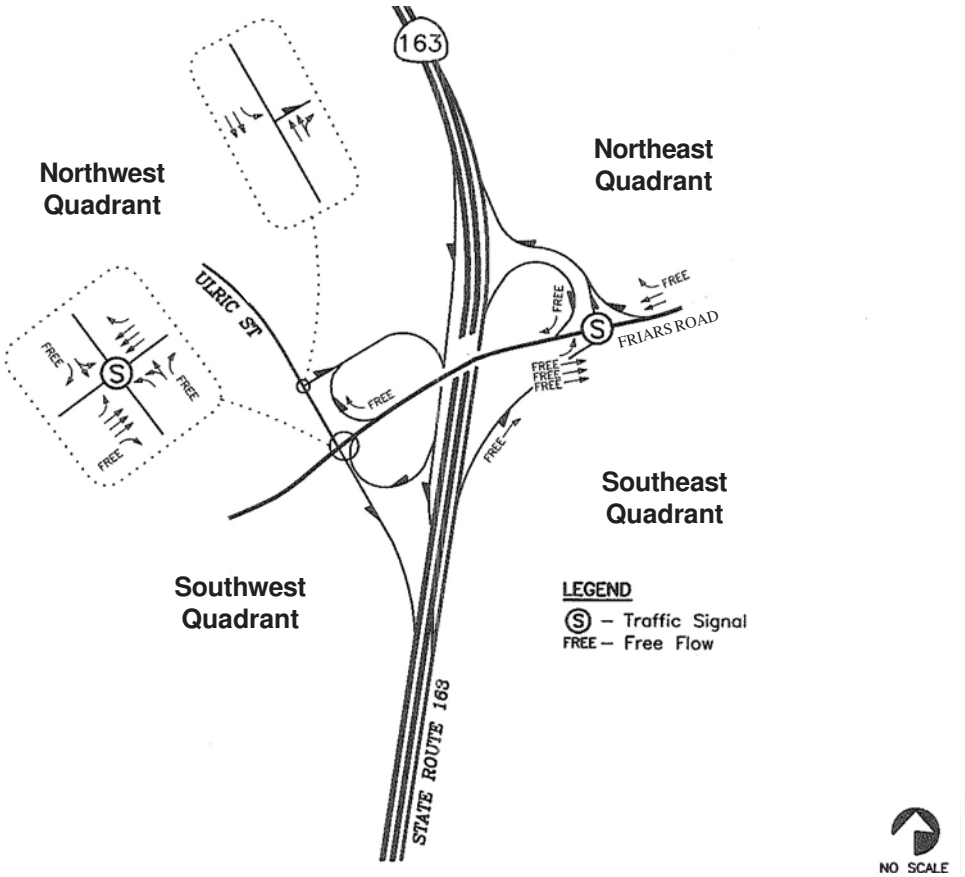
Vicinity Map

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 2-1



Source: Linscott, Law, & Greenspan 2005

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Existing Traffic Movements

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 2-2

CHAPTER 3.0

PROJECT DESCRIPTION

3.0 PROJECT DESCRIPTION

As noted in Section 1.1, the City is coordinating with Caltrans District 11 and the FHWA to implement proposed improvements to the SR 163/Friars Road interchange and adjacent streets, including Frazee Road, Ulric Street and Avenida de las Tiendas.

Major Project elements include constructing a new separate facility for southbound SR 163 traffic to exit onto westbound I-8 (including a new bridge over the San Diego River), building a new flyover bridge to connect Ulric Street to southbound SR 163, widening the Friars Road Bridge, widening and/or restriping other roads and freeway ramps, relocating medians, and changing various traffic movements. All of these changes constitute the "Project," as described in detail in this chapter following a discussion of the Project purpose.

The remainder of this chapter identifies why the Project is needed, what the Project is designed to achieve, what the Project would consist of (bridges, pavement, landscaping, etc.), specifics on construction (phasing, engineering techniques), and specific permits or approvals from the City and other agencies that would be required in order for the Project to be implemented.

3.1 PROJECT PURPOSE

3.1.1 Statement of Objectives

As described in Subsection 3.1.2, the specific problems associated with the existing Caltrans and City transportation facilities involve issues of roadway configuration, as well as capacity and transportation demand. In response to these issues, the Project has been designed to:

- Achieve acceptable levels of service on the interchange and surrounding local street system, and reduce traffic weaving where possible, through the Project design year 2030.
- Relieve traffic congestion, delays and queues on the interchange and surrounding local street system caused by population growth and planned land use development in the Mission Valley area.
- Provide a standard and efficient interchange facility for vehicle traffic on SR 163 and for vehicle, pedestrian and bicycle traffic on Friars Road.
- Enhance operational characteristics.
- Comply with the intent of the *Mission Valley Community Plan* to improve the SR 163/Friars Road interchange and widen Friars Road.

3.1.2 Project Need

3.1.2.1 Freeway and Roadway Characteristics

The existing SR 163/Friars Road interchange has characteristics that create challenging conditions for drivers, bicyclists and pedestrians. The primary issues are short weaving distances that create congestion and queuing for vehicles, and free-right turn movements for cars that make street crossings difficult for bicyclists and pedestrians.

The existing interchange has a southbound on-/off-ramp collector road with a short weaving distance. The southbound collector road provides access to eastbound and westbound Friars Road and northbound Ulric Street from SR 163 (southwest quadrant). The short weaving distance available on the southbound collector road between the southbound SR 163 on- and off-ramps causes substantial delays.

Since vehicles typically move slowly in this area to accommodate the weaving movements and high traffic volumes, queues (lines of cars) often extend back to the southbound freeway lanes and create unstable traffic flows. If the current configuration remains, the increased weaving demand in the future would cause further breakdown in freeway operations. Problems associated with the existing design are summarized below by quadrant:

- Southeast Quadrant: The existing single-lane northbound diamond off-ramp from SR 163 accesses eastbound Friars Road via a free-right-turn (no stopping) lane. The off-ramp lane becomes a must-exit lane (to southbound Frazee Road) on Friars Road. To travel east on Friars Road, the exiting freeway traffic in this lane must merge to the left, onto the southernmost Friars Road through lane, within a short distance of 250 feet. Drivers coming onto eastbound Friars Road from SR 163 who want to access northbound Frazee Road must quickly cross three lanes of eastbound traffic to access the left-turn lanes to Frazee Road. This maneuver is often impossible during peak commute periods. The difficulty of this merge condition is expected to intensify as traffic volumes continue to increase.
- Northeast Quadrant: The existing single-lane northbound SR 163 loop off-ramp to Friars Road in this quadrant provides a free-right turn lane for westbound traffic. The existing single-lane northbound on-ramp to SR 163 from both eastbound and westbound Friars Road was constructed on a steep grade with a tight radius. Eastbound traffic from Friars Road enters the ramp from a single left-turn lane; westbound traffic from Friars Road enters the ramp via a sharp curve and yields to eastbound traffic. With the current configuration of the ramp, queuing for westbound vehicles accessing northbound SR 163 would extend back into the intersection of Friars Road and Frazee Road in the future.
- Southwest and Northwest Quadrants: The existing interchange has a southbound on-/off-ramp collector road with a short weaving distance for traffic entering SR 163 from Friars Road and Ulric Street in the northwest quadrant, and for traffic exiting the freeway to access eastbound and westbound Friars Road and northbound Ulric Street in the southwest quadrant. The short weaving distance

between the southbound SR 163 on- and off-ramps causes substantial delays. Since vehicles typically move slowly in this area to accommodate the weaving movements and high traffic volumes, queue lengths often extend back to the southbound freeway lanes and create unstable traffic flows. With the current configuration, the increased weaving demand in the future would cause further breakdown in freeway operations.

- Southwest Quadrant: The existing SR 163 southbound loop off-ramp provides a free-right turn lane for traffic accessing eastbound Friars Road. The existing difficult merge condition for pedestrians and bicyclists would worsen as traffic volumes increase on Friars Road in the future.
- Northwest Quadrant: An elongated loop in this quadrant allows westbound vehicles on Friars Road to access southbound SR 163 via a free-right turn onto the ramp before the signal at Friars Road and Ulric Street. Drivers on Ulric Street and eastbound vehicles on Friars Road can access the loop on-ramp from Ulric Street. As described in Section 2.2, this quadrant lacks a southbound SR 163 diamond off-ramp.

3.1.2.2 Capacity and Transportation Demand

The major developments in the vicinity of the SR 163/Friars Road interchange, including Fashion Valley Center, Hazard Center, Friars-Mission Center and high-density residential developments along Friars Road and Camino de la Reina, were completed after the current interchange construction in 1970. Since that time, traffic volumes have more than doubled on SR 163 due to these developments, growth in the Linda Vista community served by Ulric Street and growth along Friars Road, particularly to the east of SR 163. The interchange design is no longer adequate to accommodate area traffic, as evidenced by the long queue that can develop from the southbound off-ramp extending into the freeway mainline as far back as Genesee Avenue, congested weaving maneuvers, and congestion and delays at on- and off-ramp intersections with local streets. The Project has been designed to accommodate both the current vehicular traffic volumes and the projected increase, improve vehicular traffic operations via additional lanes, and eliminate current weaving patterns at the Friars Road/SR 163 merge.

Level of service (LOS) is a standard by which the operating conditions of a given roadway segment or intersection is measured. LOS is defined on a scale of A to F, where LOS A represents free flowing traffic conditions; LOS C represents stable flow with speed and maneuverability more closely controlled by higher traffic volumes; and LOS F represents forced flow, many stoppages and low operating speeds. The City encourages operation of LOS D (conditions approaching unstable flow) or better. LOS E or F would be considered unacceptable.

<u>SR 163</u>

Existing and projected future traffic conditions are discussed in Section 5.2, Traffic/Circulation. Based on the Traffic Evaluation Report (TER) prepared for the

Project, current traffic volumes on SR 163 range from approximately 147,000 to 165,000 average daily traffic (ADT). Future traffic volumes along SR 163 (year 2030) are projected to range from approximately 206,000 to 221,000 ADT. The TER analysis concluded that the southbound lanes on SR 163 north of the Friars Road interchange currently operate at an unacceptable level during the morning (AM) peak period, and the following additional freeway segments would perform below current design standards by the year 2030:

- Northbound SR 163 north and south of Friars Road during the afternoon (PM) peak period
- Southbound SR 163 north of Friars Road during the PM peak period
- Southbound SR 163 south of Friars Road during the AM peak period

SR 163 on- and off-ramps and the weave areas also have current and projected issues. The southbound SR 163 on-ramp from Friars Road currently has an unacceptable operational level during both the AM and PM peak periods, and would continue to operate at unacceptable levels by the year 2030. The southbound SR 163 on-ramp at Genesee Avenue also would be operating at unacceptable levels by 2030. The southbound weave area between the Friars Road interchange and I-8 currently operates at an unacceptable level during the PM peak period. The weave condition is projected to worsen such that there would be unacceptable weave operations in the AM, midday and PM peak periods by the year 2030.

Local Roads

Existing traffic volumes on Friars Road between Avenida de las Tiendas and Frazee Road range from 34,300 to 66,400 ADT (west to east). Year 2030 traffic volumes on these segments of Friars Road are projected to range from 38,000 to 71,100 ADT. An unacceptable LOS E for Friars Road would be generated with 45,000 to 50,000 ADT (depending on road segment). Therefore, certain segments of Friars Road currently operate at unacceptable LOS, and the unacceptable flow conditions are projected to increase in the future.

The performance of intersections is related to the time of delay in seconds. The maximum acceptable intersection delay is 55 seconds per vehicle. Currently, the intersection of Friars Road, Ulric Street and the southbound SR 163 ramp operates with unacceptable delays in the AM, midday and PM peak. The intersection of Friars Road and Frazee Road also currently operates with unacceptable delays in the midday and PM peak. In the future, the intersection of Friars Road and northbound SR 163 is projected to have unacceptable delays during the PM peak. Current and projected future delays at these intersections are presented in Table 3-1, Intersection Delays.

Table 3-1 INTERSECTION DELAYS			
Intersection	**Peak Period**	**Existing Delay (sec.)**	**Year 2030 Delay (sec.)**
Friars Road/Ulric Street/southbound SR 163 ramp	AM Midday PM	65.1 72.7 111.2	78.0 80.9 131.8
Friars Road/Frazee Road	Midday PM	82.7 103.1	94.8 135.2
Friars Road/northbound SR 163 ramp	PM	40.8	57.7

3.1.3 Benefits of the Project

The Project would improve access to regionally important commercial destinations, particularly easing the movement of people and goods during seasonal peaks and when special events occur downtown and at Qualcomm Stadium in east Mission Valley.

The SR 163/Friars Road interchange and the segment of Friars Road connecting with Fashion Valley Road serve as a primary access route to a major light rail transit (LRT)/bus station located on the south side of Fashion Valley Center. This is a popular park-and-ride location for San Diego Padres games, other downtown events and events at Qualcomm Stadium. Another LRT/bus station that would benefit from Project improvements is on Hazard Center Drive. The area bus routes (6, 14, 25, 41 and 928) also would benefit from reduced congestion, which would improve travel times and fuel efficiency.

As described in Section 5.10, Air Quality, if operational deficiencies are corrected and traffic congestion is alleviated, air pollution emissions from vehicles traveling in the Project vicinity would be reduced compared to the existing condition. Emissions associated with idling due to traffic congestion would be reduced with Project implementation, resulting in a beneficial effect. The study area's contribution to adverse cumulative impacts upon the ambient air quality consequently would be reduced.

3.2 PROJECT FEATURES

3.2.1 Roadway Improvements

This subsection describes the Project, which would involve construction of a separate southbound SR 163 off-ramp lane to Friars Road and a Friars Road flyover from Ulric Street to southbound SR 163/eastbound I-8.

The Project was developed by a multi-disciplinary team after an extensive analysis of numerous potential development scenarios, including 4 northbound and 13 southbound

ramp configurations, to achieve the Project purpose and need while avoiding or minimizing environmental impacts (refer to Chapter 11.0, Alternatives, for a description and evaluation of the project alternatives). Project features were refined in a formal Value Engineering Analysis session held on June 21 and 22, 2004, which was attended by Project Development Team members, as well as City and Caltrans specialists.

Project improvements would encompass SR 163 from the merge with I-8 in the south to the SR 163/Genesee Avenue interchange in the north, as well as the Friars Road corridor from west of Avenida de las Tiendas to west of Mission Center Road (Figures 3-1a and 3-1b, Proposed Project). The total length of the Project is approximately 2.1 miles along the SR 163 mainline and 0.8 mile on Friars Road. The interchange ramps, SR 163 freeway mainlines between I-8 and the Genesee Avenue interchange, and Friars Road between Fashion Valley Center and Hazard Center, would be substantially modified.

A major design element of the Project is the construction of new at-grade lanes (also referred to as "collector-distributor") on the west side of southbound SR 163 approaching Friars Road, connecting to westbound I-8/Hotel Circle North. Additional design elements would involve modifications to the existing SR 163/Friars Road interchange partial cloverleaf, including the addition of a flyover bridge from Ulric Street to southbound SR 163 and the widening of Friars Road and the Friars Road Bridge. Freeway and roadway modifications for the Project would include the design elements listed below. Major design elements 1 through 15 are indicated by circled numbers on Figures 3-1a and 3-1b.

Additional details on individual Project elements, including bridges and retaining walls, landscaping, drainage facilities, utility relocations, construction methods and property requirements are presented in Subsections 3.2.2 through 3.2.9. Existing facilities are described in Section 2.2.

<u>SR 163</u>

- Design Element 1: Add southbound auxiliary lanes from Genesee Avenue southerly that would become collector/distributor lanes, crossing under the Friars Road Bridge and under the elevated San Diego Trolley line, bridging the San Diego River and merging with westbound I-8/Hotel Circle North (refer to Subsection 3.2.2, Bridges).
- Construct retaining/soil nail walls (refer to call-outs for various walls in blue on Figures 3-1a and 3-1b).

SR 163/Friars Road On-/Off-ramps[1]

West of SR 163

- Design Element 2: Remove the existing southbound elongated loop on-ramp from Ulric Street to southbound SR 163. Replace the western portion of the loop with two realigned lanes in the northwest quadrant. Replace the eastern portion of the loop with a flyover bridge that crosses above the Friars Road Bridge and the SR 163 off-ramp lanes to SR 163/eastbound I-8, then crosses under the San Diego Trolley line, and crosses over the San Diego River in the southwest quadrant (refer to Subsection 3.2.2, Bridges below).
- Design Element 3: Remove the existing free-right access from the southbound SR 163 off-ramp to eastbound Friars Road in the southwest quadrant.

East of SR 163

- Design Element 4: Remove the existing northbound SR 163 diamond off-ramp to eastbound Friars Road in the southeast quadrant.
- Design Element 5: Widen the existing northbound SR 163 off-ramp to westbound Friars Road from one lane to two lanes, and create a five-lane terminus to accommodate traffic accessing both eastbound and westbound Friars Road in the northeast quadrant.
- Design Element 6: Remove the existing free-right turn lane from the northbound SR 163 off-ramp to westbound Friars Road in the northeast quadrant.
- Design Element 7: Remove the existing free-right turn lane from westbound Friars Road to northbound SR 163 on-ramp in the northeast quadrant.
- Design Element 8: Widen the existing northbound diamond on-ramp to SR 163 from one lane to two lanes, extending with auxiliary lanes about midway between Friars Road and Genesee Avenue in the northeast quadrant.

Friars Road/Ulric Street

- Design Element 9: Widen the Friars Road Bridge (north and south side) over SR 163 from 6 to 10 lanes (refer to Subsection 3.2.2, Bridges), and add sidewalks along both sides of Friars Road Bridge.

[1] In January 1992, Caltrans prepared the Transportation Concept Report that identified ramp-metering systems as a Transportation System Management (TSM) strategy for the region. Due to the extremely high traffic volumes within the Project vicinity, Caltrans has waived ramp-metering systems as a TSM strategy for the southbound and northbound on-ramps at Friars Road and SR 163. Therefore, ramp metering systems are not part of the Project.

- Design Element 10: Upgrade or install new traffic signals at Friars Road/Ulric Street, Ulric Street/southbound SR 163 on-ramp and Friars Road/northbound SR 163 on-ramp.
- Design Element 11: Widen Friars Road east of the northbound SR 163 on-ramp.
  - Restripe Friars Road from west of Avenida de las Tiendas to Mission Center Road.
  - Construct retaining walls (refer to Subsection 3.2.3, Retaining Walls, and note call-outs in blue on Figures 3-1a and 3-1b).
  - Construct asphalt/concrete berms or concrete curbs and gutters along the length of roadway improvements associated with Friars Road and Ulric Street.
  - In making modifications to Friars Road, retain/re-create the Class II bike facility (five-foot-wide designated and striped bike lanes) along Friars Road, both eastbound and westbound.

Frazee Road

- Design Element 12: Install a traffic signal at Murray Canyon Road.
- Design Element 13: Widen the west side of Frazee Road immediately north of Friars Road to five southbound lanes (two left turns, one through and two right turns) at Friars Road. Relocate the median. Provide sidewalk along a portion of the west side of the street. Convert the Frazee Road/Ralphs Driveway intersection to a right in/right out driveway.
- Design Element 14: Widen the west side of Frazee Road immediately south of Friars Road. Relocate the median. Provide two southbound left turn lanes into the Food 4 Less center. Lengthen the left-turn pocket for northbound Frazee Road to westbound Friars Road. Add an extra southbound left-turn lane at Frazee Road/Hazard Center Driveway.

Avenida de las Tiendas

- Design Element 15: Remove the median and restripe the roadway to provide three southbound lanes and three northbound lanes.

3.2.2 Bridges

As part of Design Element 1, a new bridge would be constructed as an independent structure over the San Diego River. The new bridge would be separated from the existing bridge by a longitudinal joint and/or gap for the whole length. The proposed bridge design incorporates the results and recommendations of a hydraulic analysis to avoid impeding water flow in the river; it would be designed to pass 100-year flood events. The approximately 60-foot-wide bridge would accommodate three southbound travel lanes, directing traffic to westbound I-8/Hotel Circle North. The bridge also would accommodate necessary drainage improvements, which would include the use of best

management practices (BMPs) to meet state and local storm water discharge quality requirements. The proposed structure would be supported on pier walls (above-ground structures) and pile foundations (below-ground structures), currently anticipated to consist of driven concrete piles. Constructing the driven piles would involve a pile driving assembly to pound the piles into the ground to the appropriate depth, with footings approximately three feet deep and six feet wide constructed at the top of the below-ground piles. An excavation approximately 10 feet wide would be made for the pier footings. An exception would be that the footings for the two piers located on either side of the river's low-flow channel would be 10 feet wide, with an excavation width of 12 feet. Pier walls for the spans over the river would be approximately two feet thick, and would range from 160 to 260 feet long, parallel to the direction of river flow. The footings and piers would be constructed in line with the footings and piers on the existing SR 163 bridge immediately to the east (Figure 3-2).

As part of Design Element 2, a flyover structure would be constructed to cross over Friars Road and the southbound SR 163 connector lanes that exit to westbound I-8/Hotel Circle North (refer to Figure 3-3 for representative cross-sections). The flyover bridge would extend from east of Ulric Street to south of the San Diego Trolley Bridge and would connect to southbound SR 163. The proposed bridge would be approximately 1,700 feet in length, with 11 spans varying in length from 100 to 230 feet, supported on 10 single columns and 1 dual column that are currently anticipated to be constructed on a below-ground system of large-diameter cast-in-drilled hole (CIDH) concrete piles. Constructing CIDH piles would involve drilling holes for piles below ground using a drill rig, installing rebar (reinforcing steel bars) in the cylindrical hole and pouring concrete to form the piles. When the below-ground structure is set, the rebar for the bridge columns (piers) above the ground would be installed, forms would be placed and concrete would be poured to form the piers.

As part of Design Element 9, the Friars Road Bridge would be widened from 6 to 10 lanes, with structure additions occurring on the north and south side of the existing bridge. The widened bridge would have eight through lanes and two turning lanes. The west side of the bridge would have two Friars Road westbound lanes that would turn left onto southbound SR 163, and the east side of the bridge would have two Friars Road eastbound lanes that would turn left onto northbound SR 163. Sidewalks would be constructed on both sides of the bridge and striped Class II bike lanes would be maintained on both sides of the bridge.

New bridge construction for the San Diego River Bridge structure would take up to 30 months, and widening of the Friars Road Bridge would take up to 12 months. Tasks would be undertaken in consecutive order, with approximately 30 to 40 workers on site at any one time. Although the length of bridge facilities and construction timeframes would vary, the structures would require the same series of construction activities. Although specific methods of construction would be left to the construction contractors' discretion, a likely scenario for each bridge would entail:

- Pile installation (flyover structure and San Diego River Bridge)
- Columns construction
- Abutments construction
- Falsework (support forms/molds within which the bridge is constructed) erection
- Superstructure formwork for stem and soffit (bottom of the bridge)
- Superstructure concrete pour for stem and soffit
- Superstructure formwork for deck (top of bridge)
- Superstructure concrete pour for deck
- Post-tensioning and grouting operation
- Hinge construction
- Falsework removal
- Work on top of completed structure (grinding, barriers, joint seal and lights)

3.2.3 Retaining Walls

Retaining walls comprise important elements of the Project to provide geologic stability, as follows (with wall numbers assigned based on the station at which they begin):

- Design Element 1: Two retaining walls and one soil nail wall for the southbound auxiliary lane north of Friars Road (Walls 91, 86 and 75), and one retaining wall for the southbound collector at the southern end of the Project (Wall 66).
- Design Element 2: Two retaining walls for the realigned on-ramp from Ulric Street to southbound SR 163 (Wall 74 and 74a).
- Design Element 8: Two retaining walls for the on-ramp from Friars Road to northbound SR 163 (Walls 76 and 78).
- Design Element 11: Two retaining walls on the south edge of Friars Road (Walls 19 and 24), three walls on the north edge of Friars Road (Walls 20, 22 and 23), one tieback wall west of southbound SR 163 (Wall 1) and one tieback wall east of northbound SR 163 (Wall 2).

The proposed wall locations are shown in Figures 3-1a and 3-1b, and the length and maximum height above the finished ground surface (visible height) of the walls are listed in Table 3-2, Proposed Retaining Walls. Figure 3-4, Retaining Wall Typical Sections, presents typical section views of Project retaining walls and associated elements.

Construction of the soil nail wall would differ from the typical retaining walls. The top of the wall would be placed two feet from grade and a four-foot tall railing would be installed on top to minimize the potential for falling cobble. Soil nail operations would consist of excavating downward in approximately five-foot increments, drilling and installing soil nails in a pattern specified by the engineer, grouting around the nails, placing rebar between the nails and applying shotcrete. After shotcrete is applied, a form would be placed on the outer face of the wall for cast-in-place concrete to be poured. After curing, the form would be removed and the wall surface would be finished.

Table 3-2
PROPOSED RETAINING WALLS

Wall I.D. on Figures 3-1a and 3-1b	Proposed Location	Length (feet)	Maximum Height above Finished Ground Surface (Visible Height in feet)
SR 163			
91	West of southbound SR 163, south of Genesee Avenue	469	10
86	West of southbound SR 163, south of Genesee Avenue	1,391	10
75	Soil nail wall west of SR 163 and north of Friars Road, immediately north of the SR 163 southbound on-ramp from Ulric Street	1,493	32
78	East of SR 163 and north of Friars Road, immediately east of the SR 163 northbound on-ramp from Friars Road	585	15
76	East of SR 163 and north of Friars Road, immediately east of the SR 163 northbound on-ramp from Friars Road	171	3.5
74	West of SR 163 and north of Friars Road, immediately north of the SR 163 southbound on-ramp from Ulric Street	33	5
74a	Below the flyover on for southbound on-ramp at Friars Road	155	12
66	West of SR 163, south of the San Diego River and next to existing commercial structures	568	3.5
Friars Road			
1	Tie-back wall immediately west of the SR 163 southbound on-ramp, under Friars Road	227	25
2	Tie-back wall east of northbound SR 163, under Friars Road	370	23
19	South side of Friars Road below flyover for SR 163 southbound on-ramp	52.5	20
20	North side of Friars Road below flyover for SR 163 southbound on-ramp	108	24.6
22	North side of Friars Road, immediately east of SR 163 northbound on-ramp	157	5
23	North side of Friars Road, west of Frazee Road	183	3.5
24	South side of Friars Road, west of Frazee Road	327	5

3.2.4 Noise Attenuation Barriers

Ten noise attenuation barriers currently are proposed as a Project feature, as summarized on Table 3-3 and illustrated on Figure 3-5a through 3-5c[2]. These walls are proposed because of FHWA involvement in the Project. Under federal criteria, an evaluation of noise abatement measures is required on all major widening of highways if projected noise levels would exceed 67 A-weighted equivalent sound level (dBA L_{eq}) where frequent human use occurs at residences.

Table 3-3
FEATURES OF PROPOSED SOUND BARRIERS

Barrier	Height (feet)	Length (feet)	Location
B1	8	745	ROW
B2	12	682	ROW, return on PP
B3	8	1,056	PP
B4	8	1,007	PP, TOS
B5a[1]	14	200	PP
B5b[1]	14	325	ROW
B6	8	2,047	PP, TOS
B7	8	2,250	PP, TOS
B8	8	1,007	PP, TOS
B9	6[2]	387	PP

Notes:
PP=private property; ROW= edge of right-of-way; TOS=top of slope
[1] Existing sound wall E3 extends for most of the length of proposed sound wall B5. E3 is approximately 4 to 5 feet in height.
[2] Height relative to the elevation of the tennis courts.

While the sound attenuation barriers identified in Table 3-3 currently are proposed as project features, final decisions regarding these barriers have not yet been made. If, during final design, conditions have substantially changed, noise abatement may not be necessary. The parameters of the noise walls also could be modified; however, such modifications would require Substantial Conformance Review to ensure that they would not result in any new or more severe environmental impacts than those described in this EIR. Considerations in the final decision include whether the homeowners wish to have walls installed, as well as land use and engineering feasibility issues (e.g., potential to preclude access to some lower-level backyards, outdoor decks that extend beyond the top of the slope, sloping yards that could preclude the construction of noise attenuation barriers for these homes). The final decision regarding noise abatement would be made upon completion of the Project design, the public involvement process and City negotiations with the affected property owners. Because of the uncertainty regarding construction of these barriers, a "worst-case" analysis is included in this EIR for each

[2] Numbering is discontinuous because additional walls initially were evaluated but not recommended for construction.

environmental topic (e.g., noise analysis assumes the barriers would not be constructed; biology and visual analyses assume the barriers would be constructed).

3.2.5 Grading

Grading for the Project would require approximately 130,000 cubic yards of cut and 39,000 cubic yards of fill. Approximately 91,000 cubic yards of excess cut material would be transported from the site to a legally authorized disposal location. No need for a rock crusher on site is anticipated because the contractor should be able to obtain the required roadway base aggregate from the extra fill material that would be available. Freeway widening would require maximum unretained cut slopes of approximately 31 feet and maximum fill slopes of approximately 35 feet, with maximum slope ratios of 2:1 for manufactured slopes.

3.2.6 Landscaping

A Landscape Concept Plan (Estrada Land Planning 2008) was prepared for the Project. This plan, which is addressed in the Visual Impact Assessment (VIA; refer to Section 5.8, Aesthetics/Neighborhood Character/Visual Quality), is depicted in Figures 3-6a and 3-6b, Landscape Concept Plan – Project. The plan was developed in accordance with City expectations and requirements, as well as Caltrans standards for highway planting and irrigation, and FHWA requirements. The Engineer-of-Record would incorporate the landscape and aesthetic design elements into the Project Report and Plans, Specifications and Estimate plans. The contractor would be responsible for maintenance of the landscaping within and in close proximity of roadway/freeway improvements during a one-year plant establishment period, after which the City Engineering and Capital Projects Department would maintain the landscaping for a minimum period of four years following construction, to the standards required by Caltrans. Following this five-year period, the City and Caltrans would be responsible for maintenance of landscaping within their respective rights-of-way. All landscape areas installed for the Project, including both the Caltrans and City rights-of-way, would be subject to a maintenance agreement between the two entities. A maintenance assessment district would not be created.

In most locations where landscaping replacement is necessary on private lands (e.g., adjacent to newly installed sound walls), the property owner would be given money to hire or perform replacement landscaping, and maintenance would be the responsibility of the individual property owner.

The Landscape Concept Plan addresses the re-establishment of landscaping and visual screening following construction; identifies opportunities within Project limits for streetscape with consistent planting themes; identifies surface architectural treatments for proposed paving, retaining walls, and potential noise walls; and identifies screening vegetation for Project retaining and potential sound walls, as feasible. The plan includes the elements discussed below.

3.2.6.1 Landscape/Aesthetic Elements

This discussion presents concepts guiding the landscape architecture plan, as well as some specific elements for particularly important portions of the Project (e.g., bridges, retaining walls). General concepts and information about plants chosen are presented in Subsection 3.2.3.2.

Trees and Shrubs

- Tall trees would be located in the vicinity of the flyover to help visually diminish the scale of the structures. The vertical nature of the trees would contrast with the horizontal line of the road.
- Riparian tree species would be planted where possible from the lowland areas to the base of the slopes at the edge of the valley to enforce the visual connection with the river.
- Subtle gray-green colored coast live oaks and chaparral species would be planted to create a transition to a coastal sage scrub/chaparral-type plants on the slopes and to increase the contrast with the lush river vegetation.
- Ornamental and brightly colored shrubs would be provided at the interchange itself.

Wall Treatments

- Stadium Conglomerate cobble formations visible in the valley's north slopes at Ulric Street and on other adjacent slopes would be reflected in cobblestone-appearing wall treatments and coloration to provide a connection with the natural conditions (Figure 3-4b, Retaining Wall Architectural Treatment insert).
- The tops of retaining walls would be softly curved (rather than stepped or angled) to match the topography of adjacent hillsides. The tops of walls also would feature a broad cap of concrete (two feet vertical) to create a precise finish at the top of the wall and emphasize the smooth line and shape of the wall.
- Where conditions permit, contour grading would be used to promote smooth transitions to existing landforms, reduce the engineered appearance of graded slopes and visually soften the contours.

Bridge Structures

- Smooth, gently curving concrete bridge structures would include a linear design treatment featuring shadow lines to enhance the clean horizontal lines and reduce the expanse of reflective smooth concrete surfaces.
- The side view of the bridge and flyover structures would be designed to present a "thin" appearance to the leading horizontal edge, minimizing the visual thickness of the edge facing the viewer and creating a shadow under the rail.

- Bridge and flyover support columns would be simplified and minimized to visually diminish vertical elements and allow the smooth-flowing horizontal lines of the concrete road structures to take visual precedence. Support columns would feature curved forms, in profile and section, to minimize stark shadow lines.
- The placement of signage, fencing, railings and other vertical elements along the flyover would be avoided, where possible, to eliminate distracting elements that would be silhouetted against the sky or in front of distant views.
- The flyover rails would be approximately 3.5 feet tall to minimize escape of headlight beams into the sky and to obscure some of the motion of traffic on the flyover.

Groundcover/vines

- The use of Stadium Conglomerate cobble would be repeated, where possible, in areas that are too narrow or shady for planting. Such areas include turning gores, median tapers and slope paving under the bridge structures (Figure 3-6a, Rock Paving insert).
- Where planting is possible, a clinging vine would be planted within a two-foot-wide planting pocket adjacent to retaining walls to provide visual relief from the large expanse of wall face and to soften the appearance.
- Green groundcover planting would be provided along edges of roadways.

Other Features

Friars Road is a highly visible and heavily traveled roadway that is the entry to shopping districts, commercial areas and medium-density residential neighborhoods. To emphasize the relationship of this entry to these community elements, the Project has incorporated the following design elements:

- The design at northbound and southbound SR 163 off-ramps at Friars Road would provide a welcoming statement, using plants and paving treatments to establish a connection to the shopping district (Figure 3-6b, Dramatic Entry Theme insert).
- An arrival signifier would be provided. This could be a large-scale emphatic planting design combined with flags or monumental design.
- A visibly defined pedestrian walk would be provided, with associated pedestrian scale seating, shade and shelter (Figure 3-6b, Pedestrian Node – Typical Insert).
- Planting would be provided along Friars Road and its medians. The plants would be highly visible, neat, clean and colorful, and provide a visual connection to adjacent shopping malls and commercial land uses.

3.2.6.2 Plant Palettes

The Plant Concept List is presented on Figure 3-6a. The Landscape Concept Plan calls for palettes that provide a visual transition between the riparian areas near the San Diego River at the southern extent of the Project area and the existing vegetation, mainly consisting of iceplant (*Carpobrotus* and/or *Delosperma alba*) and eucalyptus (*Eucalyptus* spp.), at the northernmost slopes bordering SR 163 within the Project area. The landscape plan also includes areas of ornamental landscaping near the SR 163/Friars Road interchange.

Native trees such as California sycamore (*Platanus racemosa*), oak (*Quercus* spp.) and willow (*Salix* spp.) would be planted where possible within the SR 163 right-of-way south of Friars Road. Additionally, any riparian vegetation within the San Diego River that would be temporarily disturbed during Project construction would be addressed in accordance with a separate approved mitigation plan (see Appendix D). The proposed planting of trees and shrubs along the SR 163 right-of-way north of Friars Road would reflect the current coastal sage scrub existing on the slopes above Ulric Street. The coastal sage scrub palette would include non-invasive and mostly small shrubs such as sages (*Salvia* spp.), California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*), as well as annual and perennial colorful flowers such as California poppy (*Eschscholzia californica*), dwarf goldfields (*Lasthenia chrystostema*), arroyo lupine (*Lupinus succulentus*) and monkeyflower (*Mimulus puniceus*). Native grasses also would be planted in this area. All of these plants are native and drought-tolerant.

In the northernmost portion of the study area (south of Genesee Avenue), the right-of-way is currently vegetated with iceplant; shrubs such as pink melaleuca (*Melaleuca nesophila*), bougainvilla (*Bougainvilla* spp.), lantana (*Lantana* spp.) and Cape plumbago (*Plumbago capensis*); and trees such as eucalyptus, Torrey pine (*Pinus torreyana*) and purple-leaf plum (*Prunus cerasifera*). Impacted vegetation in this area would be replanted with similar species. Ngaio (*Myoporum laetum*) would not be replanted in this area as part of the Project because it is considered an invasive species.

A transition palette consisting of native plants such as toyon (*Heteromeles arbutifolia*), lemonade berry (*Rhus integrifolia*), coast live oak (*Quercus agrifolia*), and coyote brush (*Baccharis pilularis*), and ornamental plants such as holly leaf cherry (*Prunus ilicifolia* ssp. *lyonii*), Pacific myoporum (*Myoporum pacificum*), and Hall's honeysuckle (*Lonicera japonica 'Halliana'*) would be planted along the SR 163 right-of-way between the coastal sage scrub areas and the existing ornamental landscaping in the northern portions of the Project area.

An ornamental palette would be used to landscape the areas surrounding the SR 163 on- and off-ramps at Friars Road and Ulric Street. This palette would include three varieties of palm trees, as well as some flowering trees such as pink flame tree (*Brachychiton discolor*), purple-leaf plum and African tulip tree (*Spathodea campanulata*). Invasive palm trees (e.g., *Washingtonia robusta* and *Phoenix canariensis)*

would not be planted as part of the Project. Shrubs and vines with colorful flowers also would be used, such as bougainvillea, orchid spot rock rose (*Cistus purpureus*), daylily (*Hemerocallis hybridus*), lantana and bird of paradise (*Strelitzia reginae*). Accent shrubs would include New Zealand flax (*Phormium tenax*) and soft agave (*Agave attenuata*). Ground cover within the ornamental zones would include Pacific myoporum and trailing gazania (*Gazania splendens*). The proposed palette includes perennial color to provide visual interest and, where possible (such as at corner crossings), trees would provide shade for pedestrians.

The Landscape Concept Plan (Estrada Land Planning 2009) also includes vines and shrubs that would be planted in front of proposed retaining walls. Specifically, vines on the retaining walls are proposed to consist of Boston ivy (*Parthenocissus tricuspidata)*.

Plant materials for the biofiltration drainage facilities (see Section 5.3, Hydrology/Water Quality, for details) would include a mixture of long-lived perennial species and annual species that would successfully reseed, consisting of a combination of grasses and grass-like species, forbs and some broad-leaved species.

3.2.6.3 Irrigation System

An automatic irrigation system would be installed within the landscaped areas to sustain healthy growth. The irrigation system would be designed to apply water slowly during evening hours to minimize soil erosion, allow for deep soil penetration and conserve water. Rain sensors would be installed, and automatic remote control valves would be controlled by an on-site irrigation controller system with networked remote programming capabilities. The system would include flow sensors to detect leaks and broken lines, allowing shut off of system or individual valve zones to prevent water waste and erosion. All existing irrigation within roadway construction-disturbed areas would be replaced in accordance with City and Caltrans standards.

3.2.6.4 Erosion Control

Permanent erosion and sedimentation control features may include, but would not be limited to, improvement of drainage facilities to handle excess runoff (see Section 3.2.7, Drainage Facilities), installation of landscaping as described above and hydroseeding of steeper cut slopes. A minimum of 50 percent of the total slope area would be planted with deep-rooting plants. For seeded plantings, at least 50 percent of the viable seed count would be required to consist of deep-rooting species. Iceplant and other shallow-rooted, non-drought tolerant ground cover would only be used on the lowest 10 feet of sloped areas. (If large areas of iceplant are existing adjacent to a graded area, the design would blend new planting forms with existing iceplant.) Plants used for erosion control on disturbed soil and slopes would be required to achieve 100 percent soil coverage within two years of installation.

3.2.7 Drainage Facilities

A Preliminary Water Resources Report (Dokken 2009b) and River Location Hydraulic Study (Dokken 2009c) were prepared to investigate modifications to the existing drainage system necessary to implement the Project. A Storm Water Data Report (Dokken 2009d) and Water Quality Technical Report (Dokken 2009e) were prepared to address storm water quality design issues and identify BMPs designed to prevent pollution. (The reader is referred to Section 5.3, Hydrology/Water Quality, for a detailed discussion.) In general, the overall drainage pattern after Project construction would remain the same as that which currently exists. Improvements to the northbound and southbound off-ramps and the installation of auxiliary lanes along the freeway would require retaining wall gutters and additional inlets and outlets. A proposed infiltration basin would be located in the northeast quadrant of the SR 163/Friars Road interchange; a biofiltration strip would be located just north of Hazard Center Drive and east of SR 163; and biofiltration swales would be located along portions of the east side of SR 163 between Genesee Avenue and Friars Road, along the Friars Road northbound on-ramp to SR 163 and in the southeast quadrant of the SR 163/Friars Road interchange. The Project drainage facilities would be consistent with the landscape plan.

Asphalt/concrete berms or concrete curbs and gutters would be constructed along the length of roadway improvements associated with Friars Road, Ulric Street and Frazee Road. Runoff generally would be collected in curb inlets connecting to existing drainage systems. All Project drainage improvements would be located within the disturbance footprint identified for the road right-of-way. Proposed modifications to existing storm drain facilities would consist of relatively minor alterations and additions. Proposed storm drain systems would conform to applicable Caltrans and/or City regulatory guidelines. Proposed inlets would be placed in appropriate locations, including upstream and downstream of bridges, adjacent to roadway intersections, and upstream of pedestrian crosswalks and curbed median openings. Storm drain pipelines would be designed for full-flow conditions.

3.2.8 Utility Relocations

Major utility relocations (e.g., regional overhead high voltage electric conduits and supporting towers) are not proposed. Project implementation would, however, require several utility adjustments or relocations, including buried telecommunications conduits (Cox Communications, SBC, AT&T, Level 3 Communications, MCI WorldCom, Time Warner Cable, XO Communications, GST, ICG Communications), buried gas lines (San Diego Gas and Electric [SDG&E]), local electric conduits (SDG&E), street lighting along Friars Road and improved portions of Ulric Street (City), and sewer and water pipelines (City).

It is assumed that all existing utilities would be relocated within the Project roadbeds or, at a minimum, within new public right-of-way, and therefore are covered within the Project footprint analyzed throughout this document. The detailed plans for replacement or relocation of utilities would not, however, be known until the final design phase, when

the utility owners provide their relocation plans. Therefore, utility relocation would be subject to subsequent CEQA conformity analysis.

The stormwater pump station along Camino de la Reina would be retained in place. The City would obtain a longitudinal encroachment permit for this facility from Caltrans. This easement would allow the City access to maintain and, if necessary, replace the pump.

3.2.9 Property Requirements

A maximum of 17 privately owned parcels of land would be partially within the right-of-way needed for the Project due to the construction of roadway lanes, on- and off-ramps, and other roadway improvements (Figure 3-7). These parcels are located at the SR 163 and Friars Road interchange, along Friars Road at the Frazee Road intersection, or on the west side of SR 163 between I-8 and Friars Road. Portions of these parcels totaling 1.73 acres, and generally encompassing a small percentage of each impacted parcel, would be acquired.

Permanent easements totaling 1.46 acres would be acquired over portions of 108 properties to allow for the maintenance of the proposed noise abatement walls and associated landscaping. Additionally, a 0.05-acre manufactured slope easement would be acquired over one property adjacent to the proposed flyover structure, and easements totaling 0.93 acre for the proposed soil nail wall would be acquired over five properties.

Three transfers or purchases of government-owned land (1.52 acres) would occur to accommodate the widening of SR 163 within existing City-owned land.

In addition to the area required for the permanent right-of-way, the City would acquire temporary easements from adjacent property owners in areas where construction activities would exceed the permanent Project footprint. These acquisitions would occur over portions of 134 parcels totaling 5.08 acres. These areas would be revegetated (if existing planting was disturbed) prior to returning control and maintenance of the parcel portion to the property owner.

3.2.10 Construction

3.2.10.1 Construction Activities

As discussed above, Project implementation would include widening roadways, re-striping roads, constructing a bridge spanning the San Diego River and a flyover spanning Friars Road, and widening the Friars Road Bridge over SR 163.

Construction activities, as well as the staging areas discussed below, generally would occur within roadway rights-of-way. Along much of the Project perimeter, however, temporary construction easements are proposed to accommodate remedial grading, excavation equipment stationing, vehicle turn areas, short-term worker parking and

incidental edge effects that normally occur during linear construction projects. In particular, construction of the new bridge over the San Diego River would require construction easements from private property extending up to 40 feet beyond the limits of structural widening.

It is anticipated that primary grading activities would be completed within a six-month period, with maximum daily grading of approximately 1.0 acre. As noted above, it is not anticipated that rock crushing would occur as part of Project construction.

Actual construction equipment and manpower usage would be at the discretion of the construction contractor. In order to provide a framework for analysis, certain assumptions have been developed. Heavy equipment would be expected to include one earthmover/dozer, two graders, one water truck, four asphalt/concrete trucks/mixers, two pavers and two roller compactors. The heavy equipment has been estimated to be in operation eight hours per day and six days per week. Approximately 10 to 15 workers are anticipated to be on site at any one time for the roadway improvement work[3], with their individual mode of transportation being parked along the roadway or at designated staging areas, as appropriate. These individuals would include approximately three or four persons in the clearing/grubbing crew, three to five persons in the grading crew, six to eight persons in the base or core construction crew (working with utilities; preparation of the subgrade, curb and gutter, etc.), and six to eight persons in the paving crew (not all crews would be operating simultaneously).

Construction work would occur on Sundays or holidays only if required for health and safety purposes (e.g., emergency access is somehow blocked or a potentially poor circulation condition requires remedy). All daytime construction activities requiring construction-period detours or lane or ramp closure along existing facilities would cease during the holiday season (between Thanksgiving and New Year's Day).

Nighttime construction activities would be required throughout the Project due to high daytime traffic volumes on Friars Road and SR 163. Temporary elimination of lanes during the day would be unacceptable because severe traffic congestion would result. It is anticipated that night work would be required where new roadway section would be joined to existing pavement. Other specific examples of nighttime construction include areas where paving, grading, bridge demolition, bridge falsework, utility relocation, signing and striping operations would occur. Nighttime construction activities also would be required when mainline and ramp traffic would need to be shifted during construction staging or for the opening of new lanes.

3.2.10.2 Staging Areas

A number of potential construction staging areas are shown within the Project construction area between the San Diego River and Genesee Avenue (Figures 3-1a and 3-1b). These areas have been identified based on preliminary suitability review (geographic location,

[3] For the purposes of providing a conservative analysis, air quality modeling was conducted based on the potential for up to 45 workers to be on site on a "worst-case" construction day.

size, etc.) and were specifically identified to avoid impacts to sensitive habitat. It is not anticipated that all of the sites shown would be used; multiple sites are evaluated within this document, however, to provide the construction contractor with flexibility and a number of environmentally cleared sites. The contractor would determine one or more ultimate location(s) (i.e., the final choice[s] among evaluated sites) following negotiations and agreement between the contractor and City or private party. The following potential staging areas have been identified and are included in assessment of Project impacts throughout this document, as applicable:

- West of SR 163 between the San Diego River and the southeast parking lot of Fashion Valley Center.
- At each of the four corners of the intersection of SR 163 and Friars Road, generally within or adjacent to the on- and off-ramps.
- Adjacent to SR 163 on the east and west sides of the roadway.
- South of Genesee Avenue and west of SR 163 between the freeway and the southbound on-ramp.

Parcels used as staging areas would be surrounded by a chain-link fence, with construction materials and vehicles stored within the designated staging area. Several of the identified staging areas (e.g., within the existing SR 163/Friars Road ramps) are within the footprint that would be permanently impacted by Project activities, such as grading and pavement/landscaping installation. For those staging areas that would not be permanently impacted by the Project, mature trees, including eucalyptus trees, would not be removed or otherwise significantly impacted during use of the staging area. Following completion of the Project, fencing would be removed and the staging area would be returned to its original condition (i.e., ornamental plantings would be replaced or the area would be seeded with a native hydroseed, as appropriate).

3.2.10.3 Construction Phases

Construction activities are expected to begin in 2014 and be completed in 2020, with the entire Project being completed in a single construction effort occurring in three phases (Figures 3-8a and 3-8b, Proposed Project Phasing). The main construction tasks in Phase 1 would involve modifications to the local roads, construction of the SR 163 northbound off-ramp and construction of a temporary southbound SR 163 auxiliary lane. Phase 2 would focus on constructing the new collector bridge and flyover bridge. Phase 3 would involve constructing permanent southbound SR 163 auxiliary lanes and a new northbound SR 163 on-ramp with auxiliary lanes. Steps in each of the three phases are listed below.

<u>Phase 1</u>

- Grade project footprint required for this phase.
- Widen existing Friars Road Bridge.

- Construct new pavement sections, sidewalks, and curb ramps along Friars Road.
- Remove existing median on Friars Road and install new raised median.
- Reconfigure median on Frazee Road.
- Remove traffic signal at Frazee Road and entrance to Friars-Mission Center, and install traffic signal at Frazee Road and Murray Canyon Road.
- Restripe Avenida de las Tiendas.
- Construct northbound SR 163 off-ramp.
- Construct southbound SR 163 off-ramp to Friars Road.
- Construct widening improvements and reconfigure striping along Frazee Road.
- Construct sound attenuation barriers.
- Construct infiltration basin, biofiltration strip and bioswale in the southeast quadrant of the SR 163/Friars Road interchange.

Phase 2

- Grade for the ultimate southbound SR 163 on-ramp.
- Construct new collector-distributor bridge crossing the San Diego River.
- Construct retaining wall along the southbound collector-distributor.
- Construct southbound auxiliary lanes from 3,608 feet south of Genesee Avenue to westbound I-8/Hotel Circle North (including retaining walls and a soil-nail wall).
- Install permanent concrete barrier along southbound SR 163 between through southbound SR 163 and westbound I-8/Hotel Circle North lanes.
- Construct southbound SR 163 on-ramp to westbound I-8/Hotel Circle North.
- Construct southbound flyover bridge from Ulric Street to SR 163.

Phase 3

- Grade to accommodate all Phase 3-related improvements.
- Reconstruct southbound SR 163 on-ramp at Genesee Avenue.
- Construct northbound SR 163 on-ramp and auxiliary lanes.
- Construct southbound auxiliary lanes from Genesee Avenue to 3,608 feet south of Genesee Avenue (including retaining walls).
- Construct bioswales not constructed as part of Phase 1.

3.2.10.4 Construction Control Measures

Project design includes a number of standard measures to minimize environmental effects during construction, as summarized below.

A final Traffic Management Plan (TMP) would be prepared and implemented by the construction contractor and approved by the City prior to commencement of construction, to reduce potential construction-related traffic conflicts, detours and delays. Elements of this plan would include maintaining public access to businesses within the Project area and, where necessary, creating temporary driveways and/or providing alternate access points. One specific example of the need to maintain business access during construction

would be the Mobil gas station located at 7698 Friars Road. The City would post signs indicating that businesses are open during construction and indicating alternate access locations and routes.

Additional elements include, but are not limited to, the following:

- Development of a Public Awareness Campaign to sufficiently inform residents and motorists of construction specifics prior to construction. Campaign activities may include establishment of a public information center, distribution of brochures and mailers, media releases and/or paid advertising.
- Proper identification of localized detour routes and lane closures within the construction area to direct motorists during construction activities. These may include changeable message signs, signing and striping, and highway advisory radio announcements.
- Placement of appropriate signs, cones and barricades near construction to increase safety and driver certainty.
- Scheduling of construction activities during off-peak hours to minimize traffic congestion and delays. All lane closure charts for SR 163 would be prepared by Caltrans and obtained from the District Traffic Manager.
- Development of plans that ensure emergency access and access to existing residences and businesses within the construction area.
- Development of traffic and contractor contingency plans. The traffic contingency plan, prepared by Caltrans staff, would evaluate measures to be implemented when traffic demands exceed anticipated limits during construction activities. The contractor contingency plan, prepared by the contractor, would address all factors affecting construction activities within the contractor's control in a work zone. Overall, a TMP contingency plan defines factors that necessitate termination of lane closures (such as inclement weather or excessive traffic volumes), identifies lines of communication and authority, and describes the responsibilities of specific parties when lane closures are implemented.
- Implementation of a Construction Zone Enhanced Enforcement Plan to provide police assistance and surveillance within construction areas. The officers would enforce speed reductions within work zones and provide emergency response support.
- Use of Freeway Service Patrol to assist motorists involved in minor incidents or vehicle breakdowns.
- Inclusion of construction activities on the Caltrans Highway Information Network, a public information line (1-800-427-ROAD).
- Implementation of a Transportation Management Team to refine TMP strategies prior to construction and to monitor and evaluate TMP activities during construction.

Because Project grading would exceed 1.0 acre, National Pollutant Discharge Elimination System (NPDES) guidelines necessitate the development of a Storm Water Pollution Prevention Program (SWPPP) by the contractor prior to construction to establish Project-specific permanent and temporary BMPs. During the design phase, a Water Pollution Control Plan would be prepared to determine the minimum control requirements to be included in the SWPPP. Typical erosion control measures used during construction would include applications of water or dust palliatives during earthwork activities, fiber rolls for slope stability and sediment control, temporary construction entrances to prevent sediment tracking on paved surfaces, gravel bags, temporary concrete washouts for concrete spoils, sweeping, contour grading, no work during high wind days and haul road sealing (as appropriate).

Each internal combustion engine used for Project construction would be equipped and operated with an appropriate muffler. No impact or vibratory piling placement would take place outside the daytime hours of 7 a.m. to 7 p.m. Residents within 500 feet of nighttime construction activities and within 200 feet of daytime construction activities would be notified by mail in advance of the planned dates and duration of the activities.

Watering and other applicable dust control measures would be employed when exposed earth is present due to construction activities. Other measures addressing air quality would include encouraging ridesharing or transit use among employees, minimizing interruptions of traffic flow, and keeping equipment properly maintained and tuned.

A Waste Management Form for Construction & Demolition (C&D) Debris has been prepared for the Project (Appendix J) and activities required would be implemented by the construction contractor.

Soil containing aerially deposited lead (ADL) that is excavated outside the Caltrans right-of-way would be disposed of as a hazardous waste at an appropriate facility. Soils within the Caltrans right-of-way may be re-used in accordance with the provisions of the Department of Toxic Substances Control lead variance issued to Caltrans. Removal of yellow thermoplastic material would adhere to the mandatory removal guidelines of the Caltrans Notice to Contractors and Special Provisions for Construction on State Highways. A contingency plan would be prepared to address contractor procedures for the unlikely event that undocumented areas of contamination are suspected or encountered during future development activities, including discontinuation of work until appropriate health and safety procedures are implemented. Any contamination remediation and removal activities would be conducted in accordance with pertinent local, state and federal regulatory guidelines, under the oversight of the appropriate regulatory agency.

Notices to relocate would be required for each company that owns or operates existing utilities facilities that are in conflict with areas of proposed work. Encroachment permits would be obtained to enter utility rights-of-way to perform relocation work. The relocation of underground water or wastewater lines would be conducted by City water or

wastewater authorities in conjunction with Project construction activities and would be undertaken in such a manner as to avoid contamination of drinking water.

3.3 DISCRETIONARY ACTIONS

3.3.1 City Discretionary Actions

Following receipt of public comments on the EIR and circulation of the Final EIR, the Planning Commission (or, if appealed, City Council) will determine whether to certify the EIR, issue Findings and a Statement of Overriding Considerations, and approve a Site Development Permit and associated findings for ESL. The City also must make a decision to approve the Project for construction and approve required land acquisitions.

3.3.2 Other Discretionary Actions

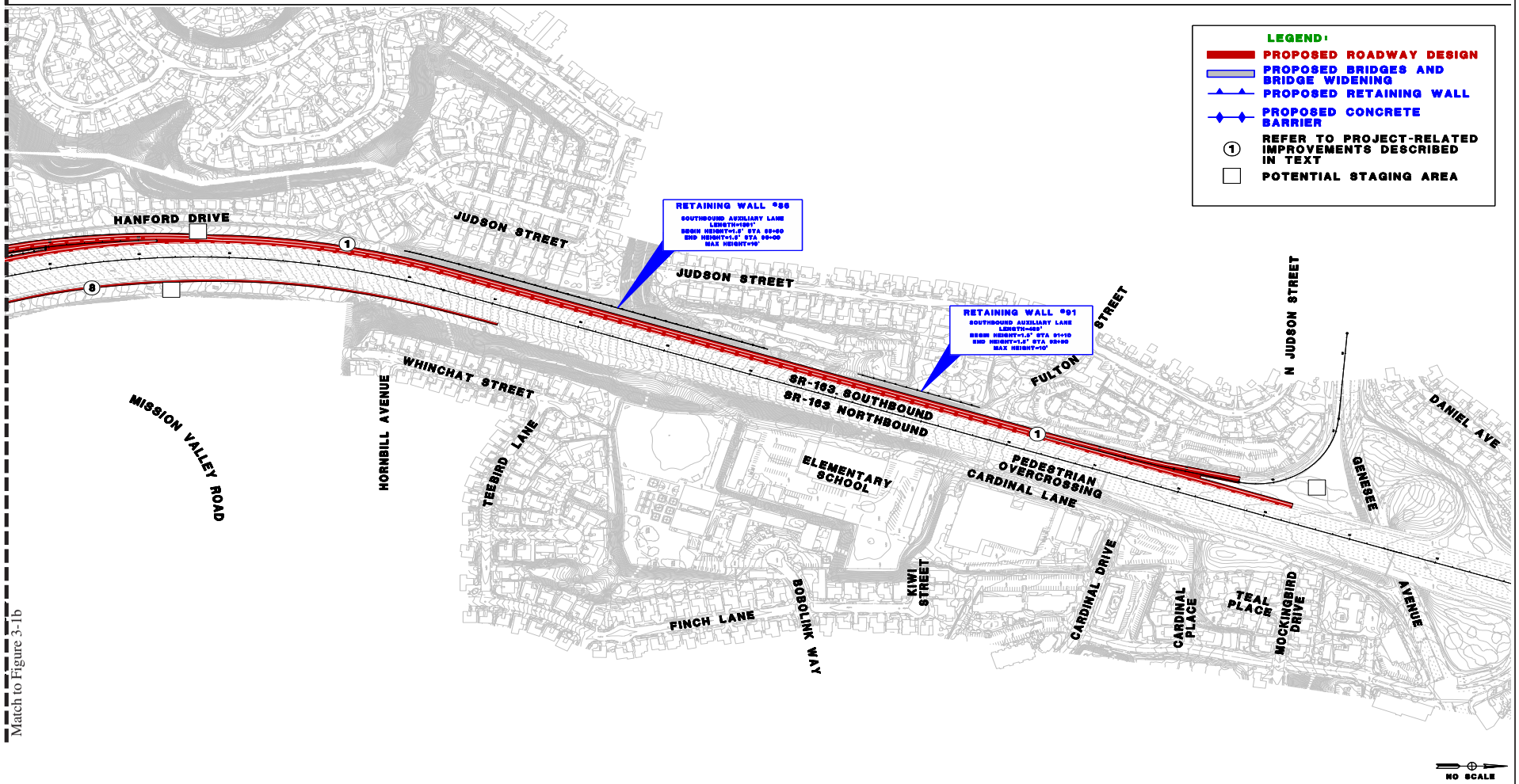
As the federal Lead Agency with authority delegated by the FHWA, Caltrans will utilize associated technical studies to support the separate federal NEPA documentation process. Other agencies would use this document to make discretionary decisions regarding Project permits, as summarized in Table 3-4.

Table 3-4
PERMITS AND APPROVALS

Agency	Permit/Approval	Status
U.S. Army Corps of Engineers	Nationwide Permit 14 (Linear Transportation Crossings) under Section 404 of the Clean Water Act	Requires Section 401 Water Quality Certification for permit authorization (see below)
U.S. Fish and Wildlife Service	Section 7 Consultation (informal)	Biological Assessment to support informal Section 7 Consultation was submitted October 2005 and informal consultation was completed June 2007
Caltrans District 11	Longitudinal encroachment permits for pump station operations on Camino de la Reina	Anticipated to be issued in conjunction with Caltrans Project approvals
State Historic Preservation Officer	Section 106 Consultation	Concurrence on finding of No Historic Properties Affected received January 3, 2006
California Department of Fish and Game	Section 1602 Streambed Alteration Agreement	Requires EIR certification for Agreement issuance

Table 3-4 (cont.)
PERMITS AND APPROVALS

Agency	Permit/Approval	Status
Regional Water Quality Control Board	Section 401 Water Quality Certification	Requires EIR certification for Certification issuance
	Conformance with Municipal Storm Water Permit	Conformance with existing permit required; will be demonstrated through SWPPP to be prepared by construction contractor
	Conformance with General Groundwater Extraction Waste Discharge Permit	Conformance with existing permit required; will be demonstrated through SWPPP to be prepared by construction contractor
State Water Resources Control Board	Conformance with Caltrans Permit for Storm Water Discharges From Caltrans Properties, Facilities, and Activities	Conformance with existing permit required; will be demonstrated through SWPPP to be prepared by construction contractor
	General Construction Activity Storm Water Permit	Conformance with existing permit required; will be demonstrated through SWPPP to be prepared by construction contractor
City of San Diego	Site Development Permit	Requires Planning Commission approval and Certification of the EIR
	Temporary and permanent land and easement acquisitions	Requires Planning Commission approval and Certification of the EIR
	Noise Control Permit	To be obtained prior to initiation of construction activities
	Right-of-Entry Permit	To be obtained prior to initiation of wetland creation activities
Metropolitan Transit System	Approval of bus turnout at the northwest and southeast corners of Friars Road/Frazee Road	Approved February 3, 2009



Source: Dokken Engineering 2009

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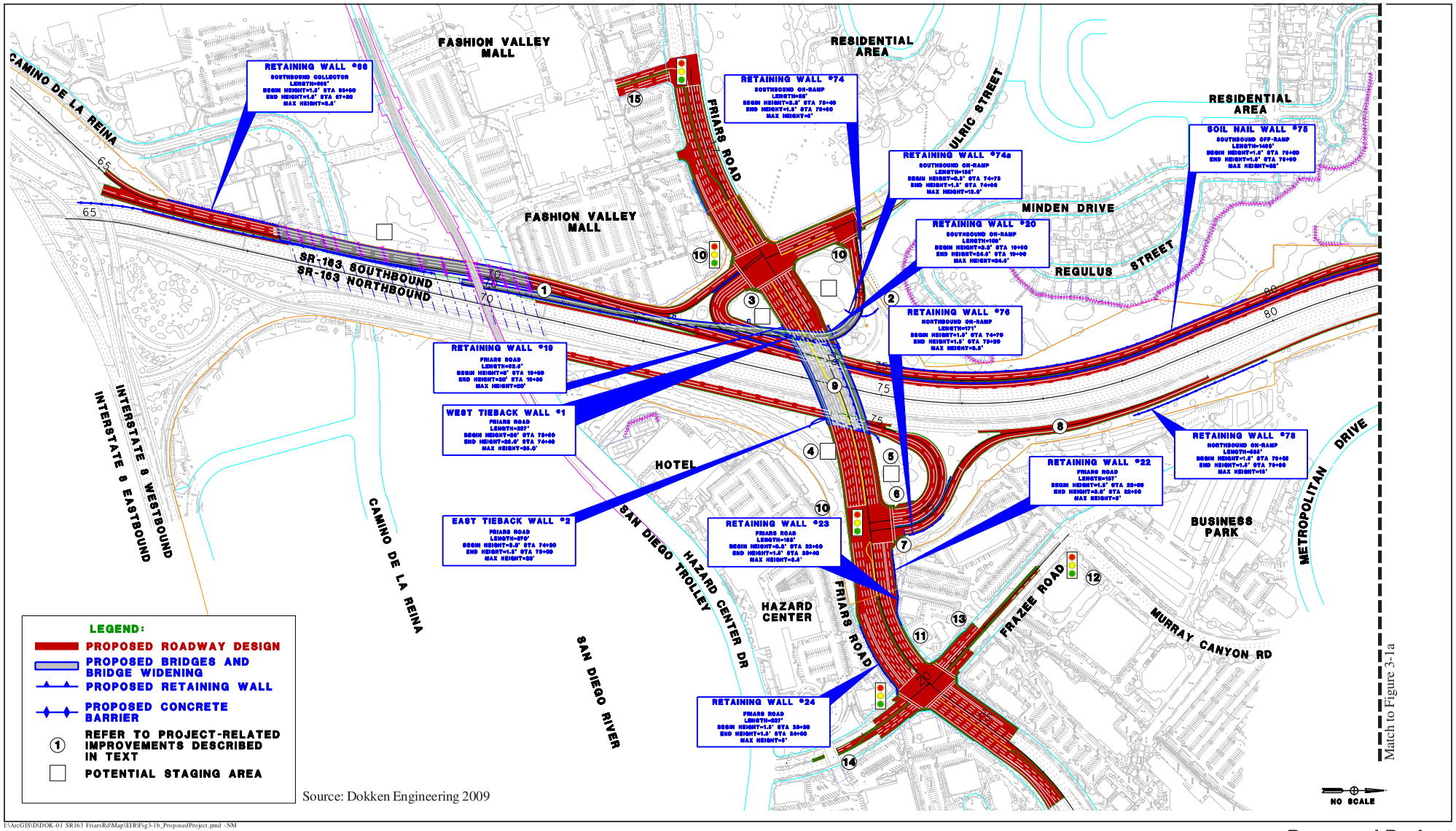
Proposed Project

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 3-1a



Source: Dokken Engineering 2009

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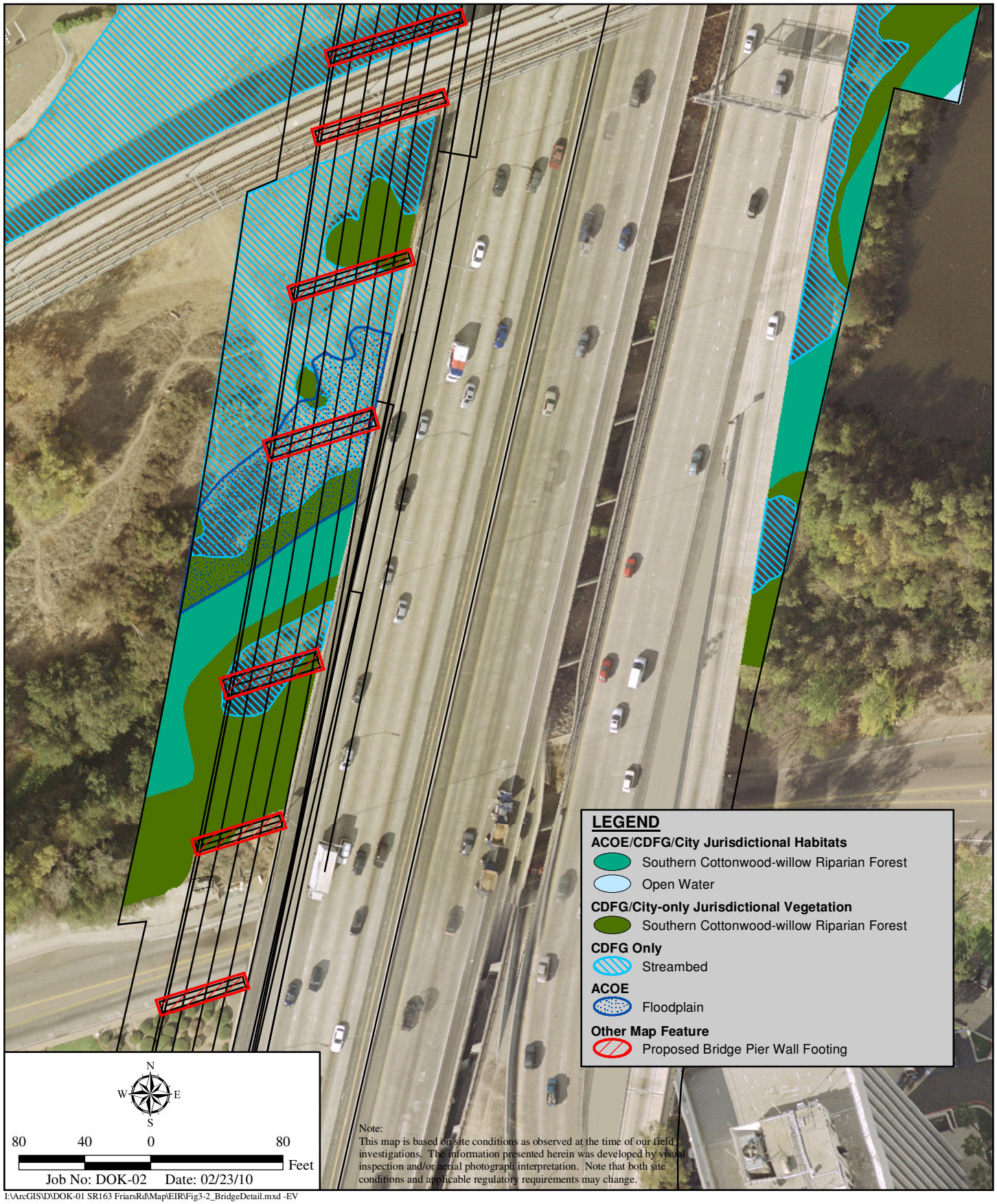
Proposed Project

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 3-1b



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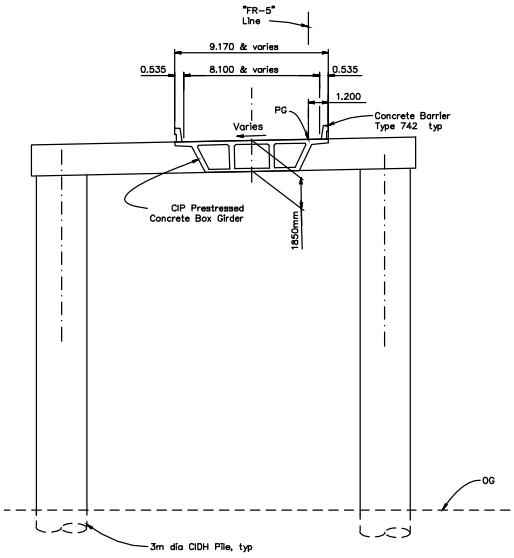
San Diego River Bridge Detail

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 3-2



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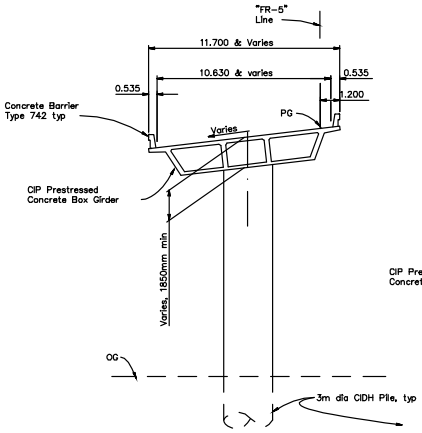

Bents 1-4, 8, 10 & 11

TYPICAL SECTION
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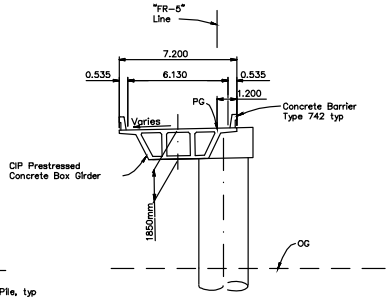

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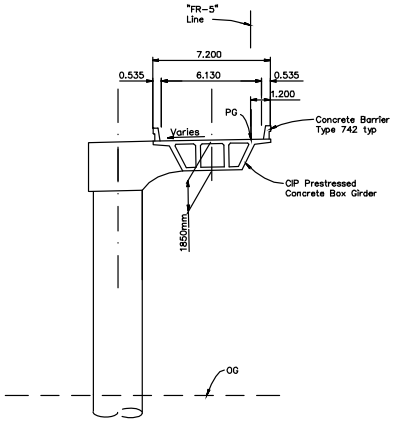

SECTION AT BENT 7
1:200

Source: T.Y. LIN International 2009

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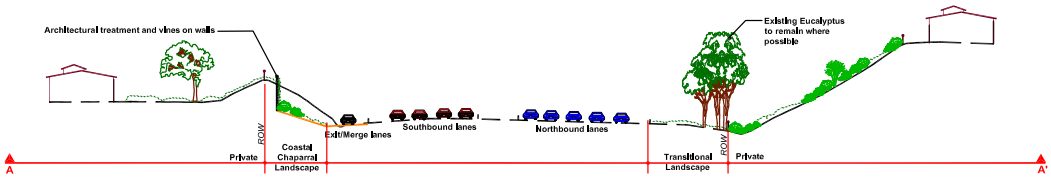
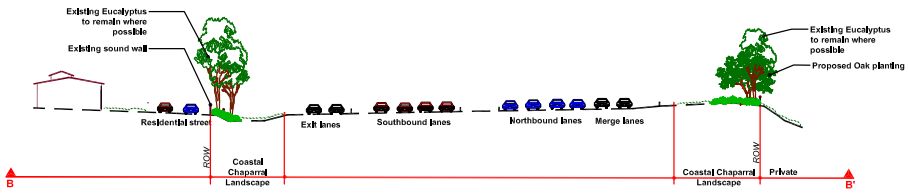
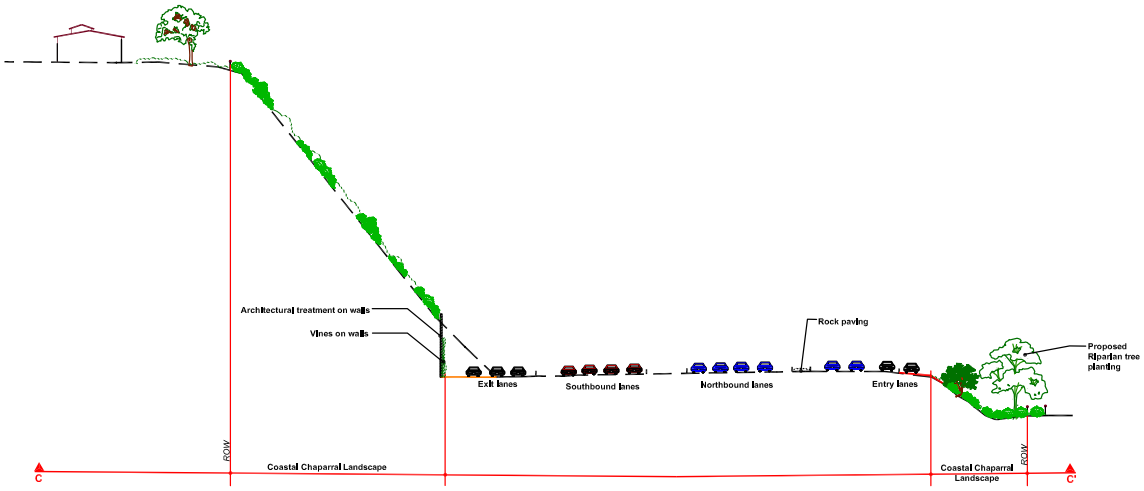
Proposed Flyover Cross-sections

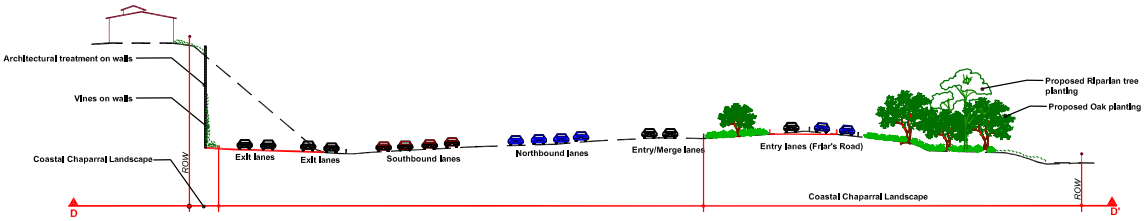
SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 3-3









Source: Estrada Land Planning 2009

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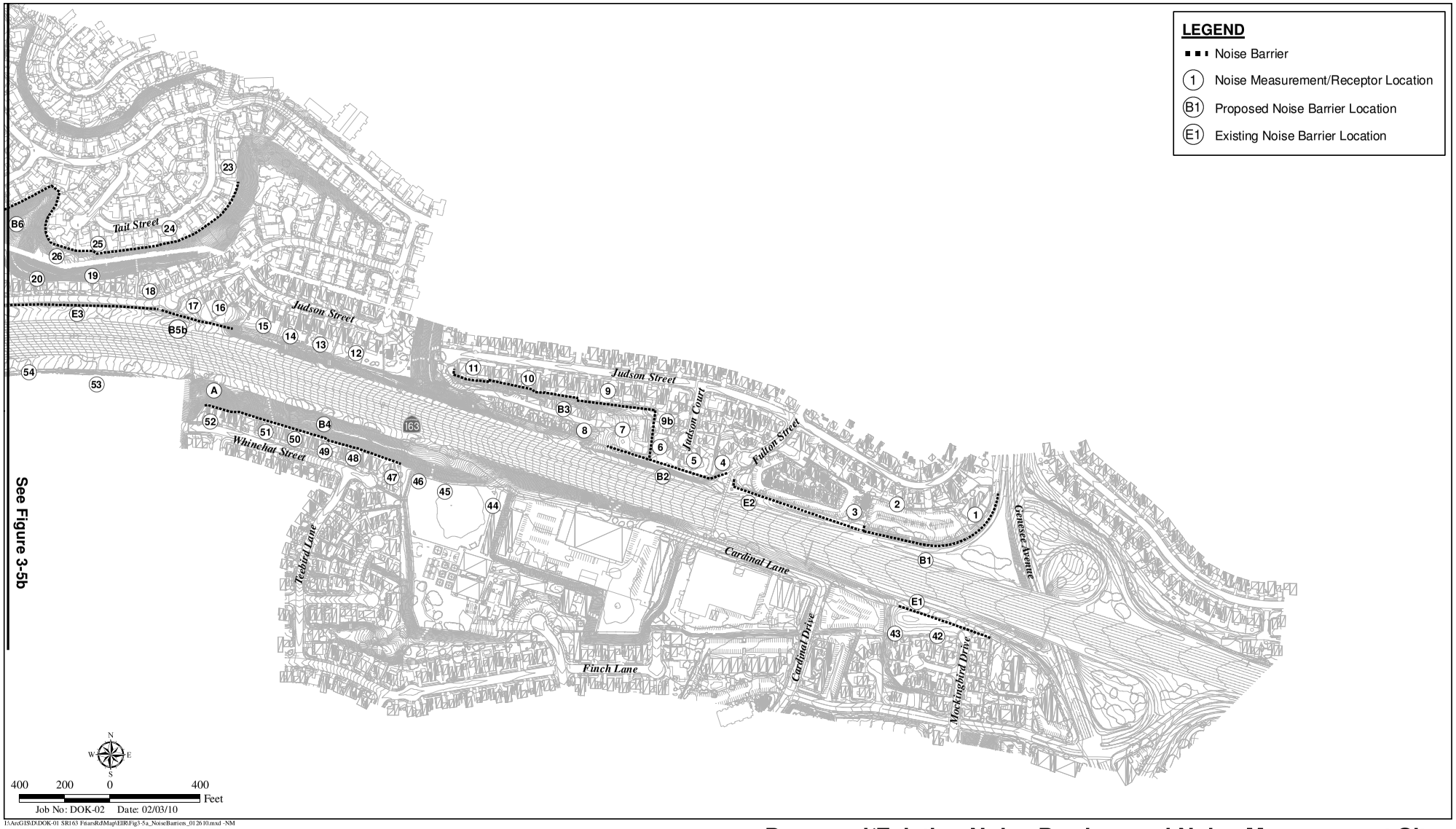
Retaining Wall Typical Sections

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 3-4



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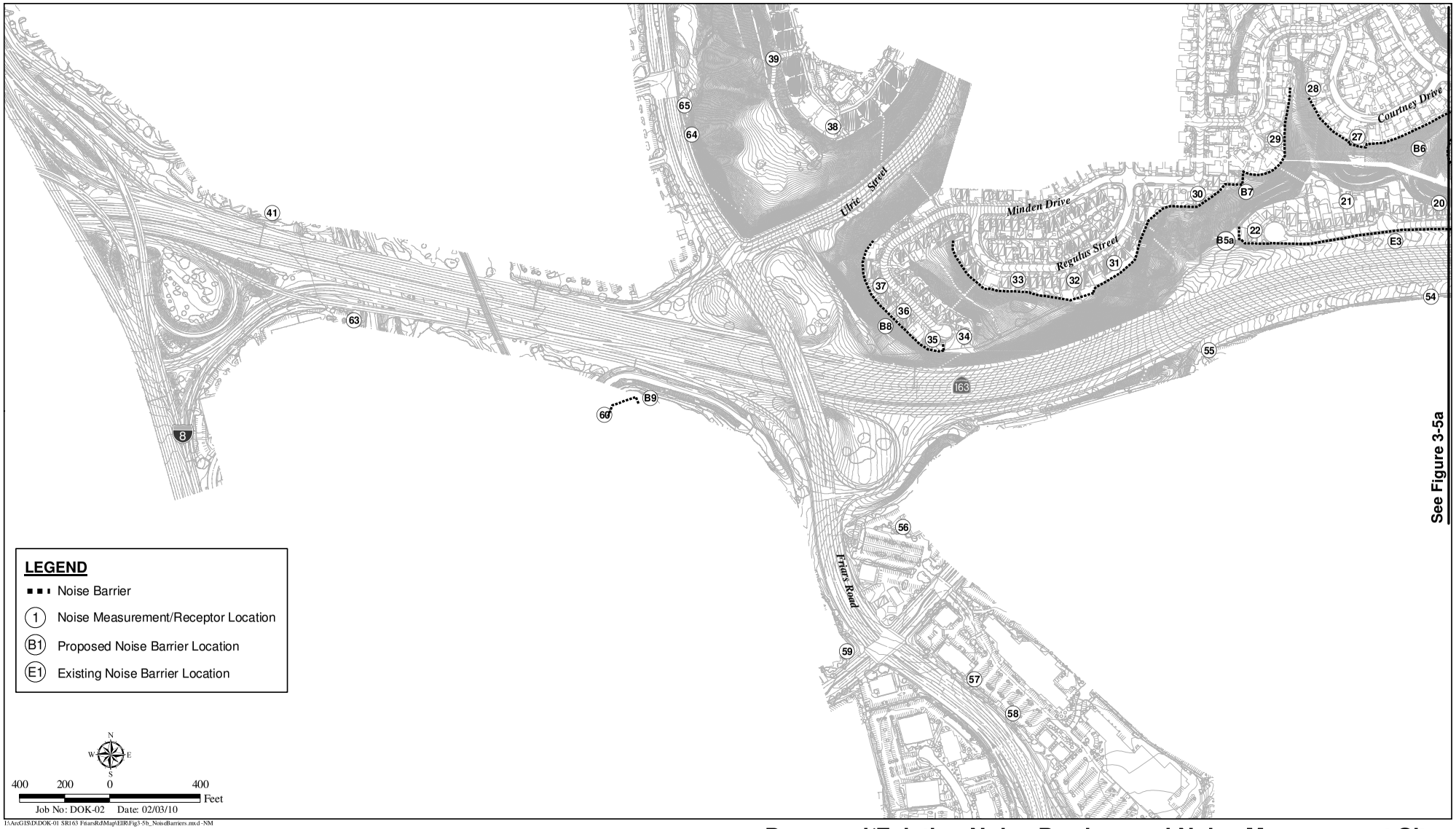
Proposed/Existing Noise Barriers and Noise Measurement Sites

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 3-5a



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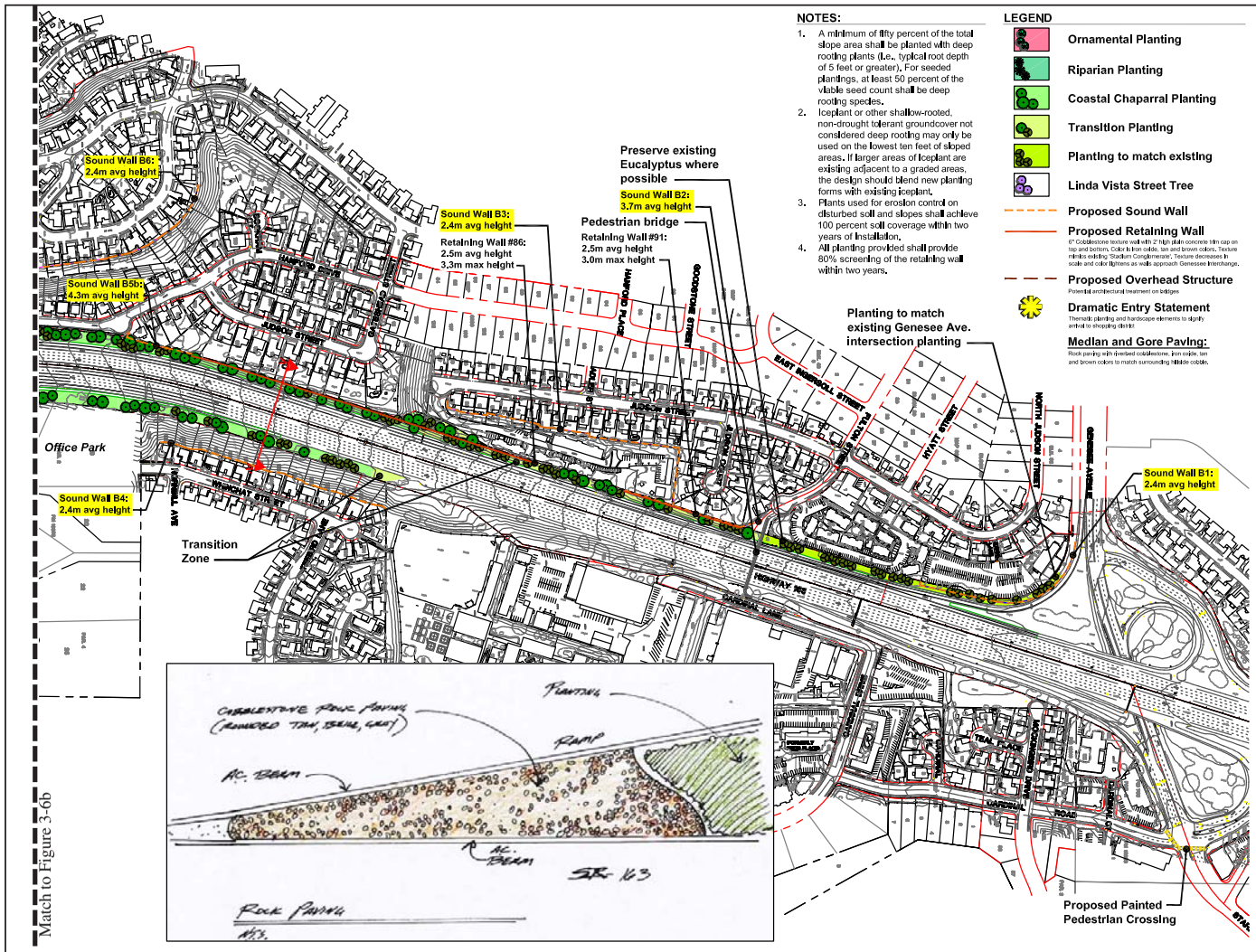
Proposed/Existing Noise Barriers and Noise Measurement Sites

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 3-5b



Source: Estrada Land Planning 2009

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NOTES:

1. A minimum of fifty percent of the total slope area shall be planted with deep rooting plants (i.e., typical root depth of 5 feet or greater). For seeded plantings, at least 50 percent of the viable seed count shall be deep rooting species.
2. Iceplant or other shallow-rooted, non-drought tolerant groundcover not considered deep rooting may only be used on the lowest ten feet of sloped areas. If larger areas of iceplant are existing adjacent to a graded areas, the design should blend new planting forms with existing iceplant.
3. Plants used for erosion control on disturbed soil and slopes shall achieve 100 percent soil coverage within two years of installation.
4. All planting provided shall provide 80% screening of the retaining wall within two years.

LEGEND

- Ornamental Planting
- Riparian Planting
- Coastal Chaparral Planting
- Transition Planting
- Planting to match existing
- Linda Vista Street Tree
- Proposed Sound Wall
- Proposed Retaining Wall
  6" Cobblestone texture wall with 2' high plain concrete trim cap on top and bottom. Color is iron oxide, tan and brown colors. Texture mimics existing "Stadium Conglomerate". Texture decreases in scale and color lightens as walls approach Genessee Interchange.
- Proposed Overhead Structure
  Potential architectural treatment on bridges
- Dramatic Entry Statement
  Thematic planting and hardscape elements to signify arrival to shopping district
- Median and Gore Paving:
  Rock paving with riverbed cobblestone, iron oxide, tan and brown colors to match surrounding fillside cobble.

PLANT CONCEPT LIST

Botanical Name — Common name

Riparian Theme Planting

Trees - (Minimum 15 gallon):

Platanus racemosa	California Sycamore
Populus fremontii	Fremont Cottonwood
Quercus agrifolia	Coast Live Oak
Baccharis salicifolia	Mule fat
Salix lasiolepis	Arroyo Willow
Salix gooddingii	Black Willow
Salix laevigata	Yellow Willow

Shrubs - (1 and 5 gallon):

Rubus ursinus	California Blackberry
Sambucus mexicana	Elderberry
Rosa californica	California Rose
Iva hayesiana	Sump Weed
Scirpus Species	Bulrush

Riparian Seed Mix		PLS lbs/ac
Ambrosia psilostachya	Western Ragweed	1
Anemopsis californica	Yerba Mansa	2
Artemesia douglasiana	Douglas Wormwort	2
Carex spissa	San Diego Sedge	2
Eleocharis macrostachya	Pale Spike sedge	2
Elymus triticoides	Beardless Wild Ryegrass	2
Encelia californica	California Encelia	1
Juncus acutus	Spiny Rush	1
Lonicera subspicata	Southern Honeysuckle	1
Mimulus guttatus	Seep Monkey Flower	1
Muhlenbergia rigens	Deergrass	3
Oenothera hookeri	Yellow Evening Primrose	1
Sisyrinchium bellum	Blue-eyed grass	1
Vulpia microstachys	Small Fescue	5
Zaushneria californica	California Fucsia	1

Coastal Chaparral Theme

Coastal Chaparral Seed Mix		PLS lbs/ac
Anemopsis californica	Yerba Mansa	2
Artemisia californica	Coastal Sage Brush	1
Lasthenia chrystostema	Dwarf Goldfields	1
Eriogonum fasciculatum	California Buckwheat	5
Eschscholzia californica	California Poppy	1
Lotus scoparius	Deer Weed	2
Lupinus succulentus	Arroyo Lupine	1
Mimulus puniceus	Monkeyflower	0.5
Oenothera hookeri	Yellow Evening Primrose	1
Salvia clevelandii	Cleveland Sage	1
Stipa pulchra	Purple needle grass	2
Salvia aptana	White sage	2
Vulpia microstachys	Small Fescue	5
Zaushneria californica	California Fuchsia	1

Oak Woodland / Chaparral Theme

Trees - (Minimum 15 gallon size):

Quercus agrifolia	Coast Live Oak
Lyonothanus floribundus 'Asplenifolius'	Catalina Lacebark
Prunus ilicifolia	Catalina Cherry

Shrubs - (1 and 5 gallon):

Heteromeles arbutifolia	Toyon
Malosma laurina	Laurel Sumac
Baccharis pilularis 'consanguinea'	Coyote Brush
Ceanothus verrucosus	Warty Stem Ceanothus
Prunus ilicifolia	Holly leaf cherry
Rhamnus californica	Coffee Berry
Rhamnus crocea	Redberry
Rhus integrifolia	Lemonade Berry
Ribes speciosa	Fuchsia Flowering Currant
Xylococcus bicolor	Mission Manzanita

Seed Mix		PLS lbs/ac
Artemisia californica	Coastal Sage Brush	1
Lasthenia chrystostema	Dwarf Goldfields	1
Eriogonum fasciculatum	California Buckwheat	5
Eschscholzia californica	California Poppy	1
Lotus scoparius	Deer Weed	2
Lupinus succulentus	Arroyo Lupine	1
Mimulus puniceus	Monkeyflower	0.5
Oenothera hookeri	Yellow Evening Primrose	1
Salvia clevelandii	Cleveland Sage	1
Stipa pulchra	Purple needle grass	2
Salvia aptana	White sage	2
Vulpia microstachys	Small Fescue	5
Zaushneria californica	California Fuchsia	1

Linda Vista Street Tree

Tree - (Minimum 15 gallon):

Jacaranda mimosifolia	Jacaranda

Vines on Proposed Retaining Walls

Parthenocissus tricuspidata	Boston Ivy

Transition Theme

Trees - (Minimum 15 gallon):

Quercus agrifolia	Coast Live Oak
Lyonothanus floribundus 'Asplenifolius'	Catalina Ironwood
Prunus ilicifolia	Holly Leaf Cherry

Shrubs - (1and 5 gallon):

Heteromeles arbutifolia	Toyon
Malosma laurina	Laurel Sumac
Prunus ilicifolia	Holly leaf cherry
Rhus integrifolia	Lemonade Berry

Groundcover:

Baccharis p. 'Centennial'	Centennial Coyote Brush
Baccharis p. 'Twin Peaks#2'	Prostrate Coyote Brush
Myoporum pacificum	Pacific myoporum
Lonicera japonica 'Halleriana'	Hall's Honeysuckle

Ornamental / Emphatic Theme

Trees - (Minimum 15 gallon):

Brahea edulis	Guadelupe Palm
Butia capitata	Pindo Palm
Roystonea regia	Royal palm
Brachychiton discolor	Pink Flame Tree
Prunus cerasifera Atropurpurea'	Purple Leaf Plum
Spathodea campanulata	African Tulip Tree
Erythrina species	Coral Tree varieties

Shrubs - (1 and 5 gallon):

Bougainvillea species	Bougainvillea
Cistus purpureus	Orchid Spot Rock Rose
Hemerocallis hybridus	Daylily
Lantana species	Lantana
Phormium tenax	New Zealand Flax
Rhaphiolepis indica	India Hawthorn
Strelitzia reginae	Bird of Paradise
Agave attenuata	Soft Agave
Pelargonium 'Balkan Hybrid'	Balkan Ivy Geranium

Groundcover:

Myoporum pacificum	Pacific Myoporum
Gazania splendens	Trailing Gazania

I-8/SR-163 Interchange (Existing Planting Theme)

Trees:

Pinus torreyana	Torrey Pine
Prunus cerasifera Atropurpurea'	Purple Leaf Plum

Shrubs:

Bougainvillea species	Bougainvillea
Lantana species	Lantana
Plumbago capensis	Cape Plumbago

Groundcover:

Delosperma alba	White Ice Plant

Mesa Theme (Existing on SR-163 from Friars Road to Clairemont Mesa Blvd)

Trees:

Eucalyptus camaldulensis	Sugar Gum
Lophostemon conferta	Brisbane Box

Shrubs:

Heteromeles arbutifolia	Toyon
Melaleuca nesophila	Pink Melaleuca

Groundcover:

Carpobrotus edulis	Ice Plant/Pickleweed

Vegetated Swales and Drainage Feature

San Diego Natives under 3' ht. - (Liners and 1 gallon)

Carex triquetra	Triangular Fruit Sedge
Cyperus eragrostis	Umbrella Sedge
Eleocharis montevidensis	Spike sedge
Eleocharis machrostachys	Spike Sedge
Iva hayesiana	Sump Weed
Juncus bufonius	Toad Rush
Juncus mexicanus	Mexican Rush
Juncus dubius	Mariposa Rush
Muhlenbergia rigens	Deer Grass
Sisyrinchium bellum	Blue Eyed Grass

Mowable Grasses under 3' ht. - (Liners and seeds)

Festuca rubra 'Molate'	Red Fescue
Nassella lepida	Foothill Needle Grass
Vulpia microstachys	Small fescue

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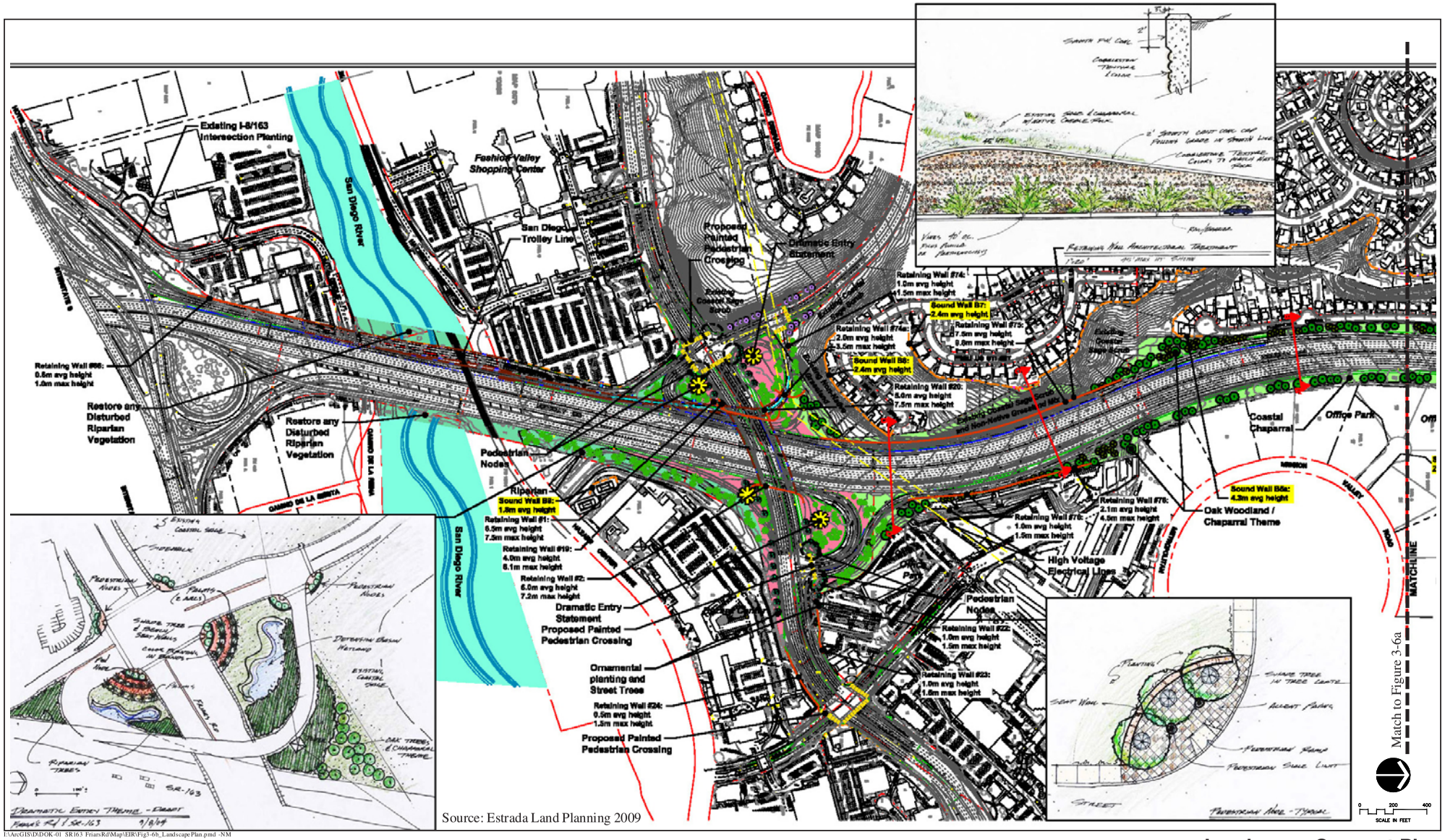
SCALE IN FEET

Landscape Concept Plan

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 3-6a



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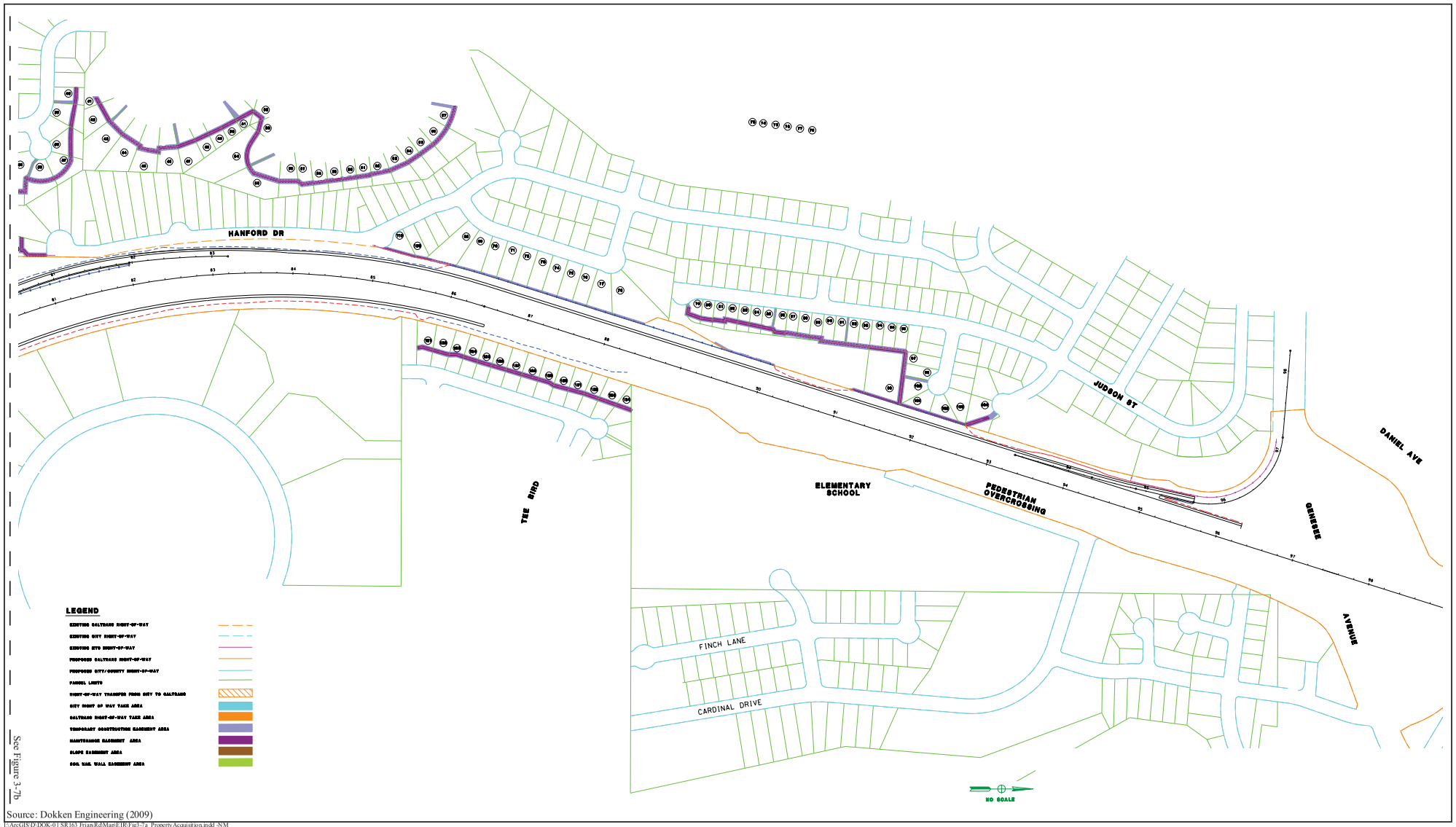
Landscape Concept Plan

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 3-6b



See Figure 3-7b

Source: Dokken Engineering (2009)

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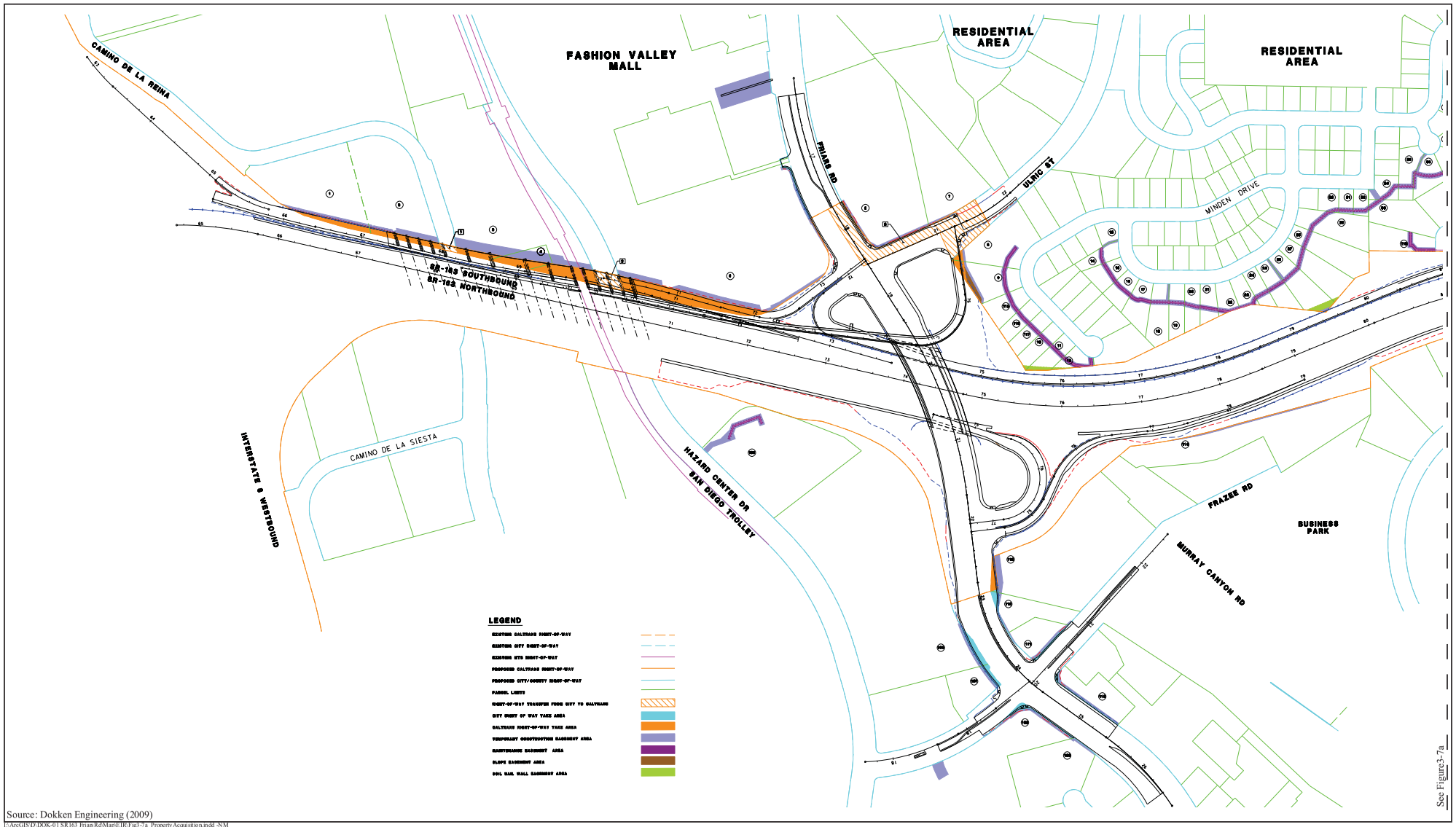
Property Acquisition Requirements

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 3-7a



Source: Dokken Engineering (2009)

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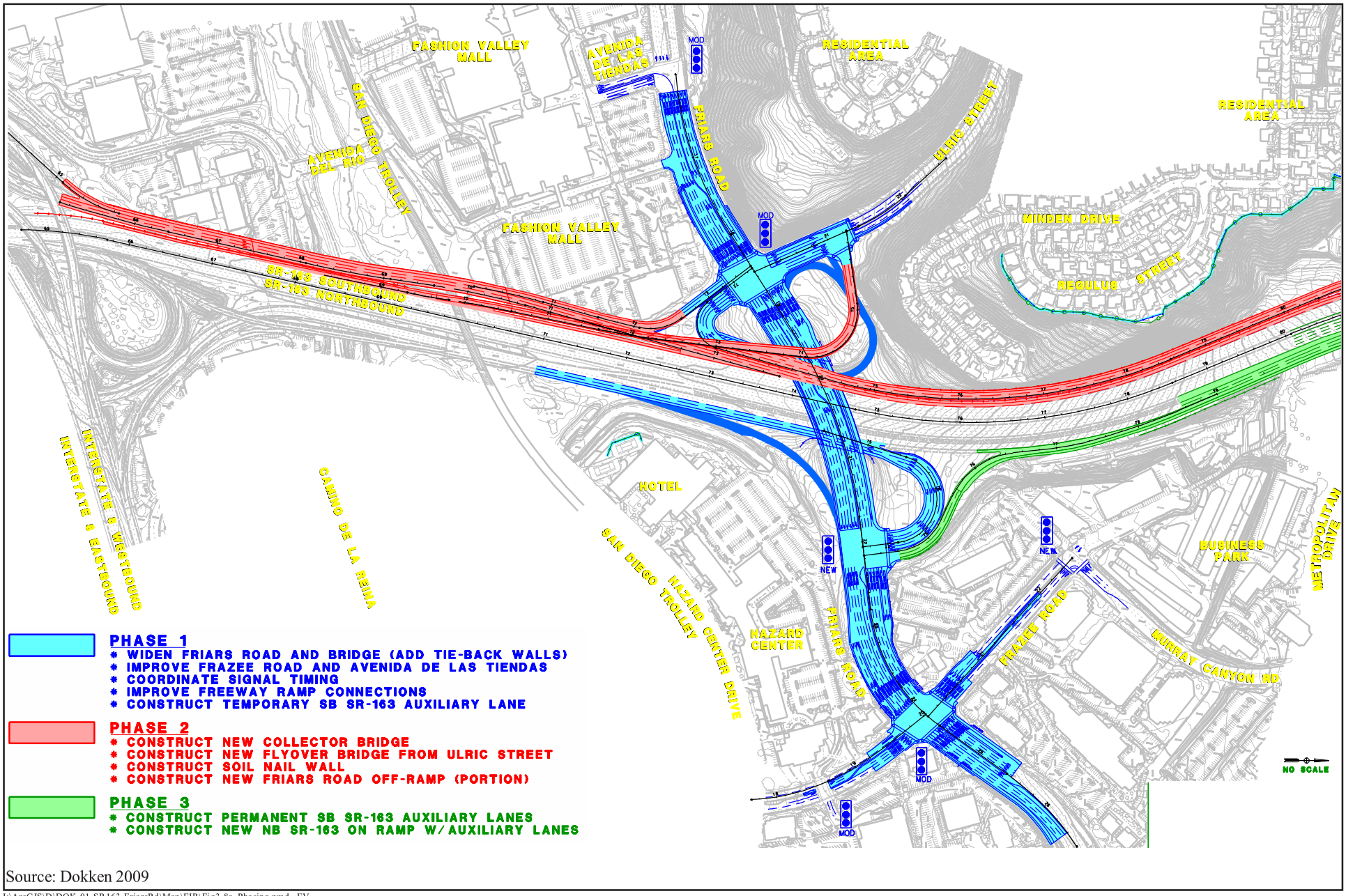
Property Acquisition Requirements

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 3-7b



Source: Dokken 2009

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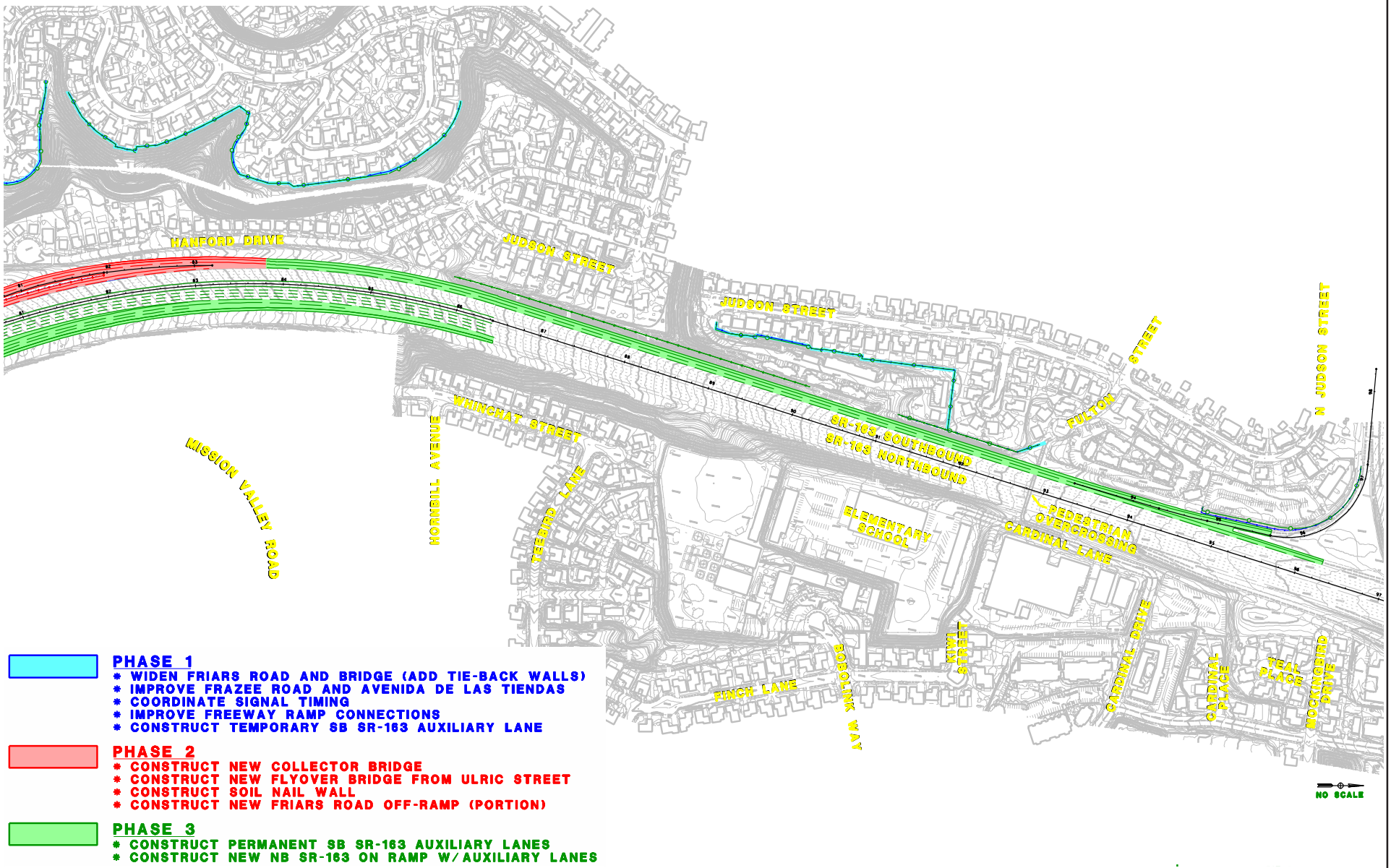
Proposed Project Phasing

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 3-8a



Source: Dokken 2009

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Proposed Project Phasing

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 3-8b

CHAPTER 4.0

HISTORY OF PROJECT CHANGES

4.0 HISTORY OF PROJECT CHANGES

This chapter chronicles the physical changes that have been made to the Project in response to environmental concerns raised during the City's review of the Project. In response to City and other agency/Caltrans input, the footprint has been modified to address a greater area of effect, to minimize construction impacts and to contain less impactive design elements.

The current SR 163/Friars Road interchange was completed in 1970. Concurrent with and following this improvement, major commercial, office and residential developments were completed in the area. These include the Fashion Valley Regional Shopping Center, Hazard Center, Friars Mission Center, Rio Vista Center, Mission Valley Heights Industrial Park and numerous high density condominium/apartment complexes along Friars Road and the San Diego River. As early as 1988, Caltrans issued Project Study Reports (PSRs) addressing additional improvements to Friars Road and SR 163 on- and off-ramps. The City initiated environmental studies in 1990. Project review continued through 1997 but was subsequently suspended pending identification of new engineering partners and preparation of a new PSR.

The current environmental review process began in 2003, with an NOP regarding preparation of an EIR released on November 4, 2005. Similar to the earlier effort, the study area initially was geographically focused on the interchange itself, with engineering solutions based on the earlier work. Subsequent changes were based on environmental concerns related both to the study area addressed in the environmental documentation as well as specific Project design issues.

The City and Caltrans immediately determined that such a proscribed study area would result in inability to adequately address existing and projected interchange shortfalls. As a result, the study area was expanded both to the SR 163 interchange with I-8 to the south, as well as the SR 163 interchange with Genesee Avenue to the north. The study area for surface streets also was extended farther west and east along Friars Road to the Fashion Valley Road and Mission Center Road intersections with Friars Road, respectively. All Project technical studies and discussion topics addressed in Chapter 5.0 of this EIR address this larger study area.

The second category of changes made to the Project address Project design. As described in Chapter 11.0, Alternatives, of this EIR, a number of evaluated potential engineering design scenarios focused on specific locations (e.g., particular on-ramp locations), leading to identification of the best specific design option for any Project element in terms of traffic safety and movement. These were then combined into overall alternatives and analyzed for potential environmental impacts. Specifics regarding potential impacts and reasons for rejection are detailed in Subsection 11.3.2, but elements that led to changes in Project description are noted below.

From 2003 through June 2004, the primary build alternative evaluated was Alternative 6. In terms of environmental effects, an integral element of Alternative 6 project design was a highly visible collector lane bypass structure that would have been built as a viaduct[1] high on the east face of the slope west of SR 163. Due to limited space, there would have been a minimal ability for introduction of planting or other mitigation measures that could reduce the resulting visual effect. As a result of a value engineering session held on the Project on June 21 and 22, 2004, the current Project (originally identified as Alternative 13) was identified. This alternative eliminated the need for the viaduct as well as potential removal of the existing Sempra transmission facilities in the interchange area. This latter anticipated removal ultimately would have required re-siting of the towers, with additional effects on hillsides/residential areas not impacted by retaining the current location. The current Project would result in fewer aesthetics, noise and utility impacts (c.f., discussions in Sections 5.8, 5.9 and 5.11, with those in Subsection 11.3.2, respectively).

On the west side of Ulric Street, early plans showed impacts up the slope. The Project was redesigned in this area to retain the current sidewalk line as the Project boundary. Cuts into these slopes have been minimized to the extent feasible overall with retaining walls allowing for vertical cut and eliminating the need for extensive cut back. In addition, a reduced amount of vegetation would be removed to support modified slopes. Construction buffer zones also have been carefully reviewed and the temporary impact area has been drawn as tightly as possible (i.e., it does not exceed the area mandatory for engineering efforts).

Additionally, early analysis assumed that the Denny's restaurant located north of Friars Road and west of Frazee Road would be removed as part of new right-of-way requirements for widened Friars Road in this area. In Summer 2008, a design was approved that would allow retention of this business. Although it would not have resulted in CEQA impacts per se, it is a local business with concerned patrons, and retention of it in place was considered beneficial.

[1] A "viaduct structure" is a combination retaining wall and bridge structure. A viaduct structure is feasible in areas where bridges are constructed near steep hillsides.

CHAPTER 5.0

ENVIRONMENTAL ANALYSIS

5.0 ENVIRONMENTAL ANALYSIS

5.1 LAND USE

This section includes evaluation of the policy level land use issues associated with implementation of the Project, and identification of potential physical land use conflicts that could arise from Project construction and operation.

5.1.1 Existing Conditions

Existing land uses within the study area are described in the affected environment; adopted land use plans, policies and regulations applicable to the Project are summarized in the regulatory setting.

5.1.1.1 Affected Environment

Land uses in the study area include open space, vacant or undeveloped areas, and developed uses for residential, commercial, public, institutional, recreational and other types of activities. Existing land uses addressed in this section generally are those occurring in the study area at the time the Project NOP was issued in November 2005.

Major commercial developments adjacent to the roadways to be improved by the Project include Fashion Valley Center west of SR 163/south of Friars Road, Hazard Center east of SR 163/south of Friars Road, Friars Mission Center east of SR 163/north of Friars Road, and industrial and commercial businesses such as self-storage along Murray Canyon Road and Frazee Road (Figure 5.1-1, Existing Land Uses). The San Diego River near the southern end of the Project area forms a corridor of open space; multi-dwelling residential development has been built along both sides of the river east of SR 163 and west of Mission Center Road. Single-family homes predominate on the mesa above the west side of SR 163 between the Friars Road and Genesee Avenue interchanges. There are approximately 30 homes along Hanford Drive and 14 homes along Judson Street adjacent to and at the same level as the freeway between these two roadways. Chesterson Elementary School is north of Genesee Avenue west of SR 163. East of SR 163, there is a mix of uses, including Colonel Ed Fletcher Elementary School on the mesa above the freeway south of Genesee Avenue, as well as single-dwelling homes.

5.1.1.2 Regulatory Setting (Relevant Plans and Policies)

Land use planning and development approval is guided by federal, state, regional and local governmental agencies and their adopted policies and ordinances. Long range planning documents provide goals, policies, implementation procedures, and regulatory controls to guide and enforce conformance.

Federal/State

Agencies use executive orders, various laws and mandates, management plans, and master plans to govern land use decisions within their jurisdictions. Federal/state regulations relevant to the Project include broad overarching policies promulgated in the acts such as federal and state Clean Air Act(s), Clean Water Act(s), Endangered Species Act(s), etc. Critical elements of these acts are incorporated into regional programs described below.

Relevant to the Project are the Regional Transportation Plan (RTP) and the Regional Transportation Improvement Program (RTIP) approved by the San Diego Association of Governments (SANDAG), the Regional Air Quality Strategy (RAQS), Water Quality Control Plan for the San Diego Basin and Multiple Species Conservation Program (MSCP).

Regional

Regional Transportation Plan

The Regional Comprehensive Plan (RCP, SANDAG 2004b) is the strategic planning framework for the San Diego region. The RTP is the transportation component of the RCP.

In March 2003, the SANDAG Board of Directors approved the 2030 RTP (SANDAG 2003a), also referred to as Mobility 2030. The RTP is the adopted long-range transportation planning document for the San Diego region. It is used as the basis for funding decisions made through the RTIP (SANDAG 2008), which is discussed below. The plan covers public policies, strategies and investments to maintain, manage, and improve the regional transportation system through 2030.

Improving mobility is considered the RTP's highest goal. The vision presented in the RTP is to develop a flexible transportation system that focuses on moving people and goods, not just vehicles, by providing more convenient, fast and safe travel choices for public transit, ridesharing, walking, biking, private vehicles and freight. Applicable policy goals of the RTP include improving the mobility of people and freight, improving accessibility to major employment and other regional activity centers, improving the reliability and safety of the transportation system, maximizing the efficiency of the existing and future transportation system, and minimizing effects on the environment. RTP policy objectives that apply to the Project include tailoring improvements to reflect land uses in major travel corridors, encouraging walkability and better bicycle access within the local communities, and focusing roadway and transit improvements in urban/suburban areas.

The SR 163/Friars Road Interchange Project is included in SANDAG's Final 2030 "revenue-constrained" RTP. The RTP specifically lists the SR 163/Friars Road Interchange Project as a Regionally Funded System Interchange Project.

Regional Transportation Improvement Program

The RTIP is a key component of the RTP and other planning efforts for the region. The RTIP is consistent within the RTP and consists of a five-year capital improvement program for transportation projects. As such, it incrementally implements the vision presented in the RTP. It is updated by SANDAG every two years and reflects the region's priorities for short-range transportation system improvements. The current adopted RTIP covers fiscal years 2008/09 through 2012/13. Funding for the transportation projects in the RTIP comes from federal, state, and local revenue sources, including TransNet, the local transportation sales tax program.

The 2008 RTIP was adopted on July 25, 2008, for fiscal years 2008 to 2009. Non-capacity-increasing engineering studies to address future construction of a new southbound SR 163 to westbound Friars Road off- ramp were included in the adopted 2008 RTIP. Amendment No. 10 to the 2008 RTIP revised the description to be consistent with the Project, indicate that the improvements would be capacity-increasing and provide additional funding for Project engineering and right-of-way acquisition. Amendment No. 15 increased funding for the Project and revised funding between fiscal years. Amendment No. 16 revised funding between project phases.

Regional Air Quality Strategy for San Diego County

The California Clean Air Act (CAA) requires areas that have not attained state ambient air quality standards for ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2) or nitrogen dioxide (NO_2) to prepare plans to attain the standards by the earliest practicable date. Each of these standards has been attained in San Diego County, with the exception of O_3. San Diego County has been designated by the California Air Resources Board (ARB) as nonattainment of the State ambient air quality standard for O_3. Accordingly, the RAQS was developed pursuant to CAA requirements and identifies feasible emission control measures to provide expeditious progress in San Diego County toward attaining the state O_3standard. The RAQS was initially adopted by the San Diego County Air Pollution Control Board (APCD) on June 30, 1992, and amended on March 2, 1993, in response to ARB comments. The District Board further updated the RAQS with triennial revisions on December 12, 1995, June 17, 1998, August 8, 2001 and July 28, 2004.

Water Quality Control Plan for the San Diego Basin

The Water Quality Control Plan for the San Diego Basin recognizes regional differences in existing water quality, the beneficial uses of the region's ground and surface waters, and local water quality conditions and problems (RWQCB 1994). The Project is included in the San Diego Hydrologic Unit. The beneficial uses of surface water in this hydrologic unit include contact and non-contact water recreation and warm and cold freshwater habitats. The only beneficial use of groundwater within this basin is for industrial activities that do not depend primarily on water quality.

The National Pollutant Discharge Elimination System (NPDES) Municipal Permit, issued on January 24, 2007 to the City and other jurisdictions by the RWQCB, requires the development and implementation of storm water regulations addressing storm water pollution issues in development planning and construction associated with both private and public projects. The City must conform with the Permit, and the vehicle for such conformance consists of the City's Storm Water Runoff and Drainage Regulations (San Diego Municipal Code, Chapter 14, Article 2, Division 2). These regulate the development of and impacts to drainage facilities; limit water quality impacts from development; minimize hazards due to flooding while minimizing the need for construction of flood control facilities; minimize impacts to environmentally sensitive lands; implement the provisions of federal and state regulations; and protect the public health, safety and welfare. The Municipal Permit, as well as the NPDES General Permit for Storm Water Discharges Associated with Construction Activity, are further discussed in Section 5.3, Hydrology/Water Quality.

Multiple Species Conservation Program

The MSCP is a comprehensive biological habitat conservation planning program developed by the City (as well as other local resource agencies including the U.S. Fish and Wildlife Service [USFWS] and California Department of Fish and Game [CDFG]) for southwestern San Diego County. The program provides the basis for the issuance of permits under the federal and state Endangered Species Act(s), and the California Natural Communities Conservation Planning Act of 1991. A goal of the MSCP is to preserve a network of habitat and open space, protecting biodiversity. Local jurisdictions, including the City, implement their portions of the MSCP through subarea plans, which describe specific implementing mechanisms.

The City's MSCP Subarea Plan was approved in March 1997. The Implementing Agreement (signed by the City, USFWS and CDFG in July 1997) allows the City to issue Incidental Take Authorizations under the provisions of the MSCP. Applicable state and federal permits are still required for wetlands and listed species that are not covered by the MSCP. The City has adopted Biology Guidelines that, together with the ESL regulations and MSCP Subarea Plan, are used to evaluate project-related impacts and required mitigation. The Biology Guidelines provide for variable mitigation ratios for project impacts for different habitats and the location of the impacted area, and proposed mitigation lands relative to the MHPA.

The MHPA is the area within which the permanent MSCP preserve is planned to be assembled and managed for its biological resources. It is a 56,831-acre area in the City, conservation of which is intended to preserve core biological resource areas and corridors targeted for preservation, and subsequently support preservation of the sensitive species that reside in or use these areas. The MHPA is defined in many areas by mapped boundaries and also is defined by quantitative targets for conservation of vegetation communities, as well as goals and criteria for preserve design. The San Diego River is included in the MHPA; the Project, therefore, would not only be subject to mitigation requirements under the City Biology Guidelines, but also to adjacency guidelines within

the MSCP. According to the MSCP, compensation for impacts to sensitive habitats may be accomplished through off-site acquisition, on-site preservation, habitat creation, habitat restoration and/or, in some instances, monetary compensation.

Local

The Project is addressed in terms of overarching City guidance in the City's General Plan. It is located within three community planning areas: Mission Valley, Linda Vista and Serra Mesa, each of which has a community plan with specific area goals as well. Finally, the Draft San Diego River Park Master Plan and City Environmentally Sensitive Lands Regulations are directly applicable. Each of these draft or adopted land use plans, policies and/or regulations are addressed below.

City General Plan

On March 10, 2008, the City Council adopted a new General Plan (City 2008). The General Plan is a comprehensive, long-term document that sets out a long-range vision and policy framework for how the City may grow and develop, provide public services, and maintain the qualities that define San Diego. Accordingly, the General Plan "provides policy guidance to balance the needs of a growing city while enhancing quality of life for current and future San Diegans." The General Plan is comprised of a Strategic Framework section and 10 elements, including: Land Use and Community Planning; Mobility; Urban Design; Economic Prosperity; Public Facilities, Services and Safety Element; Recreation; Conservation; Historic Preservation; Noise; and Housing. The elements that are directly applicable to the Project include Mobility; Urban Design; Public Facilities, Services and Safety; Conservation; and Noise.

Mobility Element. The purpose of the Mobility Element is "to improve mobility through development of a balanced, multi-modal transportation network." The element identifies the proposed transportation network and strategies that have been designed to meet the future transportation needs generated by the General Plan land uses. The Mobility Element's policies promote a balanced, multimodal transportation network that gets people where they want to go and minimizes environmental and neighborhood impacts. The element contains policies that address walking, streets, transit, regional collaboration, bicycling, parking, the movement of goods and other components of a transportation system. Together, these policies advance a strategy for relieving congestion and increasing transportation choices. Applicable goals include greater "walkability," with streets and sidewalks emphasizing pedestrian safety and comfort, as well as appropriate maintenance; a street and freeway system that balances the needs of multiple users of the public right-of-way; vehicle congestion relief; and safe and efficient street design that minimizes environmental and neighborhood impacts.

Urban Design Element. The purpose of the Urban Design Element is "to guide physical development toward a desired image that is consistent with the social, economic and aesthetic values of the City." The element policies capitalize on San Diego's natural beauty and unique neighborhoods by calling for development that respects the natural setting; enhances the distinctiveness of its neighborhoods; strengthens the natural and

built linkages; and creates mixed-use, walkable villages throughout the City. Urban Design Element policies help support and implement land use and transportation decisions, encourage economic revitalization, and improve the quality of life in San Diego. Ultimately, the Urban Design Element influences the implementation of all of the General Plan's elements and community plans (specifics of which are discussed below). Applicable goals with this element include a built environment that respects San Diego's natural environment and utilization of landscape as an important aesthetic and unifying element throughout the City.

Public Facilities, Services and Safety Element. The purpose of the Public Facilities, Services and Safety Element (Public Facilities Element) is "to provide the public facilities and services needed to serve the existing population and new growth." The element contains policies that address financing strategies, prioritization, and the provision of specific facilities and services that must accompany growth. The policies within the Public Facilities Element also specifically apply to transportation, and park and recreation facilities and services. Specifically applicable policies relate to ensuring that public facilities are available at time of need, that increased use of reclaimed water be reviewed and that there is a maximum diversion of materials from disposal through reuse/recycling of waste.

Conservation Element. The purpose of the Conservation Element is "to become an international model of sustainable development and conservation. To provide for the long-term conservation and sustainable management of the natural resources that help define the City's identity, contribute to its economy, and improve its quality of life." The Conservation Element contains policies to guide the conservation of resources that are fundamental components of San Diego's environment, that help define the City's identity, and that are relied upon for continued economic prosperity. San Diego's resources include, but are not limited to: water, land, air, biodiversity, minerals, natural materials, recyclables, topography, viewsheds, and energy. The element contains policies for sustainable development, preservation of open space and wildlife, management of resources, and other initiatives to protect the public, health, safety and welfare. Particularly applicable policies relate to reduction of demolition waste and reduction of the City's carbon dioxide (CO_2) footprint.

Noise Element. The purpose of the Noise Element is "to protect people living and working in the city of San Diego from excessive noise." The element provides goals and policies to guide compatible land uses and the incorporation of noise attenuation measures for new uses to protect people living and working in the City from an excessive noise environment.

Community Plans and Zoning

Land use designations in the study area are described on Table 5.1-1, Community Planned Land Use Designations Adjacent to the Project.

Zoning. Zoning within the Project vicinity is illustrated in Figure 5.1-2, Existing Zoning. Zoning within the Mission Valley Community Plan portion of the study area includes Commercial Retail (MVPD-MV-CR) Multiple Use/Specific Plan (MVPD-MV-M/SP), Commercial Visitor (MVPD-MV-CV), Commercial Office (MVPD-MV-CO), Industrial

(MVPD-MV-I) and Open Space Floodplain (OF-1-1). Portions of the study area also are included in the Floodway (FW) Zone and Floodplain Fringe Overlay (FPF) Zone.

Table 5.1-1
COMMUNITY PLAN LAND USE DESIGNATIONS ADJACENT TO THE PROJECT

Mission Valley Community Planning Area	Linda Vista Community Planning Area	Serra Mesa Community Planning Area
Commercial: South of Friars Road to I-8, west of SR 163 South of Friars Road to Hazard Center Drive, east of SR 163 South of Camino de la Reina to I-8, east of SR 163 North of Friars Road, east of SR 163 Multi-family Residential: South of Hazard Center Drive and north of Camino de la Reina, east of SR 163 Industrial: North of Murray Canyon Road to boundary with Serra Mesa Community Planning Area, east of SR 163 Inland Bodies of Water: Along the San Diego River south of Friars Road and north of I-8 Park, Open Space: Slivers along the San Diego River, east of SR 163	Group Quarters: Southwest of the Genesee Avenue interchange, west of SR 163 Multi-family Residential: Southwest of Ulric Street and north of Friars Road, west of SR 163 South of Genesee Avenue, west of SR 163 Commercial: North of Friars Road, west of SR 163 Single-family Residential: South of Genesee Avenue and north of the Friars Road loop ramp, west of SR 163 Park, Open Space: North of Friars Road, west of Ulric Street	Single-family Residential: North of boundary with Mission Valley Community Planning Area and south of school, east of SR 163 Schools: North of residential and south of Genesee Avenue, east of SR 163

Zoning within the Linda Vista Community Plan portion of the study area includes Open Space-Residential (OR-1-1), Residential-Multiple Unit (RM-1-1; 1 dwelling unit for each 3,000 square feet of lot area) and Residential-Single Unit (RS-1-7; 1 dwelling unit per minimum 5,000-square foot lot).

Zoning within the Serra Mesa Community Plan portion of the study area includes Residential-Single Unit (RS-1-7; 1 dwelling unit per minimum 5,000-square foot lot).

Mission Valley Community Plan. As shown in Figure 5.1-1, Existing Land Uses, a portion of the study area is within the area addressed by the *Mission Valley Community Plan* (City 1985, as amended). This community plan is currently being revised. Within the study area, the Mission Valley community planning area includes three-quarters of the SR 163/Friars Road interchange (the southwest, southeast and northeast quadrants); portions of Friars Road (including a portion of the SR 163 Bridge), Frazee Road, Hazard Center Drive, SR 163 and the San Diego River; portions of the Fashion Valley Center and Hazard Center; and vegetated slopes adjacent to the east side of SR 163. The *Mission Valley Community Plan* identifies the issues and goals of the community with respect to land use, transportation, open space, development intensity, community facilities, conservation, cultural and heritage resources, and urban design.

The *Mission Valley Community Plan* design guidelines for freeways include recommendations for careful design treatment to contribute to the overall visual character of the community. The guidelines recommend landscape buffering at freeway edges. According to the guidelines, "such landscaping will help to define the freeways as view corridors and entrance/gateways into the community."

Additionally, the Design Guidelines for major roads include recommendations for street tree placement and landscaping for pedestrian and vehicle safety, visibility, and aesthetics. Appendix F of the *Mission Valley Community Plan* identifies Acceptable Plant Species for Mission Valley, including plants such as California sycamore, Catalina lacebark, Catalina cherry, bougainvillea, orchid spot rock rose and New Zealand flax**.**

A major goal of this community plan is the provision of a street system (including freeways) that is adequate to meet the total future needs of the community. The community plan anticipates improvements to the SR 163/Friars Road interchange, including building Friars Road west of SR 163 to a six-lane major road and improving Friars Road between SR 163 and Mission Road as an eight-lane primary arterial. Relevant elements of the plan are summarized below.

Transportation Element. The *Mission Valley Community Plan* recognizes that transportation, on both streets and freeways, is an issue for the community. The objective of the Transportation Element is to facilitate transportation into, throughout and out of Mission Valley while seeking to establish and maintain a balanced transportation system. Proposed transportation improvements relevant to the Project include closing gaps and correcting other deficiencies in the surface street system; encouraging the rapid

completion of the freeway system in order to relieve the community's circulation system; and reducing conflicts between vehicles, bicyclists and pedestrians.

The Transportation Element identifies one suite of design elements anticipated to address Friars Road and interchange issues related to traffic congestion/flow capacity and weaving movements. Within the Project design footprint, the 1985 plan recommended the following improvements:

- All intersections with access to Friars Road from SR 163 should be restricted to right-in/right-out movements.
- Friars Road between the northbound SR 163 interchange ramps and Mission Center Road should be widened to eight lanes.
- A southbound SR 163 to westbound Friars Road interchange ramp should be constructed to reduce traffic signal requirements at the intersection of Friars Road and Ulric Street.
- Either the existing signal for the eastbound Friars Road to northbound SR 163 interchange ramp should be moved to the east to provide additional left-turn storage space or a loop ramp or flyover should be constructed within the southeast quadrant.
- The median width on the Friars Road Bridge should be reduced to provide three westbound through lanes and a westbound auxiliary lane between the ramp intersections.
- The northbound SR 163 to eastbound Friars Road interchange ramp should be widened to provide an additional eastbound lane. Improved signalization would possibly be required to prevent weaving conflicts.

In October 2008, the Quarry Falls project, which included a Community Plan Amendment, was approved. As part of this Amendment, the Circulation Element was revised as follows:

- Rather than moving the existing signal to the east to provide additional left-turn storage or providing a loop ramp or flyover, improvements to the eastbound Friars Road to northbound SR 163 interchange ramp are to consist of the addition of dual left-turn lanes and widening of the north leg of the intersection to accept two turning lanes.

- The requirement for a westbound auxiliary lane between the ramp intersections on the Friars Road Bridge was removed.

- Rather than widening the SR 163 to eastbound Friars Road interchange ramp, the northbound on-ramps are to be moved eastward or replaced with a loop or flyover.

The Development Guidelines of the Transportation Element state that the Friars Road intersection at Frazee Road "may require prohibition of left-turn ingress and egress when volumes exceed City Street Design Standards on Friars Road." The Development Guidelines further state that Frazee Road "needs to be four lanes south of Friars [Road]."

An existing bikeway is located along Ulric Street within the study area and along Friars Road west of Ulric Street. No new bikeways are proposed in the community plan along the remainder of Friars Road within the Project.

Open Space Element. The San Diego River is the most prominent open space element within the community. One of the purposes of the Open Space Element is to provide objectives and guidelines that facilitate the development of the San Diego River as a natural, functional component of the Mission Valley community. Such objectives include protecting existing and future development from flood hazard; preserving and maintaining the wetlands and riparian habitat areas along both sides of the river; and enhancing and maintaining the aesthetics and recreational qualities of the river corridor as part of an open space system. Development guidelines applicable to the Project state that facilities located within the 100-year floodway should be compatible with the primary use of the floodway as a natural open space system and should not reduce the quantity or quality of the native habitat areas.

The Open Space Element also discusses hillsides. No hillsides within the study area are located in the Mission Valley community planning area (they are located within Serra Mesa or Linda Vista community plan areas).

The San Diego River Wetlands Management Plan is included as an appendix to the *Mission Valley Community Plan*. The established floodway zone boundary encompasses a sensitive resource area wherein no modification (grading, paving, removal of vegetation) is permitted unless mitigation, in accordance with the management plan, is accomplished. The intent of the wetlands management plan is that no net reduction of wetlands habitat would occur and the overall quality of existing habitats would be improved within the community planning area. Biological design criteria and development guidelines described in the plan provide the framework for accomplishing this goal.

Conservation Element. The Conservation Element of the *Mission Valley Community Plan* includes the following objectives: protect and enhance the quality of the community's air and water resources, and conserve the community's water, land, and energy resources. Proposals that would support the implementation of these objectives include applying and enforcing the recommendations of the Regional Air Quality Strategy (RAQS); minimizing and avoiding adverse noise impacts by planning for the appropriate placement and intensity of land uses relative to noise sources; providing guidelines for the mitigation of noise impacts where incompatible land uses are located in a high noise environment; monitoring potential sources of water contamination and taking necessary steps to eliminate existing problems and to prevent potential problems; and encouraging water conservation through development and landscaping guidelines

and the use of recycled water. Relevant development guidelines for this element include improving air quality through the reduction of automobile trips by developing safe bicycle and pedestrian connections between activity centers through proper design of these facilities with the street system; mitigating noise impacts by screening freeways and other heavily traveled roads through use of walls and/or berming with landscaping; buffering residential development sufficiently from noise using setbacks or elevation differences; practicing erosion control techniques when grading sites; using groundcover to help control runoff; landscaping with native, drought-resistant vegetation; using water saving devices; and using reclaimed water for irrigation of landscaping. The Conservation Element also states that where noise walls are necessary, the design of the walls and surrounding land should soften the visual effect of the wall and landscaping materials should be incorporated into the design.

Urban Design Element. Urban design in Mission Valley strives to be responsive to both the form and function of the community, recommending guidelines for future development that enhances both, and ties the various components of the community together.

The portion of the study area spanning the San Diego River is within the Wetlands Review Area, and the area between I-8 and Friars Road is within the Urban Design Sensitive Area. The Wetlands Review Area requests that future actions protect existing and future development from flood hazard; preserve and maintain the wetlands and riparian habitat areas along both sides of the river; and enhance and maintain the aesthetic and recreational qualities of the river corridor as part of the open space system. The *Mission Valley Community Plan* has identified two functional categories that require special design considerations: (1) design protection areas including the San Diego River, hillsides and landmarks, and (2) transportation corridors including freeways, streets and LRT. The community plan provides design guidelines for these categories, both of which apply to the Project.

Design guidelines for flood protection include maintaining the 100-year floodway zone, and maintaining existing safe water velocities and property values for adjacent properties if modifications to the floodway zone are proposed. Design guidelines for wetlands, natural habitat conservation and enhancement include designing the floodway as a natural-appearing waterway with rehabilitation, revegetation and/or preservation of native wetland habitats; preserving and recreating natural environmental features within the floodway and incorporating as much as possible in areas beyond the floodway boundary to maintain and enhance the habitat and aesthetic values of the river; and revegetating with appropriate wetland and/or riparian habitat to develop a continuous revegetation corridor along both sides of the river. Design guidelines include locating buffer areas along the entire length on both sides of the river (with a minimum buffer of 10 feet, maximum buffer of at least 50 feet and an average buffer of at least 20 feet); placing the widest buffer areas adjacent to the most sensitive habitat areas; planting native trees, primarily riparian woodland species, and native shrubs of the coastal sage scrub community; and allowing other land uses such as the light rail transit corridor, bikeway and pedestrian lanes, and other passive recreation uses. Open space design

guidelines, include providing public access to the river corridor and ensuring that landscaping adjacent to the river channel would be consistent with the native species in the river. Projects should be constructed in such as way to allow ground level and aerial views of the river corridor (e.g., from hillsides, roads and parks).

Transportation corridors are functional and also contribute to the overall character of the community. Because road rights-of-way are a major land use in Mission Valley, it is important that they contribute positively to the community. Careful design treatment of freeway corridors can result in this positive contribution. Design guidelines for freeways that pertain to the Project include the following:

- Freeways should be buffered from adjacent frontage roads by landscaping. Landscaping not only provides visual relief but also helps reduce the effect of some of the heat and noise generated by the freeway traffic.
- Landscaping along north-south freeway corridors (including SR 163) should be designed to enhance the hillsides that frame these freeways as they enter the valley. Such landscaping helps to define the freeways as view corridors and entrance/gateways into the community.
- At several points in the valley, freeway structures are elevated, providing useable space underneath. These spaces may be used for transit stops, or pedestrian areas, park space and public art areas, provided noise levels are compatible with such activities. The freeway structures themselves provide sculptural forms that can be complemented with park-like landscaping underneath.

Major roads provide an important urban design element connecting the community. Major roads and collector streets require careful design consideration, including the following policies:

- Street trees should be provided along major streets. Trees should be long-lived (60 years), deep-rooted, evergreen; require little maintenance; be structurally strong; insect and disease resistant; and require little pruning.
- Street trees should be planted in the sidewalk between the parking or traffic lane and the pedestrian walk area to provide greater pedestrian safety and better delineate pedestrian spaces along the street.
- To allow visibility at pedestrian levels, landscaping materials should include tall trees with canopy areas rather than short bushy trees.
- In the interest of maintaining sight distances and public safety, trees shall be planted no closer than 25 feet from the beginning of curb returns at intersections and 10 feet from street lights, fire hydrants, and driveways.
- Pedestrian sidewalks along major streets should have at least an eight-foot-wide clear corridor. In areas of high-intensity commercial development, this clear sidewalk should be increased to a minimum 10 feet.

- Landscaped medians are highly desirable along major east-west streets, and their development should be encouraged. The landscaped material should be primarily tall, canopied trees and low maintenance ground cover.
- Major and collector street design should include space and design for transit stops (e.g., buses, light rail transit, and taxis).

Design guidelines for pedestrian areas include providing safe routes between developments, preferably separated from vehicular traffic; providing interest to pedestrians in the form of paving materials, landscaping or public art; providing sitting areas and adequate lighting; and having a minimum width of 6 feet, with 10- to 20-foot widths recommended for consideration in higher development intensity areas.

Energy and conservation considerations are also included in the Urban Design Element of the *Mission Valley Community Plan*. Design guidelines that apply to the Project include conserving water by using low maintenance and drought-tolerant plant material; using drip irrigation systems and reclaimed water; and constructing landscaped earthen berms or elevation differences, which can have a greater design appeal and appearance than walls, to reduce noise effects.
The Urban Design Element of the *Mission Valley Community Plan* also identifies the study area as a Landmark/View Sensitive Area, although there are no landmarks identified within or adjacent to the study area.

Linda Vista Community Plan. A portion of the study area is within the area addressed by the *Linda Vista Community Plan* (City 1998), as shown on Figure 5.1-1. This includes the northwest quadrant of the SR 163/Friars Road interchange; portions of Friars Road (including a portion of the SR 163 Bridge), Ulric Street, Genesee Avenue and SR 163; the southbound on-ramp from eastbound Genesee Avenue; and vegetated slopes adjacent to the west side of SR 163 and to the east of Ulric Street. The *Linda Vista Community Plan* identifies the issues and goals of the community with respect to residential land use; commercial and industrial land use; open space; community facilities, parks and services; transportation; and urban design. One of the overall goals of the community plan is to enhance pedestrian travel by improving sidewalks and adding landscaping. The *Linda Vista Community Plan* discusses the congestion that occurs at the SR 163 southbound on- and off-ramps along Friars Road and Ulric Street. Relevant elements of the plan are summarized below.

Transportation Element. Applicable goals include maintaining and improving the street system to enhance traffic flow; providing safe and pleasant pedestrian walkways and bikeways to connect residential neighborhoods, schools, parks, and commercial areas; and (providing street landscaping along major streets) and at community entrances. The plan calls for improving the road network by modifying congested intersections and street segments where feasible. In addition, it states that all road improvements need to include sidewalks and landscaping. The Transportation Element establishes future street classifications for the roads with the planning area. Ultimately, Friars Road from the main entrance at Fashion Valley Center to Ulric Street is shown as a six-lane major road;

from Ulric Street eastward, Friars Road is shown as a six-lane primary in this plan. Ulric Street within the study area eventually would be classified as a four-lane major road. A Class II bikeway (bicycle lane) is located along both sides of Friars Road and Ulric Street.

Open Space Element. One of the goals of the *Linda Vista Community Plan* Open Space Element is to preserve the remaining undeveloped slopes in the community. The slopes along the western side of SR 163 to the north of Friars Road and in the northwestern corner of Friars Road/Ulric Street are identified as open space within the community plan. Applicable policies include designating undeveloped slopes as open space, preserving sensitive resources within open space and clustering new development outside of open space areas. Specific proposals to implement policies include designing the grading of hillsides to blend into the natural landforms; avoiding steep cuts and fills along hillsides; landscaping with native, drought-tolerant plants along Ulric Street right-of-way, where it traverses designated open space; and complying with the City's MSCP.

Urban Design Element. One of the policies within the Urban Design Element of the *Linda Vista Community Plan* includes improving the appearance of the community by installing street trees including Canary Island pine (*Pinus canariensis*) and jacaranda (*Jacaranda mimosifolia*) along Ulric Street within the Project site, and eucalyptus (*Eucalyptus deglupta*) and tipu tree (*Tipuana tipu*) along Friars Road from SR 163 to the west. Specific proposals for development on and adjacent to hillsides and canyons include avoiding construction on natural hillsides with slopes exceeding 25 percent; limiting encroachment into the hillside according to a sliding scale to ensure preservation of the hillside character while allowing reasonable development; replanting disturbed slopes with native vegetation; maintaining the natural surface drainage system of hillsides such as by minimizing the amount of hardscape; and landscaping with native, drought-tolerant species.

<u>Serra Mesa Community Plan</u>. The remainder of the study area (a portion of SR 163 and the northbound on-ramp from Friars Road) is within the area addressed by the *Serra Mesa Community Plan* (City 1977, as amended). The *Serra Mesa Community Plan* identifies the issues, objectives and proposals of the community with respect to housing, commercial uses, parks and recreation, community facilities, employment center, transportation, and environmental management. The Transportation Element of the plan is discussed below.

Transportation Element. The goal of the Transportation Element is to provide a safe, balanced, efficient transportation system with minimal adverse environmental effects. Applicable proposals include minimizing street widening and other improvements and assuring compatibility with the total landscape.

<u>Mission Valley Public Facilities Financing Plan</u>. The Mission Valley Public Facilities Financing Plan – Fiscal Year 2006 (City 2005b) sets forth the major public facilities anticipated to be necessary over the next 25 years, when full community development is anticipated. Provision of adequate transportation facilities has been a continuing process

of providing automobile and public transportation systems, a bicycle system, and a pedestrian system to support the needs of existing and future development. The Public Facilities Financing Plan identifies a need for the construction of a new southbound SR 163 to westbound Friars Road off-ramp, widening of Friars Road to eight lanes from Friars Road Bridge to Frazee Road, construction of a third westbound lane on Friars Road to Fashion Valley Road, construction of an exclusive right-turn lane on southbound Frazee Road to westbound Friars Road, and other modifications to existing on- and off-ramps. The Public Facilities Financing Plan also identifies a need for the restriping of Friars Road to six lanes with bicycle lanes from Fashion Valley Road to SR 163.

San Diego River Park Draft Master Plan

The San Diego River Park Draft Master Plan (City 2005a) provides guidance to the City during implementation of the San Diego River Park. In 2005, a draft Master Plan was presented to City Council as an information item and received unanimous support. An implementation element, Program EIR and the community plan amendments required to implement the Master Plan are in process (City website 2008c).

The draft plan focuses on the section of the San Diego River within the boundaries of the City extending from the Pacific Ocean at Mission Bay to the city of Santee and defines the river corridor as extending approximately 0.5 mile on each side of the river. It constructs a framework that adjacent communities can use to set policy on riverfront land uses within their boundaries and encourage coordination between San Diego River Park planning and other future developments along the river corridor. The draft plan divides the river corridor into six sections based on topographic characteristics and the condition of the river. The study area is located in the Lower Valley section of the river, which extends from the eastern edge of the Mission Valley Preserve to I-15.

The San Diego River Park Draft Master Plan identifies seven principles: cleaning up and restoring hydrologic function to the river; reclaiming the valley as a public common space for residents; unifying fragmented lands, emphasizing a continuum of experience; revealing the valley history; reorienting development toward the river; and creating a synergy of people, water and wildlife. Applicable general recommendations presented in the plan include integrating infrastructure (e.g., transportation, utilities, stormwater) and ecostructure (e.g., rivers, vegetation, wildlife corridors, habitats) into "beautiful infrastructure." This is anticipated to result from making key ecological and infrastructure functions visible as such; transforming roads and bridges into part of a unified landscape and maintaining and enhancing connections between adjacent natural habitats, residential communities and the river; encouraging the growth of appropriate wetland vegetation; adopting programs to reduce/remove non-point source loads of pollutants and prevent pollutants from entering the river at their source; eliminating invasive plant species and reintroducing native species; and separating pedestrian/wildlife and vehicular river crossings. Relevant short-term recommendations include establishing green gateways along SR 163 (including within the study area) and at interchanges throughout the valley by introducing native landscapes along roadways. The plan also recommends a continuous, paved, multi-use trail along the entire river corridor.

Environmentally Sensitive Lands Regulations

Chapter 14, Article 3, Division 1 of the San Diego Municipal Code, Land Development Code contains the ESL Regulations. The purpose of the regulations is to "protect, preserve and, where damaged, restore the environmentally sensitive lands of San Diego and the viability of the species supported by those lands."

Applicable portions of these regulations apply to land that contains sensitive biological resources and Special Flood Hazard Areas. Special Flood Hazard Areas within the City are established in accordance with Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM).[1]

Any development that requires encroachment into environmentally sensitive lands is required to obtain either a Neighborhood Development Permit or a Site Development Permit. In general, these permits can be approved only if the following findings can be made:

- The proposed development will not adversely affect the applicable land use plan.
- The proposed development will not be detrimental to the public health, safety, and welfare.
- The proposed development will comply with the applicable regulations of the Land Development Code (Chapter 14 § 126.0504 a).

In addition, where environmentally sensitive lands are affected, the following deviation findings must be made along with those listed above:

- The site is physically suitable for the design and siting of the proposed development and the development will result in minimum disturbance to the environmentally sensitive lands.
- The proposed development will minimize the alteration of natural landforms and will not result in undue risk from geologic and erosional forces, flood hazards, or fire hazards.
- The proposed development will be sited and designed to prevent adverse impacts on any adjacent environmentally sensitive lands.
- The proposed development will be consistent with the City's MSCP Subarea Plan.

[1] Although the regulations also address coastal beaches/bluffs and steep hillsides, these elements do not apply to the Project. There are no coastal beaches or sensitive coastal bluffs within the study area. Similarly, there are no steep hillsides. Project slopes exceeding 25 percent with a minimum elevation differential of 50 feet have previously been altered and are not natural. They are manufactured slopes resulting from previous freeway widening, preparatory improvements for the southbound SR 163 off-ramp to Ulric Street project that were not implemented and grading for residential development.

- The proposed development will not contribute to the erosion of public beaches or adversely impact local shoreline sand supply.
- The nature and extent of mitigation required as a condition of the permit is reasonably related to, and calculated to, alleviate negative impact created by the proposed development.

Lastly, when a project cannot meet the conditions set forth in the ESL Regulations and the project requires a deviation, the proposed project must also present these additional findings:

- There are no feasible measures that can further minimize the potential adverse effects on sensitive biological resources.
- The proposed deviation is the minimum necessary to afford relief from special circumstances or conditions of the land not the applicant's making.

The study area contains sensitive biological resources, as described in Section 5.4, Biological Resources, of this EIR. For the purposes of these regulations, sensitive biological resources include upland (Tier I-III A-B) or wetland areas that have been included in the MHPA; wetlands; lands outside the MHPA that contain Tier I, II, IIIA or IIIB habitats; lands supporting listed or candidate species; lands containing habitats with narrow endemic species; and lands containing habitats of covered species as listed in the City's Biology Guidelines. The ESL Regulations also require that impacts to wetlands are to be avoided and a wetland buffer be maintained as appropriate to maintain the wetland functions and values. Deviations from ESL Regulations require the decision-maker to make "deviation findings," as described above. All mitigation for wetland impacts (including those associated with a deviation from ESL Regulations) must achieve the goal of no net loss and retain in-kind functions and values. The ESL Regulations further require that a project applicant confer with the appropriate resource agencies regarding any potential impacts to wetlands or non-covered listed species habitat.

Outside the MHPA, encroachment into other covered MSCP sensitive biological resources is limited by the ESL Regulations only where lands are designated or zoned for open space. Mitigation for impacts to such resources may include acquisition or dedication of another site that can serve to mitigate the project impacts; translocation, preservation or dedication of on-site sensitive biological resources, or, for cases where the area of impact is small (i.e., less than five acres), monetary payment into a City fund used to acquire, maintain and administer habitat areas. Finally, grading during wildlife breeding seasons must be consistent with the requirements of the ESL Regulations and the MSCP Subarea Plan.

The southern portion of the study area traverses the San Diego River floodway and flood fringe, as well as floodplain associated with Murray Canyon Creek as described in Section 5.3, Hydrology/Water Quality of this EIR.

Historical Resource Regulations

The purpose of the Historical Resources Regulations (San Diego Municipal Code, Chapter 14, Article 3, Division 2) is to protect, preserve and, where damaged, restore the historical resources within the City, which include historical buildings, historical structures or historical objects, important archaeological sites, historical districts, historical landscapes, and traditional cultural properties.

The goal of the regulations is to preserve important archaeological sites in their natural state, although limited encroachment may be allowed. Development may be permitted to encroach up to 25 percent into an important archaeological site where necessary to achieve a reasonable development area. This 25 percent encroachment includes all grading, structures, public and private streets, brush management except as provided in the Regulations, and any project-serving utilities. An additional encroachment of up to 15 percent, for a total encroachment of 40 percent, into important archaeological sites may be permitted for essential public service projects that are sited, designed and constructed to minimize adverse impacts to important archaeological sites, where it has been demonstrated that there is no feasible, less environmentally damaging location or alternative. Relevant to the Project, essential public service projects include major streets and primary arterials, and public utility systems.

Any encroachment into important archaeological sites is required to include measures to mitigate for the partial loss of the resource as a condition of approval. Mitigation shall include the following methods, consistent with the Historical Resources Guidelines of the Land Development Manual:

- The preservation through avoidance of the remaining portion of the important archaeological site.
- The implementation of a research design and excavation program that recovers the scientific value of the portion of the important archaeological site that would be lost due to encroachment.

Either a Neighborhood Development Permit or Site Development Permit is required for projects which would impact historical resources identified in the Regulations.

5.1.2 Analysis of Issue 1: Plans, Policies, and Land Uses

Issue 1: ***How would the Project implement the goals, objectives, and recommendations of the City of San Diego General Plan, the City's adopted community plans, airport land use plans and existing policies? Would the Project be compatible with the surrounding existing and future planned land uses in the project vicinity?***

5.1.2.1 Impact Threshold

In accordance with City Significance Determination Thresholds (2007a), a significant land use impact would be identified if the Project would result in:

1. Inconsistency/conflict with the environmental goals, objectives, or guidelines of a community or general plan.[2] (City Significance Determination Threshold 1)
2. Inconsistency/conflict with an adopted land use designation or intensity and indirect or secondary environmental impacts occur. (City Significance Determination Threshold 2)
3. Substantial incompatibility with an adopted plan. As a general rule, projects that are consistent with the zoning and compatible with surrounding uses should not result in land use impacts. (City Significance Determination Threshold 3)
4. Development or conversion of General Plan or Community Plan designated open space or prime farmland to a more intensive land use. (City Significance Determination Threshold 4)
5. Incompatible uses as defined in an airport land use plan or inconsistency with an airport's Comprehensive Land Use Plan. (City Significance Determination Threshold 5)

5.1.2.2 Impact Analysis

The relevant permits and approvals that would be required for Project implementation are summarized in Table 5.1-2, Permits and Approvals.

Table 5.1-2
PERMITS AND APPROVALS

Agency	Permit/Approval	Status
U.S. Army Corps of Engineers (Corps)	Nationwide Permit 14 (Linear Transportation Crossings) under Section 404 of the Clean Water Act	Requires Section 401 Water Quality Certification for permit authorization
U.S. Fish and Wildlife Service	Section 7 Consultation (informal)	Biological Assessment to support informal Section 7 Consultation was submitted October 2005 and informal consultation was completed June 2007
Caltrans District 11	Longitudinal encroachment permits for pump station operations on Camino de la Reina	Anticipated to be issued in conjunction with Caltrans Project approvals
State Historic Preservation Officer	Section 106 Consultation	Concurrence on finding of No Historic Properties Affected received January 3, 2006

[2] The reader should note that an inconsistency with a plan is not by itself a significant environmental impact; the inconsistency must relate to an environmental issue to be considered significant under CEQA (City 2007a).

Table 5.1-2 (cont.)
PERMITS AND APPROVALS

Agency	Permit/Approval	Status
California Department of Fish and Game	1602 Streambed Alteration Agreement	Requires EIR certification for Agreement issuance
Regional Water Quality Control Board	Section 401 Water Quality Certification	Requires EIR certification for Certification issuance
	Conformance with Municipal Storm Water Permit	Conformance with existing permit required; will be demonstrated through SWPPP to be prepared by construction contractor
	Conformance with General Groundwater Extraction Waste Discharge Permit	Conformance with existing permit required; will be demonstrated through SWPPP to be prepared by construction contractor
State Water Resources Control Board	Conformance with Caltrans Permit for Storm Water Discharges From Caltrans Properties, Facilities, and Activities	Conformance with existing permit required; will be demonstrated through SWPPP to be prepared by construction contractor
State Water Resources Control Board (cont.)	General Construction Activity Storm Water Permit	Conformance with existing permit required; will be demonstrated through SWPPP to be prepared by construction contractor
City of San Diego	Site Development Permit	Requires Planning Commission approval and Certification of the EIR
	Temporary and permanent land and easement acquisitions	Requires Planning Commission approval and Certification of the EIR
	Noise Control Permit	To be obtained prior to initiation of construction activities
	Right-of-Entry Permit	To be obtained prior to initiation of wetland creation activities
Metropolitan Transit System	Approval of bus turnout at the northwest and southeast corners of the Friars Road/Frazee Road intersection	Approved February 3, 2009

Regional Transportation Plans

The 2003 RTP lists the SR 163/Friars Road Interchange Project as a Regionally Funded System Interchange Project. The project design concept and scope of the Project are consistent with the project description provided in the 2003 RTP. In addition, the Project would comply with applicable policy goals and objectives.

Non-capacity-increasing engineering studies to address future construction of a new southbound SR 163 to westbound Friars Road off- ramp were included in the adopted 2008 RTIP. Amendment No. 10 to the 2008 RTIP revises the description to be consistent with the Project, indicate that the improvements would be capacity-increasing and provide additional funding for Project engineering and right-of-way acquisition.

As the Project would be consistent with these regional transportation plans, no significant impacts would occur.

Local General, Community and Airport Land Use Plans

City General Plan

Mobility Element. The Project would increase the number of lanes along the Friars Road Bridge from 6 to 10 and would include sidewalks and Class II bike lanes along both sides of the roadway. As described in Section 5.2, Traffic/Circulation, the Project would be adequate to convey 2030 traffic volumes at acceptable levels of service. In addition, the Project would provide a sidewalk along both sides of the Friars Road Bridge to allow its continued use by pedestrians. These sidewalks also would contribute to the goal of the Mobility Element to include greater "walkability." The sidewalks would provide a safe location for pedestrians to walk along the roadside. The improved Friars Road Bridge would be maintained by the City.

The Project has been modified over several years in order to minimize impacts to the environment and neighborhoods. Impacts to native habitats and sensitive species have been reduced to the maximum extent practicable. As discussed in Section 5.8, Aesthetics/Neighborhood Character/Visual Quality, the Project would result in substantial grading within undeveloped areas, including large cut and fill slopes, because of the location of the roadway, design standards and site topography. The Project would limit contour grading because of the proximity of residential structures and to avoid increasing the grading footprint and associated environmental impacts. The Project would therefore be consistent with the Mobility Element of the General Plan.

Urban Design Element. As stated above under Mobility Element, the Project would include construction of sidewalks along Friars Road Bridge, which would provide "walkable" connectivity to commercial centers on either side of SR 163. Also as stated above, the Project has been modified to the maximum extent practicable to reduce environmental, including biological and visual, impacts. A Landscape Concept Plan has been prepared for the Project, which includes the revegetation of all temporary

disturbance areas and calls for palettes that would blend with the existing adjacent native habitats. In addition, the proposed improvements to City roadways would be consistent with typical engineering standards determined by the City. The Project would therefore be consistent with the Urban Design Element of the General Plan.

Public Facilities, Services and Safety Element. The levels of service along Project roadways currently are failing. Accordingly, the Project was designed to address the need for improvements to roadways in the study area. As described in Section 5.2, Traffic/Circulation, the Project would be adequate to convey 2030 traffic volumes on City streets at acceptable levels of service.

The Project would install reclaimed water pipelines. Although reclaimed water currently is not available to the study area, the Project would provide a means to utilize such water when it is made available.

The Project also would recycle to the maximum extent practicable the demolition material that would be generated during the construction period. This effort would reduce the amount of debris transported to landfills. With compliance with applicable policies, the Project would consistent with the Public Facilities, Services and Safety Element of the General Plan.

Conservation Element. As stated above under Public Facilities, Services and Safety Element, the Project would reduce the amount of waste hauled to landfills by recycling to the maximum extent practicable the demolition debris during the construction period. In addition, because the Project would relieve traffic congestion along Project roadways, it would help reduce the amount of CO_2 generated by the vehicles utilizing the roadways. (The reader is referred to Subsection 9.3.1.2, Air Quality, for a discussion on the Project's effects on climate change/greenhouse gas [GHG] emissions.) The Project would therefore be consistent with the Conservation Element of the General Plan.

Noise Element. Potential traffic noise impacts associated with construction and operation of the Project are addressed in Section 5.9, Noise, with permanent impacts being less than significant. The Project would therefore be consistent with the Noise Element of the General Plan.

Mission Valley Community Plan

Transportation Element. As mentioned above, the overarching objective of the Transportation Element of the *Mission Valley Community Plan* is to facilitate transportation into, throughout and out of Mission Valley while seeking to establish and maintain a balanced transportation system. Improvements suggested are focused on correcting deficiencies in the surface street system, encouraging the completion of the freeway system, and reducing conflicts among vehicles, bicyclists and pedestrians.

The Project would improve traffic operations in the vicinity of the SR 163/Friars Road interchange by substantially upgrading SR 163/Friars Road interchange ramps, SR 163

freeway mainlines between I-8 and the Genesee Avenue interchange to the north, and Friars Road between the Fashion Valley Center and Hazard Center. Upgrades would accommodate both the current vehicular traffic volumes and the projected traffic volume increase, improve vehicular traffic operations via additional lanes, eliminate current weaving patterns at the Friars Road/SR 163 merge, and improve pedestrian safety.

The Project would decrease traffic delays, which is a current (and anticipated future) deficiency in the Mission Valley surface street system. The Project also would help relieve traffic congestion and weaving patterns and would reduce conflicts between vehicular traffic, bicyclists and pedestrians. The Project would retain the sidewalk along the southern side and the Class II bike lanes along both sides of the Friars Road Bridge, as well as add a sidewalk along the northern side of the Friars Road Bridge. These improvements are a City priority and were included in the Mission Valley Public Facilities Financing Plan (City 2005b). These aspects of the Project would be consistent with the Transportation Element of the Mission Valley Community Plan.

The Transportation Element offered specific improvements for local roadways at the interchange as concepts for solving perceived traffic issues. More than 20 years after initial approval of the *Mission Valley Community Plan*, the traffic issues persist, but the means of solving them have been refined in Community Plan Amendments and the current design effort. As summarized in Table 5.1-3a and b, design elements of the Project would successfully address the underlying objective of each specific recommendation made in the community plan. The Project would be consistent with the Transportation Element of the *Mission Valley Community Plan.*

Table 5.1-3a
PROJECT CONSISTENCY WITH MISSION VALLEY COMMUNITY PLAN TRANSPORTATION ELEMENT ROADWAY IMPROVEMENTS

Community Plan Recommended Roadway Improvement	Objective	Project Solutions
Right-in/right-out movements	Reduce intersection delays	New signals, additional turn lanes, widened roadways
Widen Friars Road to eight lanes	Provide additional capacity and reduce congestion	Widen Friars Road to eight through lanes with additional turn lanes at intersections
Construct a southbound SR 163 to westbound Friars Road interchange ramp	Improve intersection operation at Friars Road and Ulric Street	Construct auxiliary lane/collector, add turn lanes at intersection
Move existing signal at Friars Road and northbound SR 163 ramp, or construct a loop ramp or flyover in the southeast quadrant	Create additional left-turn storage space to improve entrance ramp operations	Widen Friars Road to provide two left turn lanes to northbound SR 163; reconfigure on-ramp and upgrade signals

Table 5.1-3a (cont.) PROJECT CONSISTENCY WITH MISSION VALLEY COMMUNITY PLAN TRANSPORTATION ELEMENT ROADWAY IMPROVEMENTS		
Community Plan Recommended Roadway Improvement	**Objective**	**Project Solutions**
Reduce the median width on the Friars Road bridge to provide three westbound through lanes and a westbound auxiliary lane between the ramp intersections	Provide additional capacity and reduce congestion on the bridge	Widen the bridge to provide four through lanes in each direction plus turn lanes (10 lanes total); improve signals at intersections at either end of bridge
Widen the northbound SR 163 to eastbound Friars Road interchange ramp; improve signalization to prevent weaving conflicts	Provide additional capacity and reduce congestion, reduce conflicts	Move ramp to occur in northeast quadrant at an improved intersection to eliminate weaving in a short distance to Frazee Road; provide two turn lanes to westbound Friars Road and three turn lanes to eastbound Friars Road

Amendments to the Circulation Element were made in 2008 as part of the Community Plan Amendment completed for the Quarry Falls project. The improvements called for in the amended Community Plan are consistent with those contained in Table 5.1-3a, with the exception of the three elements identified in Table 5.1-3b, below. These amendments improved consistency between the Community Plan Circulation Element and the Project.

Table 5.1-3b PROJECT CONSISTENCY WITH MISSION VALLEY COMMUNITY PLAN TRANSPORTATION ELEMENT ROADWAY IMPROVEMENTS AMENDED AS OF 2008		
Community Plan Recommended Roadway Improvement	**Objective**	**Project Solutions**
Add dual lefts for eastbound-northbound on-ramps; widen north leg of intersection to accept two turning lanes	Create additional left-turn storage space to improve entrance ramp operations	Widen Friars Road to provide two left turn lanes to northbound SR 163; reconfigure on-ramp and upgrade signals

Table 5.1-3b (cont.) PROJECT CONSISTENCY WITH MISSION VALLEY COMMUNITY PLAN TRANSPORTATION ELEMENT ROADWAY IMPROVEMENTS		
Community Plan Recommended Roadway Improvement	**Objective**	**Project Solutions**
Reduce the median width on the Friars Road bridge to provide three westbound through lanes between the ramp intersections	Provide additional capacity and reduce congestion on the bridge	Widen the bridge to provide four through lanes in each direction plus turn lanes (10 lanes total); improve signals at intersections at either end of bridge
Move northbound SR 163 to eastbound Friars Road on-ramps eastward or replace with a loop or flyover	Provide additional capacity and reduce congestion, reduce conflicts	Move ramp to occur in northeast quadrant at an improved intersection to eliminate weaving in a short distance to Frazee Road; provide two turn lanes to westbound Friars Road and three turn lanes to eastbound Friars Road

Open Space Element. The San Diego River is the focus of this analysis. Relevant objectives of the Open Space Element include: (1) protecting existing and future development from flood hazard; (2) preserving and maintaining the wetlands and riparian habitat areas along both sides of the river; and (3) enhancing and maintaining the aesthetics and recreational qualities of the river corridor as part of an open space system. Echoing these objectives, development guidelines state that facilities located within the 100-year floodway should be compatible with the primary use of the floodway as a natural open space system and should not reduce the quantity or quality of the native habitat areas. Also, the San Diego River Wetlands Management Plan, which is an appendix to the *Mission Valley Community Plan*, prohibits modifications such as grading, paving and removal of vegetation in the floodway unless mitigation consistent with the management plan is accomplished.

The Project includes plans to construct a bridge over the San Diego River at an elevation generally matching the height of the existing SR 163 Bridge. The proposed bridge design incorporates the results and recommendations of a hydraulic analysis to avoid impeding water flow in the river. The bridge has been designed to withstand 100-year flood events and to accommodate any necessary drainage improvements. The proposed bridge would be protected from flood hazard, and would not increase the flood hazard for any existing development. Therefore, the Project would be consistent with objective 1 above. Also, designing the crossing as a bridge that would span the river would be consistent with development guidelines for maintaining the floodway as a natural open space system.

The proposed bridge structure would be supported on large-diameter single columns and driven concrete piles. The new bridge would permanently shade existing southern cottonwood-willow riparian forest and would disrupt an additional width of this wetland/riparian habitat during construction (see Section 5.4, Biological Resources). Construction of the new bridge, therefore, would not preserve and maintain the directly impacted area of wetland and riparian habitat. Every effort, however, has been made to comply with the Open Space Element objectives. The construction zone crossing the river is the minimum necessary (40 feet beyond the new bridge structure) in order to accommodate the bridge building equipment. In addition, although the Project would slightly reduce the quantity and quality of the native habitat areas in the river in the short-term, over the long-term, conditions would be improved rather than degraded. This is because the area to be impacted is already largely disturbed and it would be hydroseeded with an appropriate mix of riparian species upon completion of bridge construction.

Appropriate mitigation for impacts to wetland and riparian habitats within the river corridor would be implemented (see Section 5.4, Biological Resources). The impacts would be mitigated at a 3:1 ratio (including at least a 1:1 creation component) so that no net reduction of wetlands habitat would occur and this mitigation would occur within the San Diego River drainage. The proposed 2:1 enhancement component of mitigation would improve the quality of wetland/riparian habitat in the river. As a result, the Project would be consistent with objective 2 of the Open Space Element as well as the mitigation requirements of the San Diego River Wetlands Management Plan.

The new bridge would add a new set of columns in the river corridor and shade an additional width of the river adjacent to the existing SR 163 overcrossing. The new columns would line up with the existing bridge columns. The new structure would not enhance the aesthetics and recreational qualities of the river corridor as part of an open space system, but would essentially maintain the existing condition and therefore be considered neutral. The Project also would accommodate a bike path planned along Hazard Center Drive, which would cross under the bridge. The Project would not be inconsistent with objective 3 above, and would be considered to conform with the goals of the element.

The Project would be consistent with objectives of the Open Space Element of the *Mission Valley Community Plan*.

<u>Conservation Element</u>. The Conservation Element of the *Mission Valley Community Plan* discusses the protection and enhancement of air and water quality and conservation of water and energy resources. The Project would be directly responsive to a number of these concerns, as follows:

- The Project would enhance local air quality by reducing congestion and decreasing delays at intersections, thus reducing idling time of vehicles and increasing transportation efficiency.

- The Project would protect water quality during construction and after Project completion by providing all required temporary and permanent best management practices to control erosion and prevent contamination.
- The Project would contribute to water conservation by using native and drought resistant plants in the landscape concept plan. In addition, an automatic irrigation system would be installed within the landscaped areas to sustain healthy growth and conserve water.
- Although recycled water currently is not available in this area, the Project would install reclaimed water lines so that they would be available in the future when the system is expanded.
- Rather than proposing a new facility in a new location, the Project would confine Project elements to areas immediately adjacent to an existing major transportation corridor, thereby placing the facilities in the appropriate location to conserve land and avoid disrupting existing adjacent land uses.
- The Project would contribute to the conservation of energy by increasing the efficiency of vehicular travel.

Development guidelines in the Conservation Element call for providing bicycle and pedestrian connections to activity centers to reduce automobile trips. The Project would continue to provide connections between shopping centers in the area by retaining/re-creating the Class II bike facility along Friars Road, adding sidewalks along both side of Friars Road Bridge, and eliminating vehicular free-right turns, which can create difficulties for bicyclists and pedestrians.

The Conservation Element also states that where noise walls are necessary, the design of the walls and surrounding land should soften the visual effect of the wall and landscaping materials should be incorporated into the design. The Landscape Concept Plan addresses the re-establishment of landscaping and visual screening following construction; identifies opportunities within Project limits for streetscape with consistent planting themes; identifies surface architectural treatments for proposed paving, retaining walls, potential noise walls; and identifies screening vegetation for Project retaining and potential sound walls, as feasible.

The Project would slightly increase noise levels where residential land uses located near SR 163 exist in a high noise environment (see Section 5.9, Noise). Under the City's noise thresholds, these operational noise impacts would not be significant, and no noise walls would be required. Therefore, the Project also would be assessed as consistent with this aspect of the Conservation Element.

<u>Urban Design Element</u>. This element of the *Mission Valley Community Plan* presents special design considerations for design protection areas that include the San Diego River, and for transportation corridors. The Project would include a new bridge parallel and adjacent to the existing SR 163 Bridge over the San Diego River. Implementation of the Project would not adversely or substantially affect the 100-year floodway zone or the

velocity of water within the river. As stated above, impacts to wetland and riparian habitats would be appropriately mitigated and would result in no net loss of wetlands due to construction of the Project. Because the new bridge would essentially constitute an expansion of the existing SR 163 Bridge width, the proposed facility would not affect the view of the San Diego River.

The Project would be consistent with applicable design guidelines for freeways and major and collector roads in the Urban Design Element. Improvements to SR 163 (the addition of new interchange lanes) would be buffered from adjacent roads and residences by landscaping. Ornamental landscaping, including drought-tolerant trees, shrubs and groundcover, would be planted and maintained along Friars Road. The *Mission Valley Community Plan*'s Acceptable Plant Species list was used as a reference for ornamental plant selection. Sidewalks would be included along both sides of Friars Road from the main entrance to the Fashion Valley Center and Mission Center Road. Existing bus stops along Friars Road would be retained and a new one installed in the vicinity of Frazee Road. The Project would provide safe pedestrian routes between the Fashion Valley Center and Hazard Center and other land uses in the area and would comply with the intent of the Urban Design Element.

The Urban Design Element also includes energy and conservation design guidelines that are applicable to the Project. As discussed above under Conservation Element, the Project would include the use of native and drought-resistant plants for revegetating temporary disturbance areas and in the Project landscaping plan to conserve water. The design guidelines also recommend constructing landscaped earthen berms or elevation differences to reduce noise effects. Due to the constrained area for the Project, berms would not be feasible, and noise walls have been proposed for mitigation to reduce operational noise impacts, if noise walls are determined to be appropriate under FHWA criteria. Since landscaped berms could not be provided, the Project would not be consistent with this aspect of the Urban Design Element. The lack of berms, however, would not result in a related environmental impact. Noise impacts could be addressed using sound walls (Section 5.9) and visual effects of walls could be addressed through appropriate Project landscaping (see Section 5.8).

The Project would be consistent with the *Mission Valley Community Plan* and associated elements.

Linda Vista Community Plan

<u>Transportation Element</u>. The Project would support the goals of the Transportation Element in the *Linda Vista Community Plan*, which include maintaining and improving the street system to enhance traffic flow; providing safe and pleasant pedestrian walkways and bikeways to connect residential neighborhoods, schools, parks and commercial areas; and providing street landscaping along major streets and at community entrances. The Project also would improve the road network by modifying the SR 163/Friars Road on- and off-ramps and the SR 163/I-8 interchange, and widening Friars Road to accommodate the large number of vehicles that utilize this interchange and

relieving congestion along SR 163 near the Friars Road and I-8 interchanges. The Project would construct a sidewalk along both sides of Friars Road and would include landscaping along Friars Road and Ulric Street. The Project would increase the number of lanes along the Friars Road Bridge from 6 to 10 lanes, which is more than the 6 lanes the community plan anticipated. Although the Project would not be constructed to the number of lanes specified in the *Linda Vista Community Plan*, it would be consistent with the intent of the Transportation Element goals, in that the Project would improve Friars Road to enhance traffic flow, provide safe walkways and bikeways between shopping centers in the area, and provide landscaping along Friars Road and Ulric Street. The *Linda Vista Community Plan* calls for a Class II bike lane (restricted right-of-way located alongside the traffic lane nearest the curb) along Friars Road and Ulric Street, which would be provided by the Project. Trolley and bus services would continue during construction and after Project completion. The trolley stops located at Fashion Valley Center and Hazard Center would not be affected during or after construction. The Project would be consistent with the Transportation Element of the *Linda Vista Community Plan.*

Open Space Element. One policy of the *Linda Vista Community Plan* calls for the designation of undeveloped canyons and slopes as open space. Another policy of the plan calls for the preservation of sensitive resources, such as coastal sage scrub and riparian vegetation, which occur within these open space areas. A small slope along the western side of SR 163 to the north of Friars Road and also the area on either side of Ulric Street within the Project footprint are identified as open space in the *Linda Vista Community Plan*. Part of the slope along the west side of SR 163 would be cut and a retaining wall would be constructed to allow room for the auxiliary lane from southbound SR 163. Also, the northwestern corner of Friars Road/Ulric Street would be graded as part of removing the elongated loop. Areas of southern willow scrub and Diegan coastal sage scrub (Ulric Street) and non-native grassland (SR 163) would be disturbed as a result of Project construction. Strictly speaking, this would not constitute "preservation" of all existing plants within the open space.

Every effort has been made, however, to minimize incursions into these slopes and impacts to them. On the west side of Ulric Street, early plans showed impacts up the slope. The Project was redesigned in this area to retain the current sidewalk line as the Project boundary. Cuts into these slopes have been minimized to the extent feasible overall with retaining walls allowing for vertical cut and eliminating the need for extensive cut back. In addition, a reduced amount of vegetation would be removed to support modified slopes. Construction buffer zones also have been carefully reviewed and the temporary impact area has been drawn as tightly as possible (i.e., it does not exceed the area mandatory for engineering efforts). The remaining impacted area is minimal in extent compared to the acreage of the habitats in the study area; and these impacts would be mitigated at approved ratios, as discussed in Section 5.4 of this EIR. Taking all of these considerations into account, the Project would be consistent with the Open Space Element of the *Linda Vista Community Plan*.

Urban Design Element. Temporary disturbance areas would be revegetated with native and drought-tolerant species. Landscaping for the Project would include drought-tolerant

species along Friars Road and Ulric Street. The tree species recommended for use within the study area by the *Linda Vista Community Plan* were used as references for plant selection within the landscape concept plan (see Section 5.8). The incorporation of the landscape concept plan into the Project would be consistent with the community plan.

The grading of currently undeveloped areas would occur due to implementation of the Project and the amount of impervious surfaces within the study area would be increased, but appropriate BMPs would be incorporated into the design of the Project to avoid impacts to drainage and water quality (see Section 5.3, Hydrology/Water Quality). Although graded areas would be contoured as specified in the Urban Design Element, and vertical retaining walls would be constructed in several locations, the natural surface drainage system of the hillsides generally would not be changed. The use of retaining walls would allow for retention of the greatest amount of existing slope and retention of those "pervious," or naturally draining areas. Even if this was interpreted as resulting in a change to drainage pattern, no environmental issues would result from the inconsistency. The graded slopes would be protected from erosion by construction of retaining walls, and new drainage systems would be provided. This land use plan impact would not be significant. The Project would be consistent with this aspect of the Urban Design Element of the *Linda Vista Community Plan.*

Serra Mesa Community Plan

Transportation Element. A small portion of SR 163 is located in the *Serra Mesa Community Plan*. The goal of the Transportation Element is to provide a safe, balanced, efficient transportation system with minimal adverse environmental effects. The portion of the Serra Mesa community planning area that would be affected by the Project would be graded and additional SR 163 lanes (associated with the northbound on-ramp from Friars Road) would be constructed in the southwest corner of the community planning area. The area also may be used as a staging area. All temporary impacts would be revegetated/landscaped as appropriate. The Project would improve the transportation system and minimize environmental impacts to the extent possible. The Project would be consistent with the Transportation Element of the *Serra Mesa Community Plan*.

Montgomery Field Airport Land Use Compatibility Plan

Montgomery Field Airport is located approximately 1.4 miles northeast of the northern terminus of the Project study area. The Project would not extend into the Flight Activity Zones, 60 dB CNEL contour, or flight paths for Montgomery Field. Most Project improvements would consist of widening of existing roadways at grade, and the proposed San Diego River Bridge would be constructed at approximately the same elevation as the existing bridge (maximum of approximately six feet higher). The proposed flyover structure to cross over Friars Road and the southbound SR 163 connector lanes would represent a new vertical element. However, this locale is at an elevation below that of the mesa to the north, where the airport occurs. As a result of these considerations, the Project would not conflict with the Montgomery Field Airport Land Use Compatibility Plan.

Existing and Future Planned Land Uses (Including any Conflicts with Established Recreational, Educational, Religious or Scientific Uses)

The study area is located in an area that is currently developed with commercial, residential and industrial uses, a school, open space and roadways (refer to Figure 5.1-1). Over the long term, the Project would help to relieve congestion for existing developed uses in the study area and vicinity. Temporary construction effects would be minimized during the most critical commercial period through Project design; construction would not occur from Thanksgiving through New Year's Day.

The Project would directly impact small portions of land that are currently undeveloped. Excluding the river bed, these undeveloped areas are small, fragmented, surrounded by development and are not included in the City's MHPA. A soil nail wall would be placed along cut slopes edging the west side of SR 163 and north of Friars Road in order to minimize slope cut and stabilize the soil. Slopes disturbed by the Project would be landscaped with native and drought-tolerant plants as described in Section 3.0, Project Description. The proposed river crossing at the southern end of the Project would be adjacent to the existing SR 163 crossing of the river, and would not interfere with the existing or future condition of the river corridor or the San Diego River Bike Path along the river banks.

The Project would not directly impact any existing buildings, or cause conflicts with any established recreational, educational, religious or scientific uses in the area. Sidewalks would be improved and bike lanes retained. The Project would not introduce a new land use or create a conflict with existing zoning designations. Therefore, no significant impacts would occur for this issue.

5.1.2.3 Significance of Impact

The Project would be consistent with the applicable planning documents, as well as with existing and planned land uses in the vicinity. Therefore, no significant impacts would occur for this issue.

5.1.2.4 Mitigation Measures

As no significant impacts were identified, no mitigation measures are required.

5.1.3 Analysis of Issue 2: Environmental Plans and Policies

Issue 2: ***Would the Project result in a conflict with the purpose and intent of any current planning process or adopted environmental plans or policies in the area?***

5.1.3.1 Impact Threshold

In accordance with City Significance Determination Thresholds (2007a), a significant land use impact will be found if the Project would result in:

1. Inconsistency/conflict with adopted environmental plans for an area. (City Significance Determination Threshold 6)

5.1.3.2 Impact Analysis

This analysis focuses on the consistency of the Project with the San Diego River Park Draft Master Plan. (The reader is referred to Subsection 5.1.6, below, for discussion of the City's MSCP.) Implementation strategies (identification of key steps) for plan recommendations are included in the plan. One step includes enhancement of habitats/natural areas. As discussed in Section 5.4, Biological Resources, the Project would minimize effects to San Diego River and would mitigate impacts to southern cottonwood-willow riparian forest at a 3:1 ratio (with a minimum 1:1 creation component). As such, no net loss of wetland habitat would occur. The Project also has been designed to minimize impacts to the MHPA (e.g., the San Diego River). The proposed bridge over the San Diego River would be built adjacent to the existing SR 163 Bridge and, therefore, would not additionally fragment habitats.

In addition, measures are included that would facilitate compliance with the MSCP Adjacency Guidelines, and minimize effects associated with invasive plant species (see Subsection 5.1.6). Temporarily impacted areas within the identified green gateway in the San Diego River Park Draft Master Plan would be revegetated or landscaped with native species. These measures would minimize the Project's effects on the river and its resources.

Construction and implementation of the proposed bridge would not impede water flow in the river (see Section 5.3, Hydrology/Water Quality). An existing pathway is located along portions of the river. The proposed bridge would not affect pedestrian and bicyclists' use of this pathway, because the bridge would be built adjacent to and at the same elevation as the existing bridge. The proposed bridge also would not affect future improvements in this portion of the San Diego River (e.g., the Hazard Center Drive roadway and bike lane improvements) or any interaction between people, wildlife and the river. The Project would be consistent with applicable recommendations in the San Diego River Park Draft Master Plan.

5.1.3.3 Significance of Impact

No significant impacts would occur for this issue.

5.1.3.4 Mitigation Measures

No mitigation measures would be required.

5.1.4 Analysis of Issue 3: City Land Development Code Regulations

Issue 3: ***Would the Project result in a conflict with the purpose and intent of the Environmentally Sensitive Lands Regulations, Historical Resources Regulations, and the Stormwater Regulations of the Land Development Code?***

5.1.4.1 Impact Threshold

In accordance with City Significance Determination Thresholds (2007a), a significant land use impact will be found if the Project would:

1. Require a deviation or variance, and the deviation or variance would in turn result in a physical impact on the environment.
2. Significantly increase the base flood elevation for upstream properties, or construct in a Special Flood Hazard Area (SFHA) or floodplain/wetland buffer zone. (City Significance Determination Threshold 7)

5.1.4.2 Impact Analysis

The City regulates development of environmentally sensitive lands through its ESL regulations. The portions of these regulations that apply to the Project involve sensitive biological resources (including wetlands, MHPA lands and Tier II, IIIA and IIIB habitats, as well as lands supporting listed species) and the 100-year floodplain. To comply with the ESL regulations, a number of findings must be made for the Project to be approved: Findings for all Site Development Permits, Supplemental Findings-Environmentally Sensitive Lands, and Supplemental Findings-Environmentally Sensitive Lands Deviations. It should be noted that the following limited exceptions from ESL Regulations apply to the Project (future utility relocations are undefined at this time but would be subject to additional CEQA review):

- Section 143.0111(e) Development in the OF zone or within any Special Flood Hazard Area (formerly the FW, FC, and FPF zones) in the *Mission Valley Community Plan* area, is subject only to the Federal Emergency Management Agency Special Regulations in Section 143.0146.
- Section 143.0111(i) Public maintenance access projects are exempt from the development area regulations of the OR-1-2 zone in Section 131.0250(b) and the development area regulations for steep hillsides in Section 143.0142(a) and for sensitive biological resources in Section 143.0141(d).

The consistency of the Project with the findings listed in Subsection 5.5.1.2, Regulatory Setting, is summarized in Table 5.1-4, Consistency with Environmentally Sensitive Lands Findings.

Table 5.1-4
CONSISTENCY WITH ENVIRONMENTALLY SENSITIVE LANDS FINDINGS

Findings Summary	Project Considerations	Consistency Determination
No adverse effects to the applicable land use plan	The Project would be consistent with relevant policies of the community plans.	Consistent
Not detrimental to public health, safety and welfare	The Project would reduce traffic congestion and improve flow for vehicles, bicyclists and pedestrians.	Consistent
Comply with Land Development Code regulations	The Project would either be in conformance with the regulations or obtain the appropriate deviations consistent with the required City processes (and would not result in additional physical impacts on the environment).	Consistent
Minimum disturbance to ESL	The Project would be constructed immediately adjacent to existing roadways to minimize impacts to sensitive habitats and the MHPA. The Project footprint has been refined to eliminate incursion into sensitive upland habitat where possible (e.g., along Ulric Street).	Consistent
Minimize alteration of natural landforms and not result in undue risk from geologic and erosional forces, flood hazards, or fire hazards	Retaining walls would result in vertical slopes, but would minimize the impacted corridor width. Bridge and other structure design in conformance with current standards and with implementation of the measures in Section 5.6, Geology/Seismicity/Soils, would minimize geologic risks. Crossing the San Diego River on a new bridge at approximately the same or higher elevation as, and immediately adjacent to, the existing SR 163 overcrossing would minimize flood hazards for the structure and impacts to the river. The Project would not be prone to fire hazards. Effects related to erosion would be minimized through the measures detailed in Section 5.3, Hydrology/Water Quality.	Consistent

Table 5.1-4 (cont.) CONSISTENCY WITH ENVIRONMENTALLY SENSITIVE LANDS FINDINGS		
Findings Summary	**Project Considerations**	**Consistency Determination**
Design to prevent adverse impacts on adjacent ESL, including sensitive biological resources and special flood hazard areas	The Project would be constructed immediately adjacent to existing roadways to minimize impacts to sensitive habitats both on abutting slopes and within the MHPA. The proposed bridge crossing of the San Diego River would minimize impacts on special flood hazard areas (see additional detail below).	Consistent
Be consistent with MSCP Subarea Plan	The Project would be consistent (see analysis in Subsection 5.1.6).	Consistent
Not contribute to erosion of beaches or impact sand supply	The Project is not in a location to potentially cause these impacts.	Consistent
Mitigation would alleviate negative impacts	Project design and mitigation measures formulated to alleviate all impacts identified as potentially adverse and significant to sensitive biological resources and the 100-year floodplain are contained throughout this EIR, as appropriate. All impacts to sensitive habitats and species would be mitigated in accordance with the City's Biology Guidelines. Although no southwestern willow flycatcher or least Bell's vireo are known to occur in or adjacent to the study area, pre-grading protocol surveys would be conducted to determine presence/ absence, and a biological monitor would be present on-site during grading operations.	Consistent
No feasible measures to further minimize potential adverse effects on sensitive biological resources	This supplemental finding can be made for the Project.	Consistent
Proposed deviation is the minimum necessary to afford relief from special circumstances or conditions of the land not of the applicant's making	This supplemental finding can be made for the Project (see additional detail below).	Consistent

Sensitive Biological Resources

ESL regulations restrict encroachment into sensitive biological habitats. In addition, all conditions of coverage for MSCP-covered species must be met and impacts to listed non-covered species and narrow endemic species are restricted. The ESL regulations require that impacts to wetlands be avoided and a wetland buffer be maintained as appropriate to maintain the wetland functions and values. The Project (including associated facilities) would impact disturbed southern willow scrub and southern cottonwood-willow riparian forest. These wetland/riparian habitats, which do not support any sensitive plant or animal species, cannot be avoided because they are located immediately adjacent to the existing SR 163 Bridge and southbound on-ramp from Ulric Street, where the Project would be constructed. Impacts have, however, been minimized to the level feasible.

Construction of the Project immediately adjacent to existing roadways would minimize impacts to sensitive habitats and the MHPA over a more dispersed alignment. The Project footprint has been refined to eliminate incursion into sensitive upland habitat where possible (e.g., along Ulric Street). Impacts to southern willow scrub and southern cottonwood-willow riparian forest would be mitigated within the San Diego River drainage at a 3:1 ratio, including a minimum 1:1 creation component and a 2:1 enhancement component[3]. No net loss to wetland/riparian habitats would occur due to construction or implementation of the Project.

Street lighting would be shielded to prevent light overspill into adjacent habitat areas. Finally, only native species would be used to revegetate areas that are temporarily impacted and in Project landscaping adjacent to open space areas and along the San Diego River corridor.

Special Flood Hazard Areas

The Project includes a bridge crossing of the San Diego River, with associated facilities (e.g., piers) located within the 100-year floodway/floodplain. Several improvements near Murray Canyon Creek also would result in improvements within the 100-year floodplain. Accordingly, proposed bridge and roadway construction would result in long-term floodplain encroachment. The Project design and implementation process would meet all pertinent federal and local requirements for floodplain encroachment. Effects related to flooding would be minimized through the measures detailed in Section 5.3 of this EIR. The Project would not significantly increase the base flood elevation for upstream properties.

Supplemental Findings – ESL Deviations

In order to relieve congestion at the SR 163/Friars Road interchange, as anticipated in the General Plan, *Mission Valley Community Plan* and *Linda Vista Community Plan*,

[3] Subject to agency approvals, wetland creation activities are anticipated to occur on the Mast Park site in Santee (refer to Subsection 5.4.2.2 for details).

disturbance in environmentally sensitive biological resources and the 100-year floodplain is required. However, the finding that there are no feasible measures that can further minimize the potential adverse effects on environmentally sensitive lands can be made for the Project.

The Project would impact small amounts of disturbed southern willow scrub and southern cottonwood-willow riparian forest. There is no way to avoid the disturbed southern willow scrub due to engineering design constraints related to curve radii and skew of the proposed flyover on-ramp to southbound SR 163 from Ulric Street. The impacts to southern cottonwood-willow riparian forest cannot be avoided because this habitat abuts the existing bridge crossing the San Diego River and the proposed bridge has been placed adjacent to the existing bridge at the narrowest habitat point. Impacts to Diegan coastal sage scrub cannot be avoided because this habitat abuts the existing SR 163 roadway and the inclusion of two additional southbound lanes would result in the roadway being widened to the west. In addition to taking the minimum amounts of these habitats necessary to accommodate permanent roadway improvements, temporary impacts also have been minimized. Where the Project would cross the river, the construction corridor has been restricted to 40 feet, which is the minimum required for the bridge construction equipment and activities. All temporary construction easements would be restricted to the minimum necessary for construction. No "buffer" would be provided. Instead, Diegan coastal sage scrub and riparian habitats would be flagged and monitored during construction to ensure that incursions within the habitat do not occur.

Similarly, it is not possible to avoid the 100-year floodplain of the San Diego River, as the proposed bridge would cross the drainage. Avoidance of the Murray Canyon Creek floodplain also is not possible, as Friars Road and Frazee Road, both of which would be improved by the Project, are located within the floodplain.

In general, the Project's right-of-way and grading would be narrowed to the maximum extent possible to minimize the potential adverse effects on Environmentally Sensitive Lands. There are no feasible measures that can further minimize the potential adverse effects from the Project on Environmentally Sensitive Lands.

The finding that the proposed deviation is the minimum necessary to afford relief from special circumstances or conditions of the land, and not of the applicant's making, can be made for the Project. The Project incorporates the City of San Diego Street Design Manual (City 2002a) and Caltrans requirements while endeavoring to minimize impacts to environmentally sensitive biological resources and the 100-year floodplain. The design of the improvements to SR 163/Friars Road interchange must also comply with engineering standards as well as the design goals of the Mission Valley and Linda Vista community plans. In so doing, disturbance of environmentally sensitive biological resources and the 100-year floodplain is unavoidable. The request for a deviation to disturb environmentally sensitive biological resources and the 100-year floodplain is the minimum necessary to afford relief from special circumstances or conditions of the land, not of the applicant's making. No significant impact is identified.

Consistency with the Historical Resources Regulations

Potential archaeological and historical resources within the study area are discussed in Section 5.5, Historical Resources, and are summarized here. The Project's area of potential effect (APE) was surveyed for historical resources. No archaeological material was found during the survey and no potentially important historic structures were identified. Bridge elements from earlier roadways, however, have previously been found in the river. Because the Project crosses an alluvial floodplain, there is a possibility for subsurface features to be encountered. Therefore, an archaeological mitigation monitoring and reporting program would be required, and the measures are specified in Section 5.5. The Project would be consistent with the requirements of the Historical Resources Regulations (SDMC 143.0201 et seq.).

5.1.4.3 Significance of Impact

The Project would result in a need for a deviation from the ESL regulations, but Project environmental effects would be appropriately addressed as design or mitigation under biological and hydrological issue areas. No significant impact would result to land use conformance.

5.1.4.4 Mitigation Measures

No mitigation measures are required.

5.1.5 Analysis of Issue 4: Recreational Activities and Plans

Issue 4: Would the Project affect recreational activities or plans for recreational areas on adjacent properties?

5.1.5.1 Impact Threshold

In accordance with City Significance Determination Thresholds (2007a), a significant land use impact will be found if the Project would result in:

1. Substantial incompatibility with an adopted plan. (City Significance Determination Threshold 3)

5.1.5.2 Impact Analysis

A Project bridge would extend across the San Diego River corridor. As discussed above, the Project would be in compliance with applicable recommendations in the San Diego River Park Draft Master Plan. Because the proposed SR 163 Bridge over the river would be constructed adjacent to the existing bridge, the Project would not affect future improvements for this portion of the San Diego River. Commuter/passive use paths along both sides of the river would remain and the bike lane planned to parallel new

Hazard Center Drive would be installed. There are no currently planned recreational projects along the river in the Project's vicinity. No significant impacts would occur.

5.1.5.3 Significance of Impact

No significant impacts would occur for this issue.

5.1.5.4 Mitigation Measures

No mitigation measures would be required.

5.1.6 Analysis of Issue 5: MSCP and Subarea Plan

Issue 5: How is the project consistent with the region's MSCP and the City of San Diego Subarea Plan?

5.1.6.1 Impact Threshold

In accordance with City Significance Determination Thresholds (2007a), a significant land use impact will be found if the Project would result in:

1. Inconsistency/conflict with adopted environmental plans for an area. For example, a use incompatible with MSCP for development within the MHPA would fall into this category. (City Significance Determination Threshold 6)

5.1.6.2 Impact Analysis

The MSCP identifies lands that would conserve habitat for federal and state endangered, threatened or sensitive species. The input from the involved jurisdictions and other special district and agency participants resulted in the creation of the MHPA, a permanent preserve planned to be assembled and managed for biological resources. Areas not located within the MHPA are available for development proposals. Only the southernmost portion of the study area contains land (i.e., the San Diego River) within the MHPA.

The MSCP Subarea Plan specifically notes (City 1997a: 45, 46) that existing roads are considered compatible uses within the MHPA, and that where locating new roads outside of the MHPA is not feasible, then the road must be designed to cross the shortest length possible of the MHPA in order to minimize impacts and fragmentation of sensitive species and habitat, with bridges being the preferred construction method. In this instance, the need for the new lanes is directly related to problematic weave patterns on the abutting portion of SR 163, and therefore must be sited in this area (i.e., it is the most prudent and feasible location). The new lanes are proposed for the west side of the bridge, which is the area where the MHPA is most narrow, as well as the area with the least amount of sensitive habitat (refer to Section 5.4, Biological Resources, for additional detail). In addition, habitat would be flagged and monitored for avoidance

during Project construction. Project design minimizes both construction and operational impacts to the amount possible in terms of ground disturbance and uses bridge construction (rather than culverts) to provide the greatest amount of potential wildlife movement capability. Impacts to disturbed southern willow scrub and southern cottonwood-willow riparian forest would be mitigated at a 3:1 ratio, impacts to Diegan coastal sage scrub (including disturbed) would be mitigated at a 1:1 ratio, and impacts to non-native grassland would be mitigated at a 0.5:1 ratio.

As described in detail in Section 5.4, Biological Resources, the Project impacts to biological resources would be mitigated in accordance with the terms of the City's Biology Guidelines. Furthermore, mitigation for impacts to vegetation communities would occur within or adjacent to the MHPA, enhancing the value of resources in the preserve.

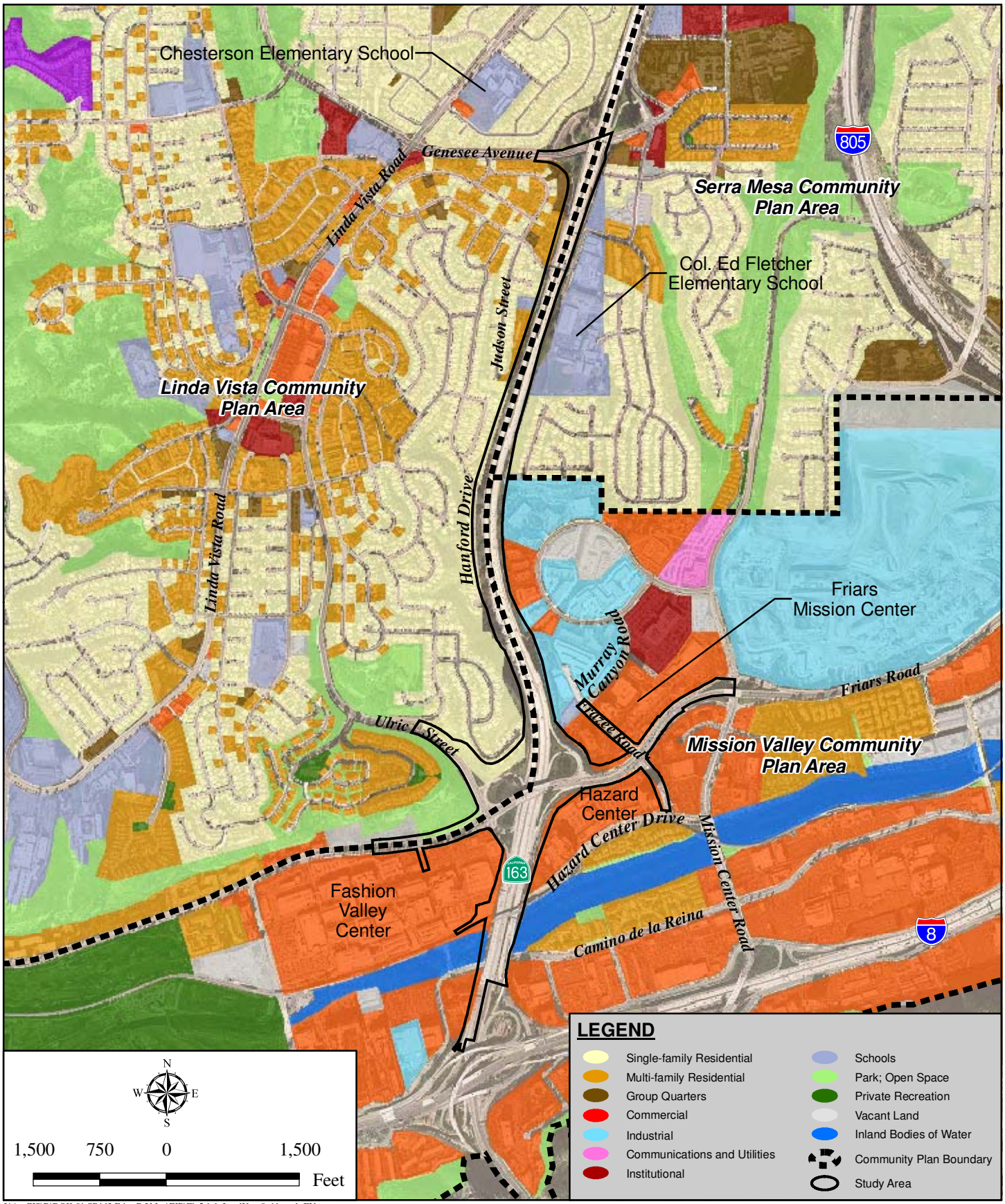
The Project also would comply with the MHPA Land Use Adjacency Guidelines. As described in Section 5.4, Biological Resources, the Project would comply with the City's MHPA Land Use Adjacency Guidelines regarding drainage, toxics, lighting, noise, barriers and invasive species. (Noise impacts to sensitive avian species would be significant; however, with implementation of mitigation within Section 5.4, impacts would be reduced to below a level of significance.) Therefore, the Project would be consistent with the City's MSCP Subarea Plan.

5.1.6.3 Significance of Impact

Compliance with the MHPA Land Use Adjacency Guidelines would reduce any adverse indirect land use impacts to below a level of significance.

5.1.6.4 Mitigation Measures

As no significant impacts have been identified, no mitigation is required. The reader is, however, referred to Mitigation Measure BR-5 from Section 5.4, Biological Resources, with regard to implementation of the City's Land Use Adjacency Guidelines.



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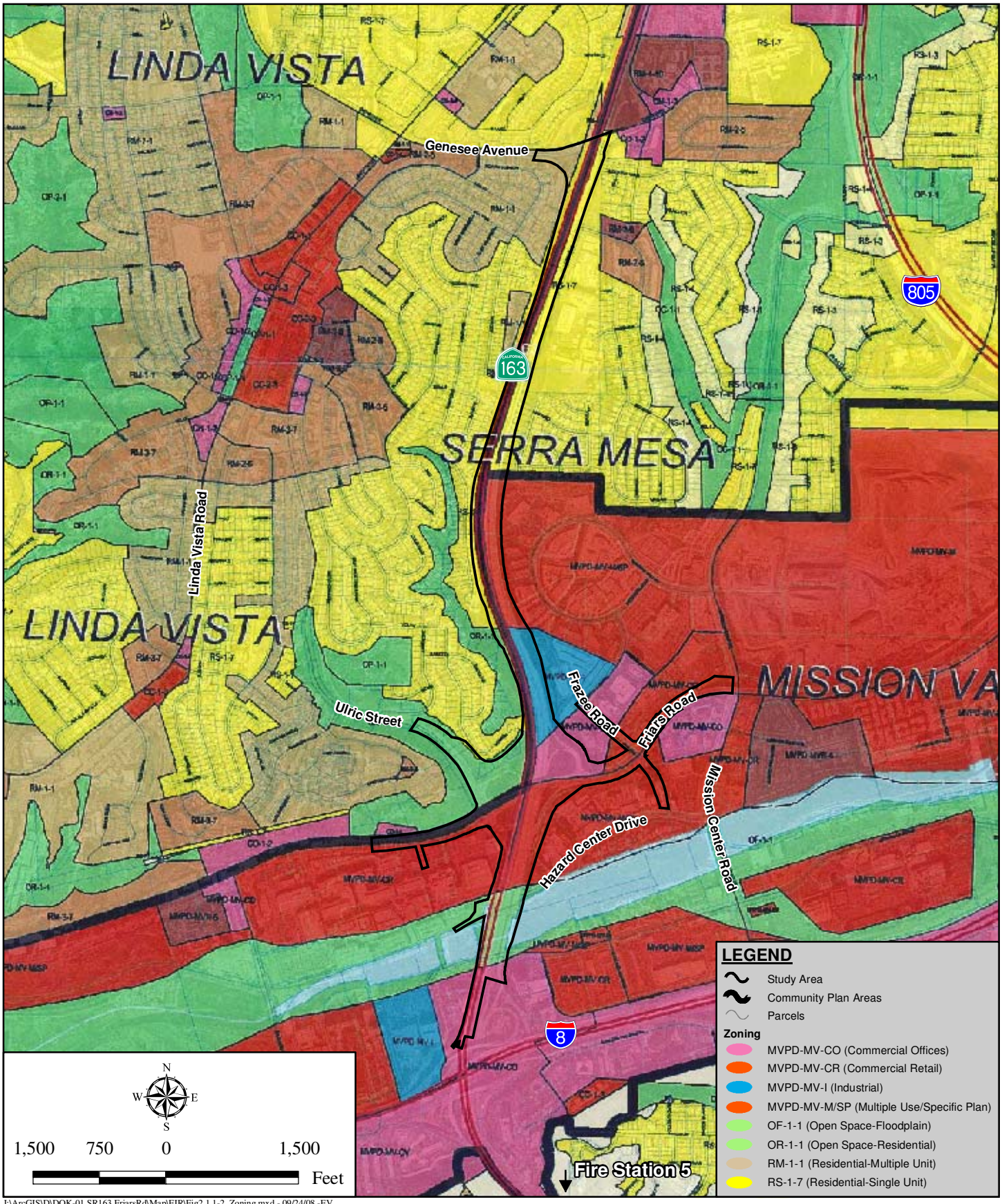
Existing Land Uses

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.1-1



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Existing Zoning

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.1-2

5.2 TRAFFIC/CIRCULATION

This section summarizes information associated with traffic studies prepared by Linscott, Law & Greenspan (LL&G) for the Project. The reports consist of the Traffic Evaluation Report (TER) (LL&G 2008a), which analyzed the Project and a set of alternative design scenarios as well as the No Project Alternative, and a focused Addendum (LL&G 2008b), which was prepared to address timing issues in 2030 for particular intersections along Frazee Road. The reports are included in their entirety as Appendix C to this EIR.

5.2.1 Existing Conditions

5.2.1.1 Affected Environment

Transportation facilities in an area include roadways, from freeways to residential streets, each of which has a defined configuration in term of number of lanes, striping, and type and width of median. Roadway intersections may be signalized or unsignalized. Intersections also have varying geometrics in terms of number and function of lanes (i.e., different combinations of right-turn, left-turn and "through" lanes). Transportation facilities include separate bicycle paths (Class I), on-street marked bicycle lanes (Class II) and on-street bicycle routes (Class III). Mass transit facilities (trolley lines and bus routes) and pedestrian facilities (sidewalks and trails) also are part of the transportation system.

The existing configurations and geometrics for roadways in the study area are shown in Figure 5.2-1, Existing Roadway Configuration. The intersections listed below are included in the study area. Intersections with asterisks are the subject of focused analysis presented in TER Addendum.

- Friars Road/Fashion Valley Road
- Friars Road/Via de la Moda
- Friars Road/Avenida de las Tiendas
- Friars Road/Ulric Street/SR 163 southbound ramp
- Ulric Street/SR 163 southbound on-ramp
- Friars Road/SR 163 northbound ramp
- Friars Road/Frazee Road
- Frazee Road/Murray Canyon Road*
- Frazee Road/Ralphs Driveway*
- Frazee Road/Hazard Center Driveway*

The following street segments are included within the study area:

- **Friars Road**
  West of Fashion Valley Road
  Fashion Valley Road to Avenida de las Tiendas
  Avenida de las Tiendas to SR 163 southbound ramp/Ulric Street
  SR 163 southbound ramp/Ulric Street to SR 163 northbound ramps
  SR 163 northbound ramps to Frazee Road
  East of Frazee Road

- **Fashion Valley Road**
  South of Friars Road
- **Ulric Street**
  North of Friars Road
- **Frazee Road**
  North of Friars Road
  South of Friars Road

In addition, the eastbound Genesee Avenue on-ramp to southbound SR 163 was studied for ramp diverge/merge operations.

The principal roadways in the study area, including physical characteristics and adjacent land uses, are briefly described below.

Friars Road is classified as a six-lane Major Road in the Circulation Element of the *Mission Valley Community Plan*. The roadway is currently constructed as a divided five-lane roadway with two lanes westbound and three lanes eastbound in the study area, with the exception of a short portion west of Ulric Street, which has three lanes in each direction. Friars Road is signalized at the intersections listed above. The posted speed limit is 45 mph. Friars Road includes a Class II bike facility on both sides of the road east and west of the SR 163 interchange. Per the May 2002 San Diego Bicycle Master Plan, a Class II bike route is suggested within the interchange. Bus stops are provided in the Project area.

Fashion Valley Road is classified as a four-lane Major Road in the Circulation Element of the *Mission Valley Community Plan*. The roadway is constructed as a four-lane undivided roadway from Hotel Circle North to Friars Road. Fashion Valley Road is signalized at Friars Road and at the transit center entrance. The posted speed limit is 35 mph, and curbside parking is generally prohibited. Bus stops are provided.

Ulric Street is classified as a four-lane Major Road in the *Linda Vista Community Plan*, although it is currently constructed to four-lane Collector Standards. Ulric Street is signalized at Friars Road. The posted speed limit is 40 mph, and curbside parking is generally prohibited. Ulric Street includes a Class II bike facility in both directions in the Project area.

Frazee Road from Friars Road south to Hazard Center Drive is classified as a four-lane Major Road on the *Mission Valley Community Plan* Horizon Year Recommended Street Classification map (Figure 13 in the Community Plan). Frazee Road is currently a four-lane road from Murray Canyon Road to Hazard Center Drive, with additional turning lanes at the Friars-Mission Center entrance (Ralphs Driveway), Friars Road, and midblock between Friars Road and Hazard Center Drive at the entrance to Frazee Center to the west and the Food 4 Less center to the east. Traffic signals are located at Ralphs Driveway, Friars Road, and approximately mid-block between Friars Road and Hazard Center Drive. Curbside parking is allowed on both sides of the roadway between Murray

Canyon Road and the Ralphs Driveway and between the Hazard Center entrance and Hazard Center Drive.

Avenida de las Tiendas is a five-lane private driveway to the Fashion Valley shopping center. There are currently two southbound lanes (one left turn only and one right turn only) and three northbound lanes (one left turn only, one right or left turn, and one right turn only), separated by a raised median, with no shoulder and no allowed curbside parking.

Genesee Avenue lies within two community plan areas. West of SR 163, Genesee Avenue is classified in the *Linda Vista Community Plan* as a six-lane Prime Arterial. The roadway is currently constructed as a four-lane divided road. One lane is dropped on the south side at the undercrossing of SR 163. East of SR 163, Genesee Avenue is classified in the *Serra Mesa Community Plan* as a Prime Arterial, with no specified number of lanes. The roadway on this side of the freeway is currently constructed as a four-lane divided facility. The posted speed limit is 45 mph west of SR 163 and 25 mph east of SR 163. Curbside parking is generally prohibited within the study area. A bike lane is provided on the south side of the roadway. Bus stops are provided.

SR 163 is generally a four-lane facility between Interstate 5 (to the south) and I-8, and an eight-lane freeway between I-8 and Interstate 15 (to the north).

Fashion Valley Center has a regional transit center with bus and San Diego Trolley service.

Existing Levels of Service for Road Segments, Intersections, and Freeway Segments

Existing weekday morning (AM), midday and evening (PM) peak hour volumes were collected at the study intersections to identify normal peak commuter activity. No shopping center holiday traffic or Qualcomm Stadium events were in progress during the time of the traffic counts. The average daily traffic (ADT) counts were conducted by vehicle classification (i.e., passenger car, two-axle trucks, three-axle trucks and four-or-more-axle trucks). Freeway volumes were obtained from Caltrans records. In addition to peak hour and ADT counts, a video weaving survey was conducted for SR 163 southbound movements in the AM, midday and PM peak periods.

Level of service (LOS) is a professional industry standard by which the operating conditions of a given roadway segment or intersection are measured. LOS is defined on a scale of A to F, where LOS A represents the best operating conditions and LOS F represents the worst operating conditions. LOS A facilities are characterized as having free-flowing traffic conditions with no restrictions on maneuvering or operating speeds; traffic volumes are low and travel speeds are high. LOS F facilities are characterized as having highly unstable, congested conditions and low operating speeds. The City encourages operating conditions of LOS D or better for roadways and intersections in already developed (versus planned) areas. The study area is a developed area with

existing access routes. Therefore, for the purposes of reviewing existing segment and intersections conditions, LOS D or better is considered acceptable.

Intersection LOS is based on the projected delay (represented in seconds per vehicle) as shown in Table 5.2-1, Level of Service Thresholds for Intersections. Street segment analysis is based upon the comparison of daily traffic volumes to the City's Roadway Classifications, Levels of Service, and Average Daily Trips table (refer to Table 5.2-2). This table provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics.

Table 5.2-1
LEVEL OF SERVICE THRESHOLDS FOR INTERSECTIONS

Signalized Intersections Total Control Delay Per Vehicle*	Unsignalized Intersections Average Control Delay per Vehicle*	LOS	Expected Delay
0.0 – 10.0	0.0 – 10.0	A	Little or no delay
10.1 – 20.0	10.1 – 15.0	B	Short traffic delays
20.1 - 35.0	15.1 – 25.0	C	Average traffic delays
35.1 – 55.0	25.1 – 35.0	D	Long traffic delays
55.1 – 80.0	35.1 – 50.0	E	Very long traffic delays
more than 80	more than 50.0	F	Severe congestion

Source: Highway Capacity Manual 2000
*Delay measured in seconds

Table 5.2-2
ROADWAY CLASSIFICATIONS, LEVELS OF SERVICE AND AVERAGE DAILY TRIPS

Street Classification	Number of Lanes	Width* (feet)	LOS A	LOS B	LOS C	LOS D	LOS E
Freeway	8	---	60,000	84,000	120,000	140,000	150,000
Freeway	6	---	45,000	63,000	90,000	110,000	120,000
Freeway	4	---	30,000	42,000	60,000	70,000	80,000
Expressway	6	102/122	30,000	42,000	60,000	70,000	80,000
Prime Arterial	6	102/122	25,000	35,000	50,000	55,000	60,000
Major Arterial	6	102/122	20,000	28,000	40,000	45,000	50,000
Major Arterial	4	78/98	15,000	21,000	30,000	35,000	40,000
Collector	4	72/92	10,000	14,000	20,000	25,000	30,000

Table 5.2-2 (cont.)
ROADWAY CLASSIFICATIONS, LEVELS OF SERVICE† AND AVERAGE DAILY TRIPS

Street Classification	Number of Lanes	Width* (feet)	LOS A	LOS B	LOS C	LOS D	LOS E
Collector (no center lane) (continuous left-turn lane)	4 2	64/84 50/70	5,000	7,000	10,000	13,000	15,000
Collector (no fronting property)	2	40/60	4,000	5,500	7,500	9,000	10,000
Collector (commercial-industrial fronting)	2	50/70	2,500	3,500	5,000	6,500	8,000
Sub-Collector (multi-family)	2	36/56	--	--	2,200	--	--

Source: City of San Diego
*Curb width/right-of-way width, based on City of San Diego Street Design Manual
†Approximate recommended ADT based on the City of San Diego Street Design Manual
Notes:
1. The volumes and the average daily level of service listed above are only intended as a general planning guideline.
2. Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

The volume-to-capacity ratio (V/C) is a measure of traffic demand on a facility (expressed as volume) compared to its traffic-carrying capacity. In evaluating the performance of a roadway, V/C is considered together with LOS. Freeway LOS definitions, determined by V/C ratios, are provided in Table 5.2-3, Caltrans Freeway Segment Level of Service Definitions.

Table 5.2-3
CALTRANS FREEWAY SEGMENT LEVEL OF SERVICE DEFINITIONS

LOS	V/C	Congestion/Delay	Traffic Description
Used for freeways, expressways, and conventional highways			
A	<0.42	None	Free flow
B	0.42 – 0.62	None	Free to stable flow, light to moderate volumes
C	0.63 – 0.80	None to minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted
D	0.81 – 0.92	Minimal to substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver
E	0.93 – 1.00	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor

Table 5.2-3 (cont.) CALTRANS FREEWAY SEGMENT LEVEL OF SERVICE DEFINITIONS			
LOS	**V/C**	**Congestion/Delay**	**Traffic Description**
Used for freeways and expressways			
F(0)	1.01 – 1.25	Considerable 0-1 hour delay	Forced flow, heavy congestion, long queues form behind breakdown points, stop and go
F(1)	1.26 – 1.35	Severe 1-2 hour delay	Very heavy congestion, very long queues
F(2)	1.36 – 1.45	Very severe 2-3 hour delay	Extremely heavy congestion, longer queues, more numerous breakdown points, longer stop periods
F(3)	>1.45	Extremely severe 3+ hour delay	Gridlock

Source: LL&G 2008a

Existing Intersection Operations

Intersection capacity analyses were conducted for each of the study area intersections. The ADT anticipated was determined based on the information gathered from segment counts. Segment counts were completed during the worst-case traffic periods of the day, also known as the "peak-hours." Figure 5.2-2, Existing Traffic Volumes, shows existing ADT for the study area during peak hours. In the figure, ADT is shown midblock, AM/midday/PM peak-period traffic volumes are shown at the intersections, and AM/PM peak-period volumes are shown for the freeway mainlines. Table 5.2-4, Existing Intersection Operations, shows existing intersection operations during peak-hour conditions.

Table 5.2-4 EXISTING INTERSECTION OPERATIONS			
Intersection[1]	**Peak Hour**	**Existing**	
		Delay[2]	**LOS**
Friars Road/Fashion Valley Road	AM	12.8	B
	Midday	19.4	B
	PM	25.8	C
Friars Road/Via de la Moda	AM	6.7	A
	Midday	14.4	B
	PM	13.5	B
Friars Road/Avenida de las Tiendas	AM	7.3	A
	Midday	19.8	B
	PM	20.6	C

Table 5.2-4 (cont.)
EXISTING INTERSECTION OPERATIONS

Intersection[1]	Peak Hour	Existing	
		Delay[2]	LOS
Friars Road/Ulric Street/SR 163 southbound ramp	AM Midday PM	65.1 72.7 111.2	**E** **E** **F**
Ulric Street/SR 163 southbound ramp (unsignalized)	AM Midday PM	10.5 10.8 14.8	B B B
Friars Road/SR 163 northbound ramps	AM Midday PM	5.3 21.0 40.8	A C D
Friars Road/Frazee Road	AM Midday PM	31.3 82.7 103.1	C **F** **F**
Frazee Road/Murray Canyon Road (*unsignalized*)[3]	PM	46.0	**E**
Frazee Road/Ralphs Driveway (*unsignalized*)[3]	PM	17.5	B
Frazee Road/Hazard Center Driveway[3]	PM	21.0	C

Source: LL&G 2008a, 2008b
[1]Intersections signalized unless otherwise noted
[2]Average delay expressed in seconds per vehicle
[3]These intersections were only evaluated in the PM peak hour.
Bold = unacceptable LOS

The majority of intersections west of the SR 163/Friars Road interchange operate with acceptable delays at LOS D or better. Intersections at or east of the interchange experience much higher delays. The poorer LOS at these intersections is attributable to major attractions at Fashion Valley Center and other commercial uses in the area, and to an under-designed roadway facility. As shown in Table 5.2-4, the following existing intersections operate at LOS E or F:

- Friars Road/Ulric Street/SR 163 southbound ramp
  LOS E, AM and midday peak periods; LOS F, PM peak period
- Friars Road/Frazee Road
  LOS F, midday and PM peak periods
- Frazee Road/Murray Canyon Road
  LOS E, PM peak

Existing Street Segment Operations

Existing street segment analyses were conducted for roadways in the study area, the results of which are shown on Table 5.2-5, Existing Street Segment Operations. While intersection operations are calculated based on peak-period conditions, street segment operations are calculated based on total daily traffic levels.

Table 5.2-5
EXISTING STREET SEGMENT OPERATIONS

Road Segment	Lanes	Classification	Capacity (LOS E)[1]	Existing ADT[2]	V/C[3]	LOS[4]
Friars Rd.						
West of Fashion Valley Rd.	5	Major Arterial	45,000	32,200	0.72	C
Fashion Valley Rd to Ave. de las Tiendas	5	Major Arterial	45,000	34,300	0.76	C
Ave. de las Tiendas to SR 163 southbound ramp/Ulric St.	6	Major Arterial	50,000	55,100	**1.10**	**F**
SR 163 southbound ramp/Ulric St. to SR 163 Northbound ramps	6	Major Arterial	50,000	59,100	**1.18**	**F**
SR 163 northbound ramps to Frazee Rd.	6	Major Arterial	50,000	66,400	**1.33**	**F**
East of Frazee Rd.	6	Major Arterial	50,000	41,400	0.83	D
Fashion Valley Rd.						
South of Friars Rd.	4	Collector	30,000	11,600	0.39	B
Ulric St.						
North of Friars Rd.	4	Collector	30,000	14,800	0.49	C
Frazee Rd.						
North of Friars Rd.	4	Collector	30,000	21,000	0.70	D
South of Friars Rd.	4	Collector	30,000	17,000	0.57	C

Source: LL&G 2008a
Bold = unacceptable LOS
[1]Capacity based on roadway classification operating at LOS E
[2]Average daily traffic
[3]Volume to capacity ratio
[4]Level of service

The majority of the existing street segments operate at LOS D or better under existing conditions. Segments of Friars Road at or near the intersection, however, operate at LOS F:

- Friars Road – Avenida de las Tiendas to SR 163 southbound ramp/Ulric Street
- Friars Road – SR 163 southbound ramp/Ulric Street to SR 163 northbound ramps
- Friars Road – SR 163 northbound ramps to Frazee Road

Existing Freeway Segment Operations

Freeway segment operations were analyzed in the TER, Appendix C, and are shown in Table 5.2-6, Existing SR 163 Segment Operations. The freeway segment analysis did not take into account the effect of weaving maneuvers. For instance, the southbound SR 163 movement south of Friars Road was observed to operate at a lower LOS than reported due to the effect of weaving on that segment.

Table 5.2-6
EXISTING SR 163 SEGMENT OPERATIONS

Segment	Direction	No. of Lanes	Capacity	Volume		V/C		LOS	
				AM	PM	AM	PM	AM	PM
North of Friars Rd.	Northbound Mainlines	5M	10,000	6,056	7,879	0.61	0.79	B	C
	Southbound Mainlines	4M	8,000	8,285	6,685	**1.04**	0.84	**F(0)**	D
South of Friars Rd.	Northbound Mainlines	4M	8,000	5,247	6,680	0.66	0.84	C	D
	Northbound Collector-Distributor	2M+1A	5,200	2,029	1,954	0.39	0.38	B	B
	Southbound Mainlines	4M+2A	10,400	7,178	5,287	0.69	0.51	C	B

Source: LL&G 2008a
Bold = unacceptable LOS

Southbound SR 163 north of Friars Road was calculated to operate at LOS F(0) in the AM peak period.

Existing Freeway Weaving Operations

The section of southbound SR 163 from Friars Road to I-8 accommodates heavy mainline and ramp volumes within a short weaving distance, resulting in saturated (congested) operations during the peak periods, as shown on Table 5.2-7, Existing

SR 163 Weave Operations. This freeway weave segment operates at LOS E during the PM peak period.[1]

Table 5.2-7
EXISTING SR 163 WEAVE OPERATIONS

Freeway Segment	Peak Hour	Speed[1]	Density[2]	LOS[3]
Southbound SR 163 (Friars Rd. to I-8)	AM	42.2	26.2	C
	Midday	36.9	35.2	D
	PM	38.6	36.4	**E**

Source: LL&G 2008a
Bold = unacceptable LOS
[1] Speed is measured in miles per hour
[2] Density is measured in passenger cars/mile/lane
[3] Level of service

Existing Ramp Merge and Diverge Operations

The existing ramp merge/diverge operations were analyzed and are shown in Table 5.2-8, Existing SR 163 Ramp Diverge/Merge Operations. LOS in merge and diverge influence areas is defined in terms of density for all cases of stable operations (LOS A through E). LOS F exists when the demand exceeds the capacity of upstream or downstream freeway sections or the capacity of the ramp. It should be noted that the ramp analysis did not take into account the effects of upstream/downstream weaving or queue spillover from the intersections of the SR 163/Friars Road interchange.

The analysis concluded that operations in the northbound direction operate at acceptable LOS while operations in the southbound direction operate at saturated conditions. The southbound SR 163 – Friars Road off-ramp operates at LOS F during the AM peak period and LOS E during the PM peak period.

[1]A weave analysis for the freeway section of SR 163 between Genesee Avenue and Friars Road was not conducted because, per the 2000 Highway Capacity Manual, if the distance between ramps is more than 2,500 feet, a weave section does not exist, and operations are governed by mainline and merge/diverge operations. The distance between the Genesee Avenue and the Friars Road ramp is approximately 5,900 feet.

Table 5.2-8
EXISTING SR 163 RAMP DIVERGE/MERGE OPERATIONS

Ramp Location	Peak Hour	Upstream Facility			Off-ramp			Ramp Diverge LOS
		Volume	Capacity	LOS F?	Volume	Capacity	LOS F?	
Diverge Operations								
Southbound SR 163 Mainlines (4 lanes)/ Friars Rd. Off-ramp (1 lane)	AM PM	9,112 7,355	9,400 9,400	No No	1,755 1,978	2,000 2,000	No No	**F** **E**
Northbound Collector-Distributor Collector-Distributor (2 lanes)/Eastbound Friars Rd. Off-ramp (1 lane)	AM PM	2,196 2,196	4,500 4,500	No No	1,067 1,015	2,000	No No	B B
Northbound Collector-Distributor Collector-Distributor (2 lanes)/Westbound Friars Rd. Off-ramp (1 lane)	AM PM	1,129 1,180	4,500 4,500	No No	628 1,220	2,000 2,000	No No	A A
Merge Operations								
Southbound SR 163 Friars Rd. On-ramps (2 lanes)/Mainlines (4 lanes)	AM PM	8,647 7,558	9,400 9,400	No No	2,828 3,305	4,600 4,600	No No	B C
Northbound Collector-Distributor Collector-Distributor (2 lanes)/On-ramp (1 lane)	AM PM	1,682 2,387	4,500 4,500	No No	1,682 2,387	4,600 4,600	No No	B C
Southbound SR 163 Eastbound Genesee Ave. On-ramp (1 lane)/Mainlines (4 lanes)	AM PM	9,112 7,356	9,400 9,400	No No	3,106 2,610	4,600 4,600	No No	C C

Source: LL&G 2008a
[1]Volumes factored up to account for peak hour factor and truck percentages and are expressed in vehicles per hour (vph)
[2]Ramp operations are dependent on freeway mainline operations and ramp capacity
[3]Ramp demands in excess of 1,500 vph generally warrant a second lane (Highway Design Manual [Caltrans 2001])
Bold = unacceptable LOS

Pedestrian and Bicycle Facilities

SR 163 is a limited access freeway and, as such, no pedestrians or bicycles are allowed on the roadway. Currently, free-right turns for vehicles are provided from eastbound

Friars Road to southbound SR 163, northbound SR 163 to eastbound Friars Road, northbound SR 163 to westbound Friars Road, westbound Friars Road to northbound SR 163, and westbound Friars Road to southbound SR 163.

As illustrated on Figure 2-1 in Chapter 2.0, Environmental Setting, a paved walkway (Class I facility) for pedestrians and bicyclists, the San Diego River Bike Path, parallels both sides of the San Diego River east of SR 163. The Class I bike path west of SR 163 currently terminates at the river crossing. Friars Road has a Class I bike path west of Fashion Valley Road and Class II bike lanes (five-foot striped lane on the roadway) on the east and west sides of the SR 163 interchange. Friars Road at the SR 163 interchange is considered a shared roadway for bicycles and automobiles with no bike lane striping or formal bicycle designation. Mission Center Road, Ulric Street, Linda Vista Road and Genesee Avenue northwest of Linda Vista Road also have Class II bike lanes. Friars Road currently has a sidewalk on the south side of the Friars Road Bridge only.

5.2.1.2 Regulatory Setting

Planning, construction and maintenance of traffic, transportation, pedestrian and bicycle facilities in San Diego County are guided by federal, state, regional and local agencies and their policies, as described below.

Federal

2000 Highway Capacity Manual

The 2000 Highway Capacity Manual is a collaborative effort between the Transportation Research Board, FHWA, and the American Association of State Highway and Transportation Officials to provide concepts, guidelines and computational procedures for calculating capacity and quality of service for highway facilities, including freeways; intersections (signalized and unsignalized); and rural highways. In addition, the 2000 Highway Capacity Manual addresses the effects of transit, pedestrians and bicycles on transportation system performance. The City's Significance Determination Thresholds (2007a) rely upon the Highway Capacity Manual for determining impacts to congested freeway segments, interchanges or ramps.

Americans with Disabilities Act

The Americans with Disabilities Act of 1990 prohibits disability based discrimination in employment, government, public accommodations, community facilities, transportation and telecommunications. The act requires the design, construction and alteration of facilities to comply with accessibility standards. The City is committed to carrying out the Americans with Disabilities Act 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.

State

Caltrans is responsible for enhancement and maintenance of state highways and interstate freeways. Any changes to state facilities or construction within state right-of-way would require an encroachment permit from Caltrans.

State Transportation Improvement Program

The 2002 State Transportation Improvement Program (STIP) is a multi-year program of federally and state-funded projects that are developed locally and approved by the California Transportation Commission. Once approved, the STIP is incorporated into the RTIP, which includes all other locally funded transportation projects.

Regional

Regional transportation planning efforts are guided by the traffic forecasting models run by the San Diego Association of Governments (SANDAG). This agency provides long-range (2030) modeling of traffic volume projections. The Series 10 Regional Growth Forecast applied in SANDAG modeling is a direct reflection of policies contained in local general and community plans.

Regional Transportation Plan

The RTP, also called Mobility 2030, was created and approved by SANDAG on March 23, 2003, with the intent of addressing challenges to mobility in the San Diego region due to population growth. It also aims to maintain, manage and improve the existing transportation system in the region.

The SR 163/Friars Road Interchange Project is included in SANDAG's Final 2030 RTP under the Revenue Constrained Plan. The RTP specifically lists the SR 163/Friars Road Interchange Project as a Regionally Funded System Interchange Project. The Project design concept and scope are consistent with the Project description provided in the 2003 RTP and FTIP.

Regional Transportation Improvement Program

The RTIP is also a multi-year program that includes all proposed major highway, arterial, transit, and non-motorized projects in the region. The 2008 RTIP was adopted on July 25, 2008, for fiscal years 2008/09 to 2012/13. Non-capacity-increasing engineering studies to address future construction of a new southbound SR 163 to westbound Friars Road off-ramp were included in the adopted 2008 RTIP. Amendment No. 1 to the 2008 RTIP revises the description to be consistent with the Project, indicate that the improvements would be capacity-increasing and provide additional funding for Project engineering and right-of-way acquisition.

Congestion Management Program

First launched in 1991, the Congestion Management Program (CMP) is a state-mandated means for monitoring roadway congestion and assessing overall performance of the region's transportation system. The guidelines, which were developed by SANDAG, contain specific strategies and improvements to reduce traffic congestion and improve performance of the region's multi-modal system. Example strategies include an increased emphasis on public transportation and rideshare programs, mitigation for new development impacts, and better coordination of land use and transportation planning. A 2006 update to the CMP guidelines was adopted in July 2006. A 2008 draft update was released in September, however, it has not yet been adopted.

Regional Growth Management Strategy

The Regional Growth Management Strategy, as originally adopted in 1993 by SANDAG, is a comprehensive framework for dealing with regional growth impacts in order to preserve and improve the regional quality of life. One facet of quality of life considered in the Regional Growth Management Strategy is transportation and congestion management. The Regional Growth Management Strategy was amended in July 1999, at which time the new growth strategy was titled REGION2020. Based on the three growth strategies, the two alternative scenarios that assume new residences will be planned within walking distance of town centers and transit stations, which would substantially reduce traffic congestion.

Local

Locally, each incorporated city, including the City of San Diego has developed specific goals and policies for traffic conditions and roadways within its jurisdiction. Each agency is responsible for the implementation of these goals and policies. Consistency of the Project with the City General Plan and local community plans is addressed in Section 5.1, Land Use.

Mission Valley Community Plan Transportation Element

The Transportation Element of the *Mission Valley Community Plan* (City 1985, as amended) identifies the general location and street classifications of the existing and future roads (Friars Road, Fashion Valley Road and Frazee Road in the study area), intersection signalization, transit routes, bikeways and pedestrian paths. Both sides of SR 163 from Friars Road to south of I-8 are located in the Mission Valley community planning area, as is the east (northbound) side of SR 163 from Friars Road north to about the midpoint to Genesee Avenue.

Linda Vista Community Plan

The Transportation Element of the *Linda Vista Community Plan* (City 1998) identifies the general location and street classifications of the existing and future roads (Friars Road

and Ulric Street in the study area), intersection signalization, transit service and bikeways. The west (southbound) side of SR 163 from Genesee Avenue to Friars Road is located in the Linda Vista community planning area.

Serra Mesa Community Plan

The Transportation Element of the *Serra Mesa Community Plan* (City 1977, as amended) identifies the general location and street classifications of the existing streets; transit service; and bicycle, pedestrian and equestrian trails. Genesee Avenue is classified as a Prime Arterial between the SR 163 on-/off-ramps. In describing existing street systems, the plan states: "Several traffic generators may cause local congestion. San Diego Stadium traffic can overload Friars Road and increase the load on nearby residential streets." The plan also has a proposal that "the freeway network should be completed as soon as monies are available."

5.2.2 Analysis of Issue 1: Traffic Circulation, Volume and Road Capacity

Issue 1: ***What direct and cumulative impacts would this Project have on traffic circulation, traffic volume and road capacity in the vicinity?***

5.2.2.1 Impact Threshold

In accordance with the City Significance Determination Thresholds (2007a), a significant impact will be found to transportation/circulation if the Project would result in any of the following conditions:

1. Any intersection, roadway segment or freeway segment affected by the Project would operate at LOS E or F under either direct or cumulative conditions, and the Project exceeds the thresholds shown in Table 5.2-9, City Traffic Thresholds. (City Significance Determination Threshold 1)
2. At any ramp meter location with delays above 15 minutes, the Project exceeds the thresholds shown in Table 5.2-9, City Traffic Thresholds. (City Significance Determination Threshold 2)
3. A substantial amount of traffic would be added to a congested freeway segment, interchange or ramp exceeding the values shown in Table 5.2-9, City Traffic Thresholds. (City Significance Determination Threshold 4)
4. If a project would increase traffic hazards to motor vehicles, bicyclists or pedestrians due to proposed non-standard design features. (City Significance Determination Threshold 5a)
5. Construction of a roadway which is inconsistent with the General Plan and/or a community plan, if the proposed roadway would not properly align with other existing or planned roadways. (City Significance Determination Threshold 5b)
6. A substantial restriction in access to publicly or privately owned land. (City Significance Determination Threshold 6)

Table 5.2-9
CITY TRAFFIC THRESHOLDS

Level of Service With Project	Allowable Change Due to Project Impact					
	Freeways		Roadway Segments		Intersections Delay (sec.)	Ramp Metering Delay (min.)
	V/C	Speed (mph)	V/C	Speed (mph)		
E (or ramp meter delays above 15 min.)	0.010	1.0	0.02	1.0	2.0	2.0
F (or ramp meter delays above 15 min.)	0.005	0.5	0.01	0.5	1.0	1.0

Source: LL&G 2008a
Delay = Average control delay per vehicle measured in seconds for intersections, or minutes for ramp meters.
LOS = Level of service
Speed = Speed measured in miles per hour
V/C = Volume to capacity ratio

5.2.2.2 Impact Analysis

Construction Traffic

Additional traffic would be generated during construction of the Project from construction workers driving to the area, equipment and materials being transported to particular construction locations, and equipment being operated in the study area. The general working hours would take into consideration avoiding peak traffic hours so that construction traffic would not contribute to peak hour traffic. Trucks carrying material from cut sites to temporary storage areas, fill sites, and off-site disposal or reuse would be the most likely source of additional traffic during construction, in addition to concrete mixer trucks during pour operations. Materials transport would be scheduled to occur during non-peak travel times as much as possible. Any road damage that could occur due to construction equipment traveling on existing roadways would be required to be repaired before Project completion.

As noted in Subsection 3.2.9, Construction, night work is anticipated to be conducted throughout the construction period to avoid lane closures during busy daytime hours, which would result in traffic congestion. Construction is expected to begin in 2013 and be completed by 2019. All construction activities requiring construction-period detours or lane or ramp closure along existing facilities would cease during the holiday season (between Thanksgiving and New Year's Day). In addition, a Traffic Management Plan would be developed, as described in Subsection 3.2.9.5, Construction Control Measures. Elements of the plan would include the following:

- Development of a Public Awareness Campaign.
- Proper identification of detour routes and lane closures within the construction area.
- Placement of appropriate signs, cones and barricades near construction.
- Scheduling of construction activities during off-peak hours.
- Development of plans that ensure emergency, residence and business access.
- Development of traffic and contractor contingency plans.
- Implementation of a Construction Zone Enhanced Enforcement Plan.
- Use of Freeway Service Patrol to assist motorists.
- Inclusion of construction activities on the Caltrans Highway Information Network.
- Implementation of a Transportation Management Team.

The Traffic Management Plan would avoid interference with emergency response on roadways in the study area by minimizing congestion and road closure/detours. In addition, during construction it is expected that traffic would yield to emergency response vehicles as required by law, and as occurs under current conditions.

Based on the above features of the Project, including construction control measures and the TMP described in Chapter 3.0, Project Description, the Project would not add a substantial amount of traffic to a congested freeway segment, interchange or ramp; would not result in a substantial restriction in access to publicly or privately owned land during construction; and would not interfere with emergency response. Therefore, no significant traffic impacts would occur during construction.

Operational Traffic

Methodology

Potential future impacts to traffic are evaluated in this EIR using projections of traffic at the Project "opening day" as well as in the year 2030, which would be approximately 10 years after Project completion, and represents the horizon design year. A modified City Model was used to forecast year 2030 traffic volumes, and opening day traffic volumes were derived from existing volumes and the year 2030 volumes.[1] The new Project model was reviewed in coordination with the City and Caltrans. Network assumptions were reviewed against the Mobility 2030 (i.e., 2030 RTP), the *Mission Valley Community Plan* and the Mission Valley Public Facilities Financing Plan for FY 2006. Additional detail regarding modeling methodology is contained in the TER (Appendix C of this EIR).

[1] The model is based on detailed inputs for Mission Valley at community buildout, with a regional forecast year of 2020. The SANDAG Model has a year 2030 regional forecast, but does not have the detailed land use inputs of the City's model. The best attributes of each model were combined to create a hybrid model for this project.

Future Traffic Volumes

The traffic forecast for 2030 indicates an average increase in ADT volumes along Friars Road of about 10 percent. For comparison purposes, the average increase in ADT volumes along SR 163 would be approximately 35 percent. Year 2030 forecast volumes are consistent with previous forecasts. It is assumed that the differences in ADT increases is due to differential growth expected for Mission Valley compared to the overall San Diego region. (The Friars Road corridor is substantially developed, yielding a lower growth rate, while a larger amount of growth is expected for the region as a whole.) Figures 5.2-3, Opening Day Traffic Volumes, and 5.2-4, Year 2030 Traffic Volumes, present the forecasted volumes and ADT.

Future Intersection Operations

Project features are described in Subsection 3.2.1, Roadway Improvements. Figure 5.2-5, Recommended Roadway Configuration, represents the recommended configuration based on intersection continuity and ultimate roadway classification, with the goal of improving transportation facility performance as much as possible. Forecast volumes for the opening day and year 2030 were assigned to the study area intersections. (Refer to Appendix C for illustrations of the forecast traffic volumes.) The dedicated bus lane at Frazee Road is not included in the Project analysis because the LOS objective would be met by the Project features.

Intersection operations under existing, future conditions without the Project, and future conditions with the Project on opening day, are presented in Table 5.2-10. All intersections were calculated to operate with acceptable delays at LOS D or better at opening day with the Project.

Two intersections that would operate at unacceptable delays without the Project would improve to acceptable levels with the Project. The Friars Road/Ulric Street/SR 163 southbound on-ramp would operate at LOS E, E and F without the Project and would improve to LOS C, C and D on the opening day with the Project at AM, Midday and PM hours, respectively. Also, the Friars Road/Frazee Road intersection would have LOS C, F and F without the Project compared to LOS D, D and D at AM, Midday and PM hours, respectively, on opening day with the Project.

Table 5.2-10
INTERSECTION OPERATIONS (OPENING DAY)

Intersection[1]	Peak Hour	Existing LOS	Without Project		With Project	
			Delay[2]	LOS	Delay[2]	LOS
Friars Road/Fashion Valley Road	AM	B	13.6	B	18.1	B
	Midday	B	21.2	C	23.4	C
	PM	C	28.8	C	28.4	C
Friars Road/Via De La Moda	AM	A	6.8	A	4.3	A
	Midday	B	14.9	B	18.2	B
	PM	B	14.0	B	14.5	B

Table 5.2-10 (cont.)
INTERSECTION OPERATIONS (OPENING DAY)

Intersection[1]	Peak Hour	Existing LOS	Without Project		With Project	
			Delay[2]	LOS	Delay[2]	LOS
Friars Road/Avenida de las Tiendas	AM	A	14.6	B	15.1	B
	Midday	B	30.3	C	33.0	D
	PM	C	32.7	C	31.1	D
Friars Road/Ulric Street/ SR 163 Southbound On-Ramp	AM	**E**	**70.6**	**E**	23.0	C
	Midday	**E**	**77.7**	**E**	31.1	C
	PM	**F**	**117.0**	**F**	35.2	D
Ulric Street/SR 163 Southbound On-Ramp (*unsignalized*)	AM	B	10.7	B	12.5	B
	Midday	B	11.0	B	19.7	C
	PM	B	14.9	B	28.1	D
Friars Road/SR 163 Northbound Ramps	AM	A	10.2	B	22.0	C
	Midday	C	23.0	C	24.2	C
	PM	D	43.4	D	28.4	D
Friars Road/Frazee Road	AM	C	33.8	C	43.0	D
	Midday	F	**85.4**	**F**	47.5	D
	PM	F	**118.0**	**F**	45.7	D

Source: LL&G 2008a; calculations with a coordinated system assuming a 240-second cycle length unless noted otherwise.
[1] Intersections signalized unless noted otherwise
[2] Average delay expressed in seconds per vehicle

Intersection operations under existing, as well as 2030 conditions without and with the Project, are presented in Table 5.2-11. All intersections were calculated to operate with acceptable delays at LOS D or better in the year 2030 with the Project.

Two intersections that would operate at unacceptable delays without the Project would improve to acceptable levels with the Project. The Friars Road/Ulric Street/SR 163 southbound on-ramp would operate at LOS E, F and F under 2030 without Project conditions and would operate at LOS C, C and D in 2030 with the Project during the AM, Midday and PM hours, respectively. Also, the Friars Road/Frazee Road intersection would have LOS D, F and F for 2030 conditions compared to LOS D, D and D at AM, Midday and PM hours, respectively, in 2030 with the Project.

Table 5.2-11
INTERSECTION OPERATIONS (2030)

Intersection[1]	Peak Hour	Existing LOS	Without Project		With Project	
			Delay[2]	LOS	Delay[2]	LOS
Friars Road/Fashion Valley Road	AM	B	15.4	B	17.7	B
	Midday	B	25.3	C	26.1	C
	PM	C	37.5	D	34.3	C
Friars Road/Via De La Moda	AM	A	7.0	A	4.9	A
	Midday	B	16.8	B	19.7	B
	PM	B	15.0	B	14.4	B
Friars Road/Avenida de las Tiendas	AM	A	15.1	B	15.3	B
	Midday	B	40.8	D	36.3	D
	PM	C	47.1	D	42.1	D
Friars Road/Ulric Street/ SR 163 Southbound On-Ramp	AM	**E**	78.0	**E**	21.9	C
	Midday	**E**	80.9	**F**	33.1	C
	PM	**F**	131.8	**F**	40.0	D
Ulric Street/SR 163 Southbound On-Ramp (*unsignalized*)	AM	B	**11.0**	B	12.9	B
	Midday	B	**11.4**	B	22.0	C
	PM	B	**16.4**	C	35.0	D
Friars Road/SR 163 Northbound Ramps	AM	A	**24.1**	C	29.3	C
	Midday	C	**32.8**	C	32.7	C
	PM	D	57.5	**E**	49.4	D
Friars Road/Frazee Road	AM	C	**38.0**	D	44.5	D
	Midday	F	94.8	**F**	48.8	D
	PM	F	135.2	**F**	53.3	D
Frazee Road/Murray Canyon Road (*unsignalized*)*	PM	E	--	--	54.9	D
Frazee Road/Ralphs Driveway (*unsignalized*)*	PM	B	--	--	4.9	A
Frazee Road/Hazard Center Driveway*	PM	C	--	--	20.6	C

Source: LL&G 2008a; calculations with a coordinated system assuming a 240-second cycle length unless noted otherwise.
*Source: LL&G 2008b; calculations with a coordinated system assuming a 200-second cycle length. Conditions in 2030 without Project are not provided.
[1] Intersections signalized unless noted otherwise
[2] Average delay expressed in seconds per vehicle

Future Street Segment Operations

Street segment operations in existing, without Project and opening day with Project conditions are presented in Table 5.2-12, Future Street Segment Operations (Opening Day). All street segments were calculated to operate with acceptable delays at LOS D or better on opening day with the Project. The roadway segments of Friars Road from

Avenida de las Tiendas to the northbound on-ramp to SR 163 would have improved operations from unacceptable LOS F without the Project, to acceptable LOS D on opening day with the Project.

Street segment operations in existing, 2030 without Project and 2030 with Project conditions are presented in Table 5.2-13, Future Street Segment Operations (2030). Almost all street segments were calculated to operate with acceptable delays at LOS D or better in 2030 with the Project. The roadway segments of Friars Road from Avenida de las Tiendas to Ulric Street and east of Frazee Road would have improved operations from unacceptable LOS F and E, respectively, in the 2030 without Project condition, to acceptable LOS D and C, respectively, in 2030 with the Project.

Due to intersection spacing constraints, the segment of Friars Road between the northbound on-ramp to SR 163 and Frazee Road would not operate at acceptable LOS on opening day with the Project. Similarly, the segments of Friars Road between Ulric Street and Frazee Road would not operate at acceptable LOS in 2030 with the Project. The intersection analysis method predicts the future performance more accurately, and as shown in Tables 5.2-10 and 5.2-11, the intersections adjacent to the northbound on-ramps to SR 163 would operate at acceptable LOS. Also, conditions would be improved with the Project as indicated by the change in LOS from F to D for Ulric Street to SR 163 northbound ramps on opening day and F to E for the 2030 condition, as well as a lower volume-to-capacity ratio for SR 163 northbound ramps to Frazee Road, even though the LOS would remain at F.

Congestion Management Program Compliance. The Congestion Management Program (CMP), adopted on November 22, 1991, is intended to link land use, transportation and air quality through level of service performance. The CMP requires an Enhanced CEQA Review for projects that are expected to generate or redistribute more than 2,400 ADT or more than 200 peak hour trips. The *SANDAG Congestion Management Program Update* (July 2005) contains a list of "CMP Arterials," including Friars Road, that are to be analyzed if the project exceeds these trip thresholds. The *City of San Diego Traffic Impact Study Manual* contains criteria, which establish that a project impact is considered significant if the travel speed along an arterial segment, operating at LOS E or lower (with project), decreases by more than one mile per hour. As shown in Table 5.2-14, the Project would result in greater speeds under both the Opening Day and 2030 conditions, compared to what would occur without the Project.

Freeway Segment Operations

Table 5.2-15, Future Freeway Segment Operations (Opening Day), shows the results for freeway segment operation analysis under existing, without project and opening day with Project conditions.

Table 5.2-16, Future Freeway Segment Operations (2030), shows the results for freeway segment operation analysis under existing, 2030 Without Project and 2030 with Project conditions.

Table 5.2-12
STREET SEGMENT OPERATIONS (OPENING DAY)

Roadway Segment	Lanes (Existing/ Proposed)	Class	Existing		Future Capacity (LOS E)[1]	Without Project			With Project		
			ADT	LOS		ADT	V/C	LOS	ADT	V/C	LOS
Friars Road											
West of Fashion Valley Rd.	5/5	Major Arterial	32,200	C	45,000	32,700	0.73	C	32,700	0.73	C
Fashion Valley Rd. to Avenida de las Tiendas	5/5	Major Arterial	34,300	C	45,000	35,300	0.78	D	35,300	0.78	D
Avenida de las Tiendas to Ulric St.	6/8	Major Arterial	55,100	F	70,000	**55,800**	**1.12**	**F**	**55,800**	0.80	D
Ulric Street to SR 163 Northbound Ramps	6/8	Major Arterial	59,100	F	70,000	**60,800**	**1.22**	**F**	**60,800**	0.87	D
SR 163 Northbound Ramps to Frazee Rd.	6/8	Major Arterial	66,400	F	70,000	**67,600**	**1.35**	**F**	**67,600**	**0.97**	*
East of Frazee Rd.	6/8	Major Arterial	41,400	D	70,000	43,200	0.86	**D**	43,200	0.62	C
Fashion Valley Road											
South of Friars Rd.	4/4	Collector	11,600	B	30,000	12,400	0.41	B	12,400	0.41	B
Ulric Street											
North of Friars Rd.	4/4	Collector	14,800	C	30,000	14,900	0.50	C	14,900	0.50	C
Frazee Road											
North of Friars Rd.	4/4	Collector	21,000	D	30,000	21,500	0.72	D	21,500	0.72	D
South of Friars Rd.	4/4	Collector	17,000	C	30,000	17,400	0.58	C	17,400	0.58	C

Source: LL&G 2008a
[1] Capacity based on roadway classification operating at LOS E.
* Segment is built to its ultimate roadway classification, and adjacent intersections operate at an acceptable LOS.
Bold = unacceptable LOS

Table 5.2-13
STREET SEGMENT OPERATIONS (2030)

Roadway Segment	Lanes (Existing/ Proposed)	Class	Existing		Future Capacity (LOS E)[1]	Without Project			With Project		
			ADT	LOS		ADT	V/C	LOS	ADT	V/C	LOS
Friars Road											
West of Fashion Valley Rd.	5/5	Major Arterial	32,200	C	45,000	34,300	0.76	C	34,300	0.76	C
Fashion Valley Rd. to Avenida de las Tiendas	5/5	Major Arterial	34,300	C	45,000	38,000	0.84	D	38,000	0.84	D
Avenida de las Tiendas to Ulric St.	6/8	Major Arterial	55,100	F	70,000	57,700	1.15	**F**	57,700	0.82	D
Ulric Street to SR 163 Northbound Ramps	6/8	Major Arterial	59,100	F	70,000	65,500	1.31	**F**	65,500	0.94	**E***
SR 163 Northbound Ramps to Frazee Rd.	6/8	Major Arterial	66,400	F	70,000	71,100	1.42	**F**	71,100	**1.02**	**F***
East of Frazee Rd.	6/8	Major Arterial	41,400	D	70,000	48,400	0.97	**E**	48,400	0.69	C
Fashion Valley Road											
South of Friars Rd.	4/4	Collector	11,600	B	30,000	14,700	0.49	C	14,700	0.49	C
Ulric Street											
North of Friars Rd.	4/4	Collector	14,800	C	30,000	17,000	0.57	C	17,000	0.57	C
Frazee Road											
North of Friars Rd.	4/4	Collector	21,000	D	30,000	23,100	0.77	D	23,100	0.77	D
South of Friars Rd.	4/4	Collector	17,000	C	30,000	18,400	0.61	C	18,400	0.61	C

Source: LL&G 2008a
[1] Capacity based on roadway classification operating at LOS E.
* Segment is built to its ultimate roadway classification, and adjacent intersections operate at an acceptable LOS.
Bold = unacceptable LOS

Table 5.2-14
CMP ARTERIAL ANALYSIS

Arterial Segment (Friars Road)	Period	Direction	Without Project		With Project	
			Speed (mph)	LOS	Speed (mph)	LOS
Opening Day						
Fashion Valley Road to Frazee Road	AM	EB	17.6	D	19.6	D
		WB	**14.1**	**E**	**15.0**	**E**
	Mid	EB	**12.3**	**F**	**14.3**	**E**
		WB	**7.8**	**F**	**12.9**	**F**
	PM	EB	**8.4**	**F**	**13.6**	**E**
		WB	**7.1**	**F**	**12.6**	**F**
Year 2030						
Fashion Valley Road to Frazee Road	AM	EB	17.2	D	18.1	D
		WB	**12.9**	**F**	**15.1**	E
	Mid	EB	**12.1**	**F**	**13.5**	**E**
		WB	**7.2**	**F**	**11.9**	**F**
	PM	EB	**6.5**	**F**	**11.7**	**F**
		WB	**6.1**	**F**	**10.7**	**F**

Source: LL&G 2008a
Bold=unacceptable LOS

Under existing conditions, one freeway segment, the southbound mainlines north of Friars Road in the AM peak, operates below LOS D. Without the Project, the northbound mainlines of SR 163 south of Friars Road are anticipated to exceed LOS D in the PM peak hour. On opening day with the Project, this freeway segment would improve to acceptable levels (Table 5.2-15).

Table 5.2-15
FREEWAY SEGMENT OPERATIONS (OPENING DAY)

Freeway Segment	Existing LOS		Future ADT	Future Peak Hour Volume		Without Project LOS		With Project LOS	
	AM	PM		AM	PM	AM	PM	AM	PM
Northbound Mainlines north of Friars Rd	B	C	221,000	8,112	10,553	C	**D**	C	**D**
Southbound Mainlines north of Friars Rd	**F(0)**	D	221,000	11,097	8,954	F(0)	**D**	**D**	C
Northbound Mainlines south of Friars Rd	C	D	206,000	7,353	9,362	C	E	C	**D**
Northbound Collector-Distributor south of Friars Rd	B	B	34,000	2,874	2,768	B	B	B	B
Southbound Mainlines south of Friars Rd	C	B	206,000	10,059	7,409	C	B	C	B
No Build Project			206,000	7,622	4,016				
Project Southbound Collector-Distributor south of Friars Rd	N/A	N/A	--	2,437	3,394	N/A	N/A	B	B

Source: LL&G 2008a
Bold=unacceptable LOS

In the 2030 without Project condition, five projected exceedances of LOS D are projected to occur: the northbound mainlines north of Friars Road in the PM peak, the southbound mainlines north of Friars Road in the AM and PM peak, the northbound mainlines south of Friars Road in the PM peak, and the southbound mainlines south of Friars Road in the AM peak. With the Project in 2030, LOS would improve for the southbound mainlines north of Friars Road in the AM and PM peak; the other freeway segments with unacceptable LOS would have the same LOS as the 2030 without Project (Table 5.2-16).

Table 5.2-16
FREEWAY SEGMENT OPERATIONS (2030)

Freeway Segment	Existing LOS		Future ADT	Future Peak Hour Volume		Without Project LOS		With Project LOS	
	AM	PM		AM	PM	AM	PM	AM	PM
Northbound Mainlines north of Friars Rd	B	C	221,000	8,112	10,553	D	**F(0)**	D	**F(0)**
Southbound Mainlines north of Friars Rd	**F(0)**	D	221,000	11,097	8,954	**F(2)**	**F(0)**	**F(0)**	D
Northbound Mainlines south of Friars Rd	C	D	206,000	7,353	9,362	D	**F(0)**	D	**F(0)**
Northbound Collector-Distributor south of Friars Rd	B	B	34,000	2,874	2,768	B	B	B	B
Southbound Mainlines south of Friars Rd	C	B	206,000	10,059	7,409	**E**	C	**E**	B
No Build Project			206,000	7,622	4,016				
Project Southbound Collector-Distributor south of Friars Rd	N/A	N/A	--	2,437	3,394	N/A	N/A	B	B

Source: LL&G 2008a
Bold=unacceptable LOS

Freeway Weaving Operations

Freeway weave operations would be accommodated with the proposed collector-distributor separating SR 163 mainline and eastbound I-8 traffic from westbound I-8 and Hotel Circle traffic. Table 5.2-17, Future Freeway Weave Operations (Opening Day), shows the results for freeway weaving under existing, without Project and Project opening day conditions. The weave segments were calculated to operate at LOS B on opening day with the Project. Table 5.2-18, Future Freeway Weave Operations (2030), shows the results for freeway weaving under existing, 2030 without Project and 2030 with Project conditions. The weave segments were calculated to operate at LOS C or better in 2030 with the Project. Operations on opening day and in 2030 with the Project would show a marked improvement over existing LOS and the future Without Project condition.

Table 5.2-17
FREEWAY WEAVE OPERATIONS (OPENING DAY)

Freeway Segment	Peak Hour	Existing LOS	Without Project			With Project		
			Speed[1]	Density[2]	LOS	Speed[1]	Density[2]	LOS
Southbound SR 163 (Friars Road to I-8)	AM	C	41.2	29.0	C	56.2	15.0	B
	Midday	D	36.0	38.7	**E**	55.3	15.9	B
	PM	E	37.7	39.8	**E**	55.4	17.1	B
Project Southbound Collector-Distributor (Friars Road to I-8)	AM	N/A	N/A	N/A	N/A	45.5	10.2	B
	Midday	N/A	N/A	N/A	N/A	41.8	14.7	B
	PM	N/A	N/A	N/A	N/A	38.1	18.5	B

Source: LL&G 2008a
[1] Speed is measured in mph
[2] Density is measured in passenger cars/mile/lane
Bold=unacceptable LOS

Table 5.2-18
FREEWAY WEAVE OPERATIONS (2030)

Freeway Segment	Peak Hour	Existing LOS	Without Project			With Project		
			Speed[1]	Density[2]	LOS	Speed[1]	Density[2]	LOS
Southbound SR 163 (Friars Road to I-8)	AM	C	39.0	36.8	E	54.2	18.7	B
	Midday	D	33.9	48.8	F	53.2	19.4	B
	PM	E	35.5	50.2	F	53.2	21.1	C
Project Southbound Collector-Distributor (Friars Road to I-8)	AM	N/A	N/A	N/A	N/A	45.4	11.8	B
	Midday	N/A	N/A	N/A	N/A	41.6	17.2	B
	PM	N/A	N/A	N/A	N/A	36.3	22.1	C

Source: LL&G 2008a
[1] Speed is measured in mph
[2] Density is measured in passenger cars/mile/lane
Bold=unacceptable LOS

Ramp Merge/Diverge Operations

Ramp merge/diverge sections (i.e., on- and off-ramps) were analyzed for future without and with Project conditions, as shown on Tables 5.2-19, Ramp Diverge/Merge Operations (Opening Day) and 5.2-20, Ramp Diverge/Merge Operations (2030).

In the future without Project conditions, the following ramps were calculated to operate below LOS D:

- Southbound SR 163, Friars Road off-ramp from mainlines, LOS F in the AM and PM peak periods.
- Southbound SR 163, Friars Road on-ramp to mainlines, LOS F in the AM and PM peak periods.
- Southbound SR 163, eastbound Genesee Avenue on-ramp to mainlines, LOS F in the AM and PM peak periods[1].

For the Project condition, all ramp junctions were calculated to operate with an acceptable LOS D or better on Project opening day and in the year 2030.

Table 5.2-19
RAMP DIVERGE/MERGE OPERATIONS (OPENING DAY)

Ramp Location	Peak Hour	Upstream Facility			Off-ramp			Ramp Diverge Merge LOS[2]
		Vol.[1]	Capacity	LOS F?	Vol.[1]	Capacity	LOS F?	
Diverge Operations								
Southbound SR 163	*Without Project*							
Mainlines (4 lanes) /	AM	9,880	9,400	**Yes**	1,789	2,000	No	**F**
Friars Rd. Off-ramp (1	PM	8,014	9,400	No	2,009	2,000	**Yes**	**F**
lane No Build, 2 lanes	*With Project*							
Project)	AM	6,851	9,400	No	1,789	3,800	No	B
Existing LOS F/E	PM	6,412	9,400	No	2,009	3,800	No	B
	Without Project							
Southbound SR 163	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mainlines (5 lanes) /	PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Collector-Distributor	*With Project*							
(2 lanes)	AM	6,473	9,400	No	1,789	4,400	No	C
	PM	5,105	9,400	No	2,009	4,400	No	C

[1] This ramp would operate at LOS C in the PM peak period in 2010 without the Project; it would degrade to LOS F by 2030.

Table 5.2-19 (cont.)
RAMP DIVERGE/MERGE OPERATIONS (OPENING DAY)

Ramp Location	Peak Hour	Upstream Facility			Off-ramp			Ramp Diverge Merge LOS[2]
		Vol.[1]	Capacity	LOS F?	Vol.[1]	Capacity	LOS F?	
Diverge Operations (cont.)								
Northbound Collector-Distributor Collector-Distributor (2 lanes) / Friars Rd. Off-ramp (Eastbound & Westbound lanes No Build, 2 lanes Project) Existing LOS B/B-E, A/A-W	*Without Project*							
	AM-E	2,525	4,500	No	1,208	2,000	No	C
	PM-E	2,415	4,500	No	1,153	2,000	No	C
	AM-W	1,317	4,500	No	637	2,000	No	B
	PM-W	1,262	4,500	No	1,252	2,000	No	B
	With Project							
	AM	2,525	4,500	No	1,844	3,800	No	A
	PM	2,415	4,500	No	2,404	3,800	No	A
Merge Operations								
Southbound Collector-Distributor Friars Rd. On-ramp (1 lane) / Collector-Distributor (2 lanes)	*Without Project*							
	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	With Project							
	AM	2,126	4,500	No	2,126	4,600	No	B
	PM	3,003	4,500	No	3,003	4,600	No	C
Southbound SR 163 Friars Rd. On-ramp (2 lanes No Build, 1 lane Project) / Mainlines (4 lanes) Existing LOS B/C	*Without Project*							
	AM	9,430	9,400	**Yes**	3,030	4,600	No	**F**
	PM	8,223	9,400	No	3,473	4,600	No	C
	With Project							
	AM	7,283	9,400	No	3,820	4,600	No	D
	PM	5,190	9,400	No	2,832	4,600	No	C
Northbound Collector-Distributor Collector-Distributor (2 lanes) / Friars Rd. On-ramp (1 lane No Build, 2 lanes Project) Existing LOS B/C	*Without Project*							
	AM	1,889	4,500	No	1,889	4,600	No	B
	PM	2,426	4,500	No	2,426	4,600	No	C
	With Project							
	AM	1,870	4,500	No	1,870	4,600	No	A
	PM	2,402	4,500	No	2,402	4,600	No	A

Table 5.2-19 (cont.)
RAMP DIVERGE/MERGE OPERATIONS (OPENING DAY)

Ramp Location	Peak Hour	Upstream Facility			Off-ramp			Ramp Diverge Merge LOS[2]
		Vol.[1]	Capacity	LOS F?	Vol.[1]	Capacity	LOS F?	
Merge Operations (cont.)								
Southbound SR 163	*Without Project*							
Eastbound Genesee	AM	9,880	9,400	**Yes**	3,311	4,600	No	**F**
Ave. On-ramp	PM	8,014	9,400	No	2,784	4,600	No	C
(1 lane) / Mainlines	*With Project*							
(4 lanes)	AM	7,380	9,400	No	2,185	4,600	No	A
Existing LOS C/C	PM	6,030	9,400	No	1,956	4,600	No	A

Source: LL&G 2008a
[1] Volumes factored up to account for peak hour factor and truck percentages, and are expressed in vehicles per hour (vph).
[2] On-ramp volume includes mainlines volumes for lanes 1 and 2.
[3] Ramp operations dependent on freeway mainline operations and ramp capacity.
[4] Per the Caltrans Highway Design Manual, ramp demands in excess of 1,500 vph generally warrant a second lane.
Bold=unacceptable LOS

Table 5.2-20
RAMP DIVERGE/MERGE OPERATIONS (2030)

Ramp Location	Peak Hour	Upstream Facility			Off-ramp			Ramp Diverge Merge LOS[2]
		Vol.[1]	Capacity	LOS F?	Vol.[1]	Capacity	LOS F?	
Diverge Operations								
Southbound SR 163	*Without Project*							
Mainlines (4 lanes) /	AM	12,186	9,400	Yes	1,877	2,000	No	**F**
Friars Rd. Off-ramp	PM	9,880	9,400	Yes	2,097	2,000	Yes	**F**
(1 lane No Build, 2	*With Project*							
lanes Project)	AM	8,695	9,400	No	1,877	3,800	No	C
Existing LOS F/E	PM	7,904	9,400	No	2,097	3,800	No	C
	Without Project							
Southbound SR 163	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mainlines (5 lanes) /	PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Collector-Distributor	*With Project*							
(2 lanes)	AM	8,248	9,400	No	1,929	4,400	No	C
	PM	6,228	9,400	No	2,097	4,400	No	C

Table 5.2-20 (cont.)
RAMP DIVERGE/MERGE OPERATIONS (2030)

Ramp Location	Peak Hour	Upstream Facility			Off-ramp			Ramp Diverge Merge LOS[2]
		Vol.[1]	Capacity	LOS F?	Vol.[1]	Capacity	LOS F?	
Diverge Operations (cont.)								
Northbound Collector-Distributor Collector-Distributor (2 lanes) / Friars Rd. Off-ramp (Eastbound & Westbound lanes No Build, 2 lanes Project) Existing LOS B/B-E, A/A-W	*Without Project*							
	AM-E	3,184	4,500	No	1,581	2,000	No	C
	PM-E	3,074	4,500	No	1,526	2,000	No	C
	AM-W	1,581	4,500	No	681	2,000	No	B
	PM-W	1,584	4,500	No	1,317	2,000	No	B
	With Project							
	AM	3,184	4,500	No	2,283	3,800	No	A
	PM	3,074	4,500	No	2,843	3,800	No	A
Merge Operations								
Southbound Collector-Distributor Friars Rd. On-ramp (1 lane) / Collector-Distributor (2 lanes)	*Without Project*							
	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	With Project							
	AM	2,551	4,500	No	2,551	4,600	No	B
	PM	3,552	4,500	No	3,552	4,600	No	C
Southbound SR 163 Friars Rd. On-ramp (2 lanes No Build, 1 lane Project) / Mainlines (4 lanes) Existing LOS B/C	*Without Project*							
	AM	11,681	9,400	Yes	3,527	4,600	No	**F**
	PM	10,100	9,400	Yes	3,943	4,600	No	**F**
	With Project							
	AM	9,105	9,400	No	4,314	4,600	No	D
	PM	6,512	4,600	No	3,399	4,600	No	C
Northbound Collector-Distributor Collector-Distributor (2 lanes) / Friars Rd. On-ramp (1 lane No Build, 2 lanes Project) Existing LOS B/C	*Without Project*							
	AM	2,173	4,500	No	2,173	4,600	No	B
	PM	2,580	4,500	No	2,580	4,600	No	C
	With Project							
	AM	2,152	4,500	No	2,152	4,600	No	A
	PM	2,555	4,500	No	2,555	4,600	No	A

Table 5.2-20 (cont.)
RAMP DIVERGE/MERGE OPERATIONS (2030)

Ramp Location	Peak Hour	Upstream Facility			Off-ramp			Ramp Diverge Merge LOS[2]
		Vol.[1]	Capacity	LOS F?	Vol.[1]	Capacity	LOS F?	
Merge Operations								
Southbound SR 163	*Without Project*							
Eastbound Genesee	AM	12,186	9,400	Yes	3,901	4,600	No	**F**
Ave. On-ramp	PM	9,880	9,400	Yes	3,251	4,600	No	**F**
(1 lane) / Mainlines	*With Project*							
(4 lanes)	AM	9,367	9,400	No	2,652	4,600	No	A
Existing LOS C/C	PM	7,283	4,600	No	2,279	4,600	No	A

Source: LL&G 2008a
[1] Volumes factored up to account for peak hour factor and truck percentages, and are expressed in vehicles per hour (vph).
[2] On-ramp volume includes mainlines volumes for lanes 1 and 2.
[3] Ramp operations dependent on freeway mainline operations and ramp capacity.
[4] Per the Caltrans Highway Design Manual, ramp demands in excess of 1,500 vph generally warrant a second lane.
Bold=unacceptable LOS

Summary of Traffic Impacts

All intersections in the study area would operate at an acceptable LOS with implementation of the Project. Except as discussed below, all street segments, diverge/merge operations, freeway weave operations, and freeway segments would operate at an acceptable LOS on opening day and in 2030 with the Project.

Project implementation would result in improvements to the following roadway/freeway segments on opening day, relative to forecast conditions without the Project:

- Friars Road from Avenida de las Tiendas to the SR 163 northbound ramps would improve from LOS F to LOS D.
- Friars Road east of Frazee Road would improve from LOS D to LOS C.
- Southbound SR 163 north of Friars Road would improve from LOS F(0) to LOS D in the AM peak and from LOS D to LOS C in the PM peak.

Project implementation would result in improvements to the following roadway/freeway segments in 2030, relative to forecast conditions without the Project:

- Friars Road from Avenida de las Tiendas to Ulric Street would improve from LOS F to LOS D.
- Friars Road from Ulric Street to SR 163 northbound ramps would improve from LOS F to LOS E.
- Friars Road east of Frazee Road would improve from LOS E to LOS C.

- Southbound SR 163 north of Friars Road would improve from LOS F(2) to LOS F(0) in the AM peak and from LOS F(0) to LOS D in the PM peak.

The improvements in traffic operations of these segments would have the additional benefit of potentially reducing response times for emergency services by providing for more efficient traffic flow.

The following street and freeway segments would have the same unacceptable LOS with or without the Project:

- Friars Road from the SR 163 northbound ramps to Frazee Road would operate at LOS F in the opening day and 2030 conditions.
- Northbound SR 163 north of Friars Road would operate at LOS F(0) in the PM peak period in 2030.
- Northbound SR 163 south of Friars Road would operate at LOS E on opening day and at LOS F(0) in 2030, in PM peak period.
- Southbound SR 163 south of Friars Road would operate at LOS E in AM peak period in 2030.

In terms of City Significance Determination Thresholds 1, 2 and 4, impacts would not be significant even though some street and freeway segments would operate at LOS E or F in 2030 with the Project because, as shown in the above tables, implementation of the Project would result in improved traffic conditions compared to predicted traffic conditions without the Project. The Project would not generate traffic, would reduce future traffic congestion and would have beneficial effects on the traffic circulation in the study area. City Significance Determination Threshold 5a is discussed further in Subsection 5.2.3, Analysis of Issue 2: Safety of Pedestrians, Bicyclists and Motorists.

In terms of City Significance Determination Threshold 5b, the Project would be consistent with the intent of the community planning documents for the area as it would improve the SR 163/Friars Road interchange, and would be designed to properly align with other existing and planned roadways. In addition, the *Mission Valley Community Plan* is being updated, and it is anticipated that the new Transportation Element would cite the approved concepts for local roadways included in the Project (see Subsection 5.1.2.2).

In terms of City Significance Determination Threshold 6, as discussed above under construction traffic impacts, construction control measures and the TMP described in Subsection 3.2.7.5, Construction Control Measures, would prevent the Project from causing substantial restrictions in access to publicly or privately owned land.

5.2.2.3 Significance of Impact

The Project would have beneficial effects on traffic circulation, would be consistent with community planning documents, and would not cause substantial restrictions in access.

Significant impacts to traffic circulation, volume and road capacity resulting from Project implementation would not occur.

5.2.2.4 Mitigation Measures

As no significant impacts are identified, no mitigation measures would be required.

5.2.3 Analysis of Issue 2: Safety of Pedestrians, Bicyclists and Motorists

Issue 2: ***What direct and cumulative impacts would the Project have on the safety of pedestrians, bicyclists and motorists using facilities in the area crossed by the road during construction of the road and bridge, and during operation of the completed Project?***

5.2.3.1 Impact Threshold

In accordance with the City Significance Determination Thresholds (2007a), a significant impact will be found to the safety of pedestrians, bicyclists and motorists if the Project would:

1. Increase traffic hazards to motor vehicles, bicyclists or pedestrians due to proposed non-standard design features (e.g., poor sight distance, proposed driveway onto an access-restricted roadway). (City Significance Determination Threshold 5a)

5.2.3.2 Impact Analysis

Project Construction

As described above, the TMP, which would be prepared to reduce potential construction-related traffic conflicts, detours and delays, would also benefit routing of pedestrians and bicyclists through active construction areas. Bicyclists using the existing Class II bike lanes along Friars Road and Ulric Street would need to follow all traffic control measures and instructions from construction personnel, similar to motorists. Provisions for safely routing pedestrians through active construction areas would be provided as part of the TMP and the contractor's specific daily traffic control measures. Interference with the Class I bike path along the south side of Friars Road would not be expected, because the path begins west of Fashion Valley Road and construction activities would not occur west of Avenida de las Tiendas. Also, interference with the Class I bike path along the San Diego River would not be expected, because the bike path does not extend under SR 163.

Based on the construction control measures and the TMP, the Project would not increase traffic hazards to motor vehicles, bicyclists or pedestrians during construction, and no significant impact is identified for this issue.

Project Operation

The widening and improvement of Friars Road would include the construction of a sidewalk on both sides of the roadway and would retain the Class II bicycle facility on both sides of the street throughout the Project area. At intersection approaches, the Class II bicycle lanes would be striped to the left of dedicated left-turn pockets to minimize conflict with vehicles. All existing free-right turns would be eliminated and would be replaced by signalized "T" intersections. As illustrated in Figure 5.2-6, Proposed Roadway Crossing Locations, locations where pedestrian and bicycle traffic would cross roadways would have painted crosswalks. The addition of a sidewalk on the north side of Friars Road, the removal of the free-right turn vehicle movements, and construction of "T" intersections is expected to enhance conditions for pedestrians and bicyclists. Non-standard design features are not proposed and, therefore, increases in traffic hazards to motor vehicles, pedestrians or bicyclists are not expected.

The future potential for extension of the Class I bike path under SR 163 would not be affected by the new bridge, because piers would be in the same alignment as the existing bridge and the bike path could simply continue.

No significant impacts to motorists, pedestrians and bicyclists would occur as a result of the Project. The overall effect of the Project on motorists, pedestrians and bicyclists would be beneficial.

5.2.3.3 Significance of Impact

Significant impacts to pedestrians and bicyclists would not occur.

5.2.3.4 Mitigation Measures

No mitigation measures would be required.

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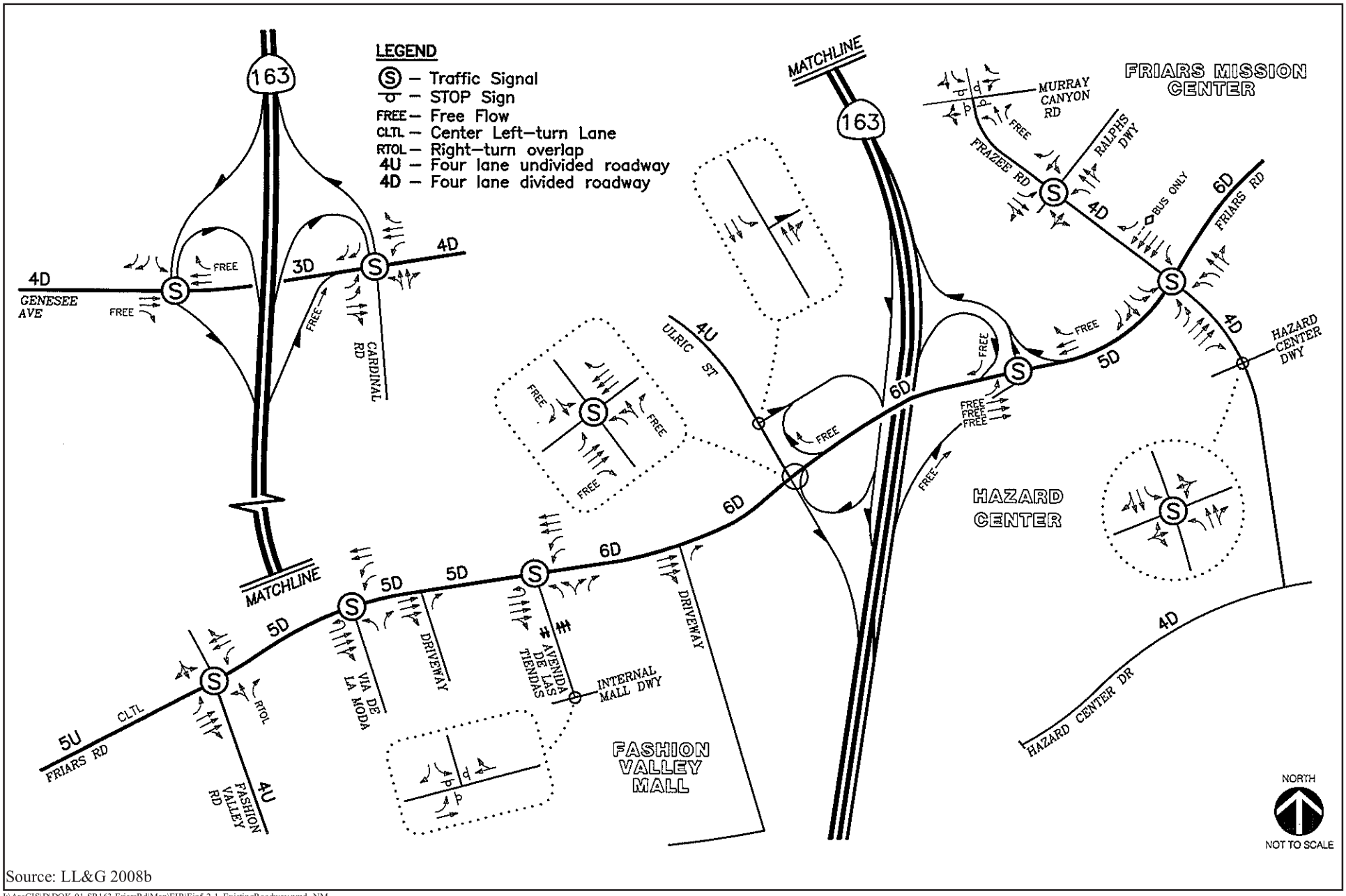


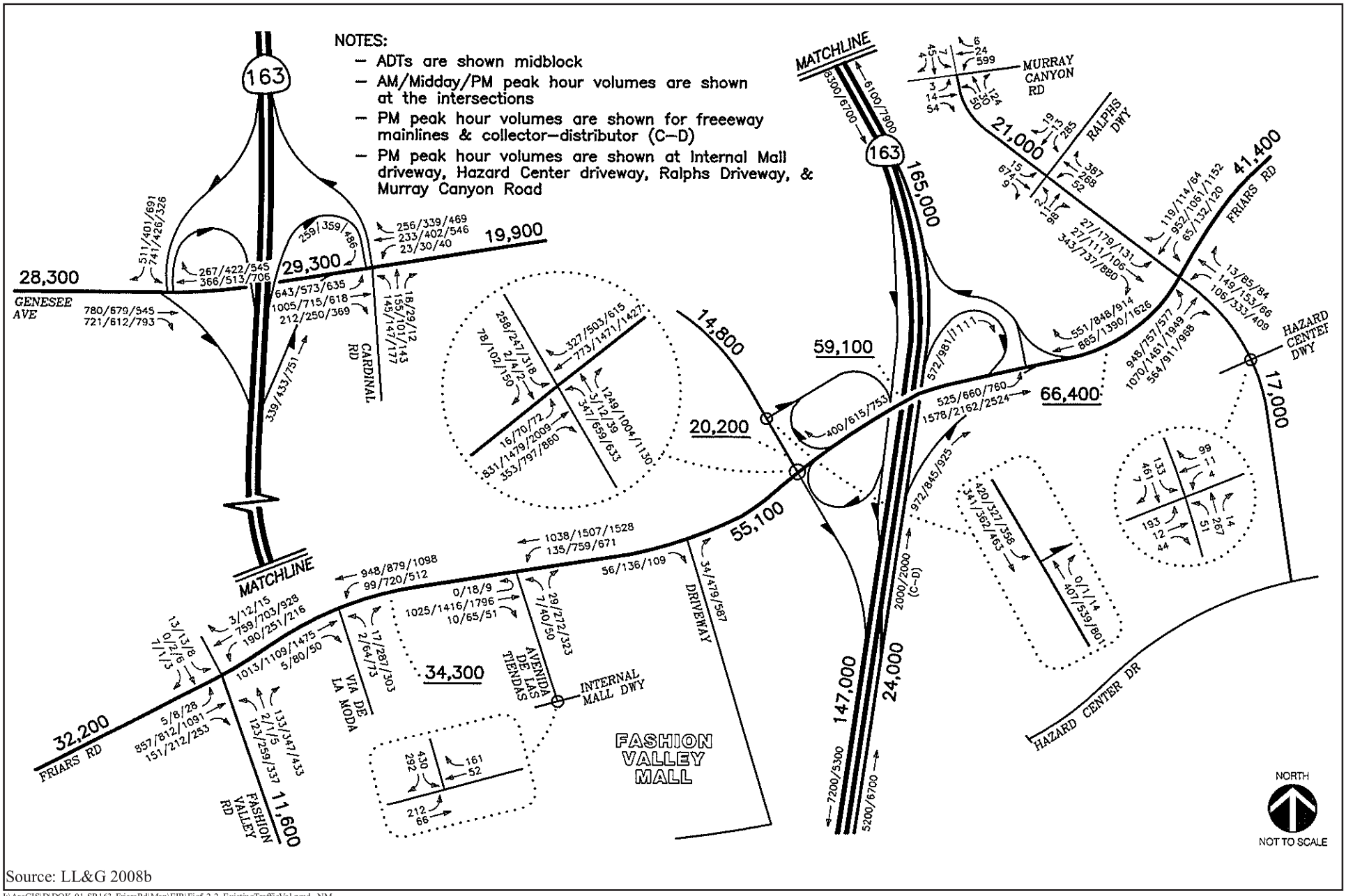
Source: LL&G 2008b

I:\ArcGIS\D\DOK-01 SR163 FriarsRd\Map\EIR\Fig5.2-1_ExistingRoadway.pmd -NM

Existing Roadway Configuration

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.2-1



Source: LL&G 2008b

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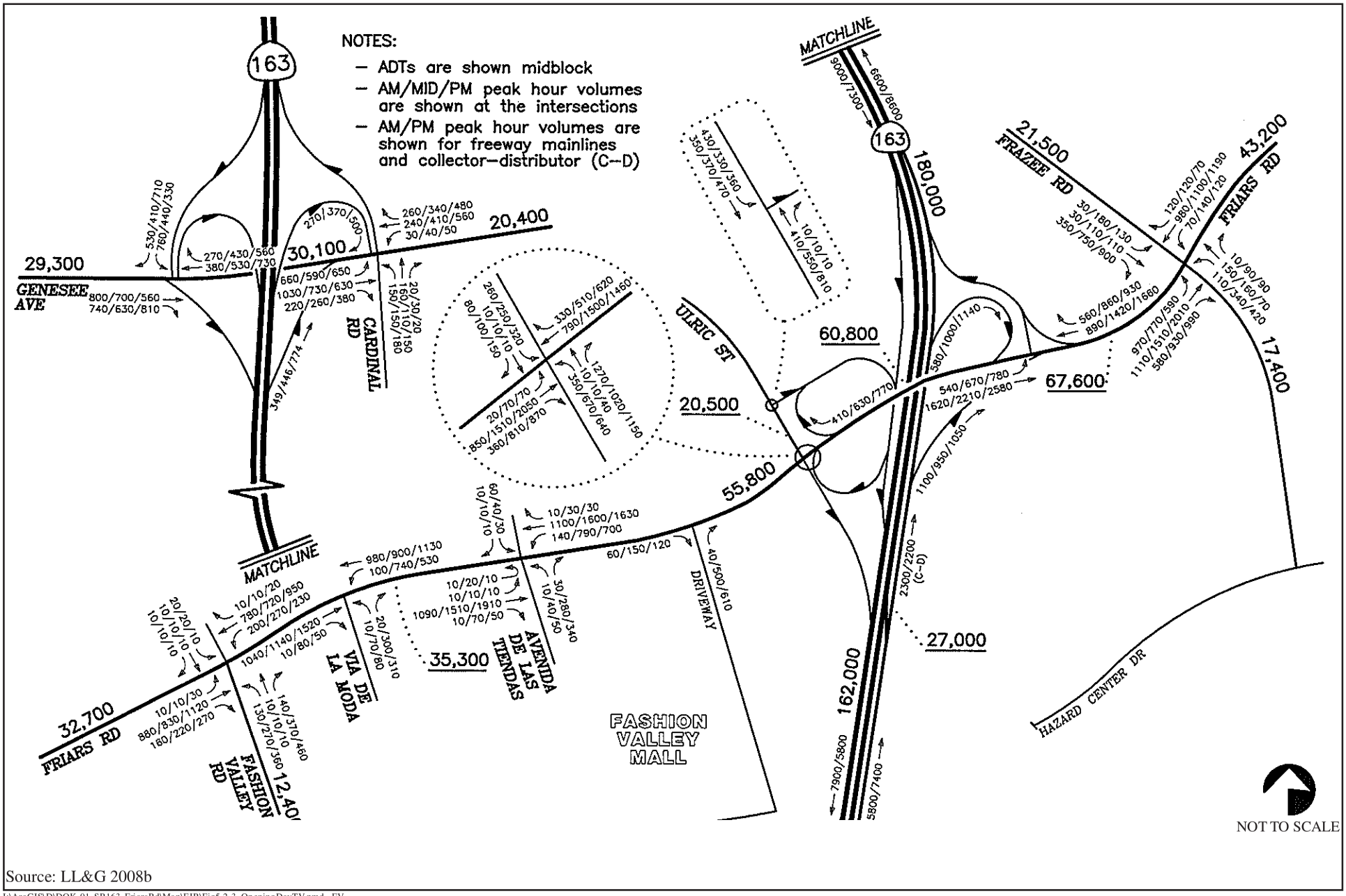
Existing Traffic Volumes

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.2-2



Source: LL&G 2008b

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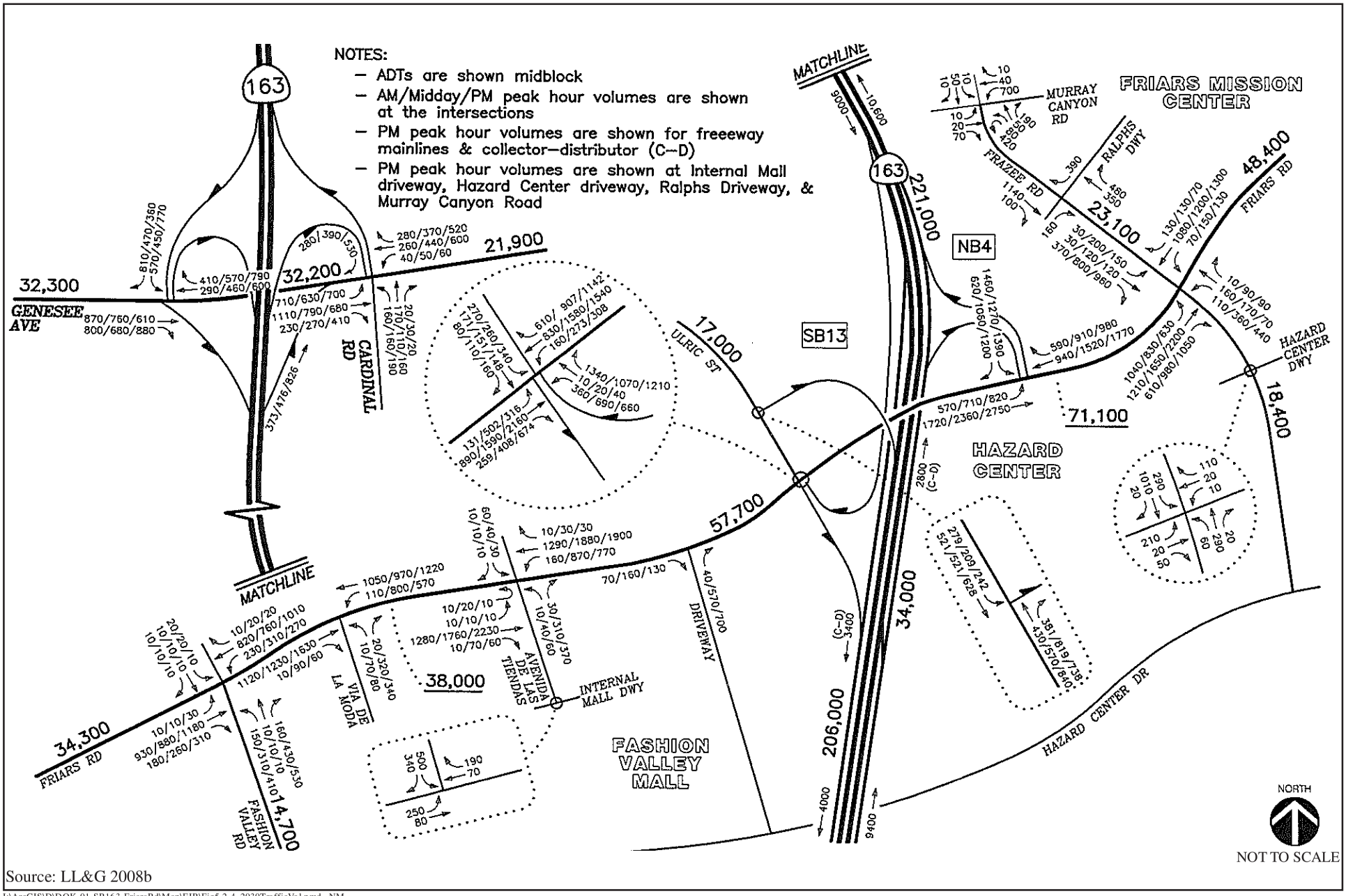
Opening Day Traffic Volumes

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.2-3



Source: LL&G 2008b

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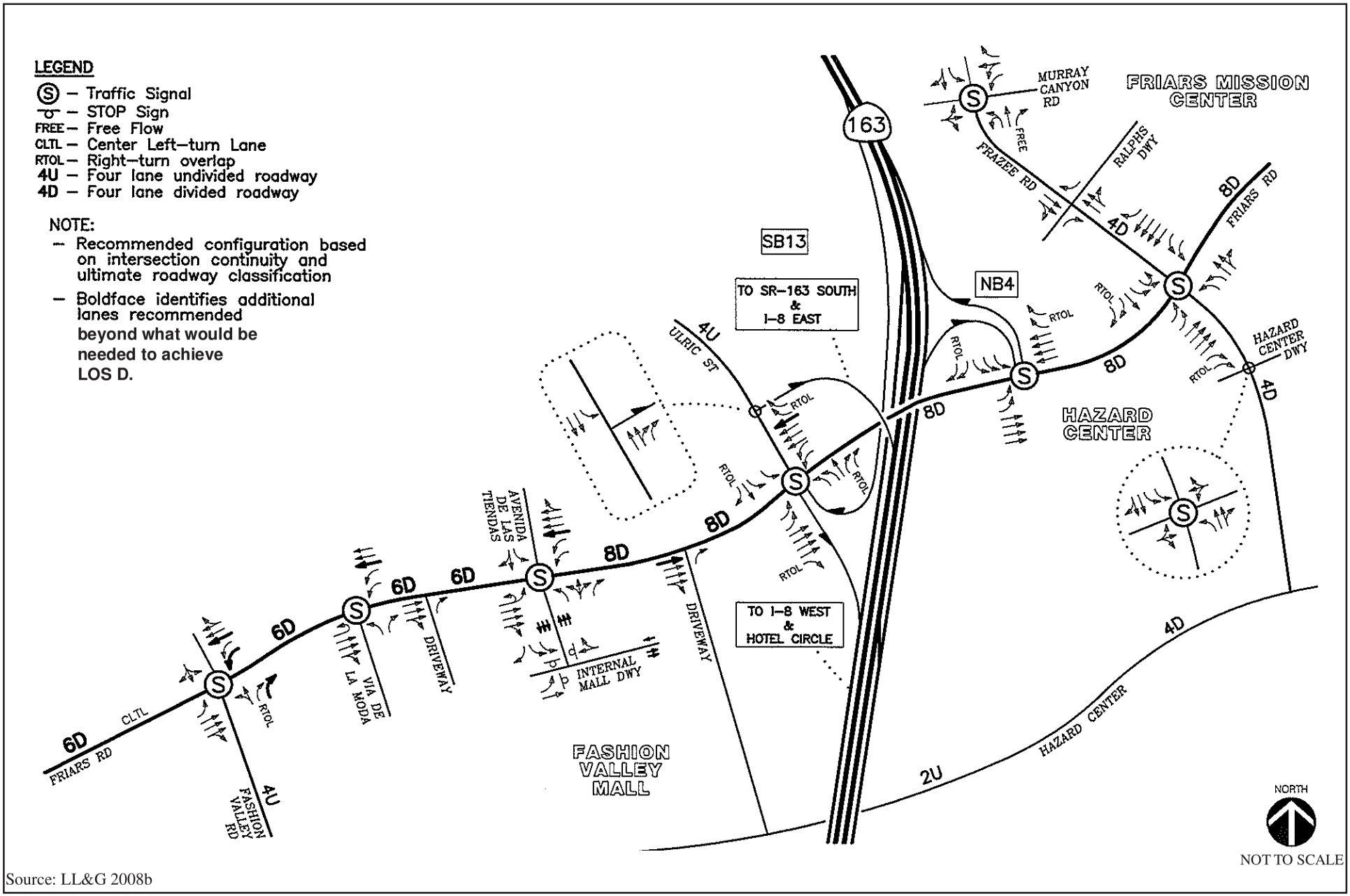
Year 2030 Traffic Volumes

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.2-4



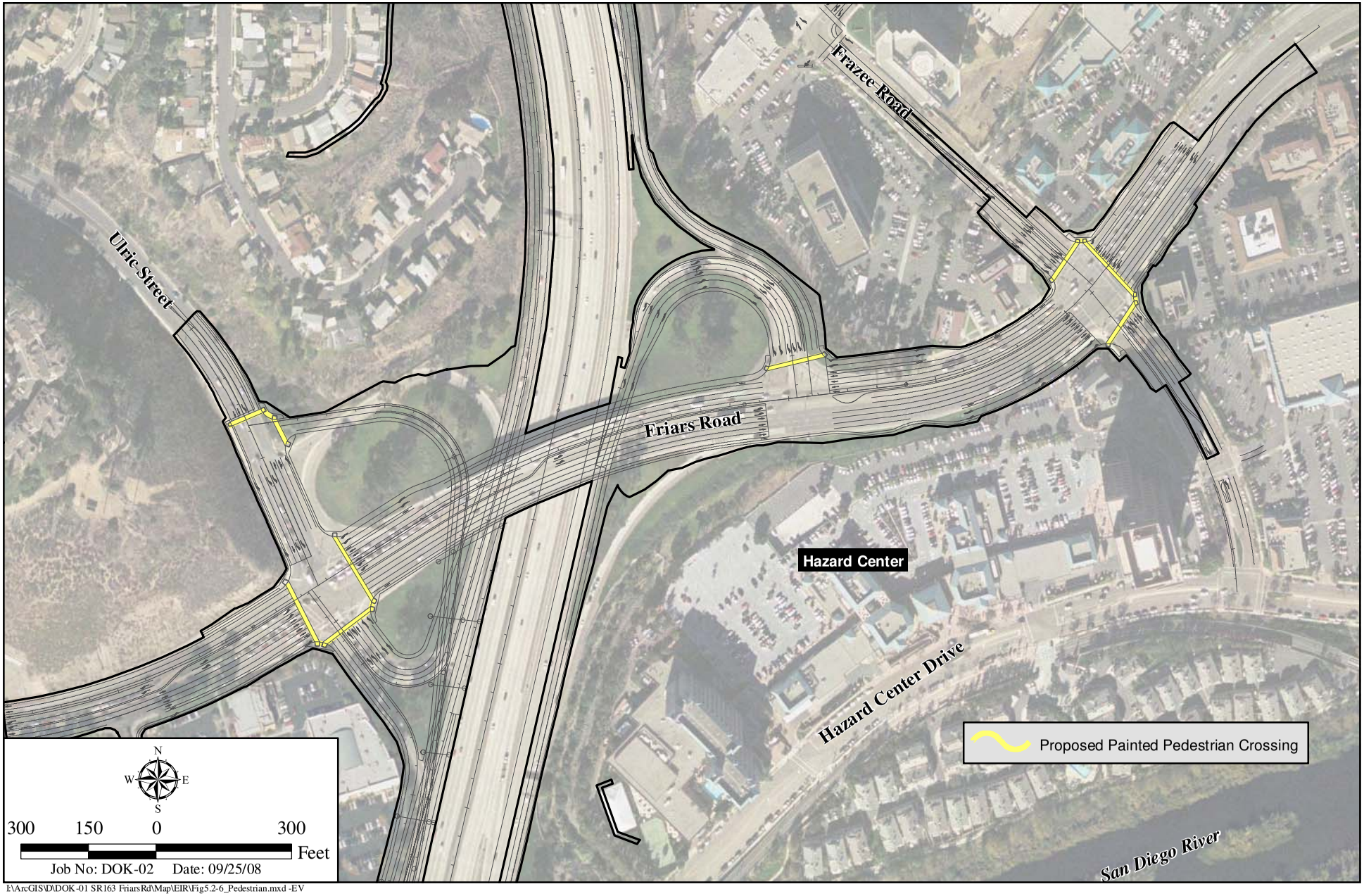
Source: LL&G 2008b

I:\ArcGIS\D\DOK-01 SR163 FriarsRd\Map\EIR\Fig5.2-5_RecRoadway.pmd -NM

Recommended Roadway Configuration

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.2-5



I:\ArcGIS\D\DOK-01 SR163 FriarsRd\Map\EIR\Fig5.2-6_Pedestrian.mxd -EV

Proposed Roadway Crossing Locations

SR-163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.2-6

5.3 HYDROLOGY/WATER QUALITY

Technical studies prepared for the Project include a Preliminary Water Resources Report (PWRR), San Diego River Location Hydraulic Study (LHS), Storm Water Data Report (SWDR), and Water Quality Technical Report (WQTR) (Dokken 2009b, 2009c, 2009d and 2009e, respectively). These studies are summarized below along with other applicable data, with the complete reports included in Appendix C of this EIR.

5.3.1 Existing Conditions

5.3.1.1 Affected Environment

Surface Water

Watershed and Drainage Characteristics

The study area is within the San Diego Hydrologic Unit (HU), 1 of 11 such drainage areas designated in the 1994 (as amended) RWQCB *Water Quality Control Plan for the San Diego Basin* (Basin Plan). The San Diego HU is a rectangular-shaped area of approximately 440 square miles that extends generally between Julian and Cuyamaca Reservoir on the east, and the San Diego River outlet (just south of Mission Bay) along the coast (Figure 5.3-1, Study Area Location Within Local Hydrologic Designations). The San Diego HU is divided into a number of hydrologic areas and subareas based on local drainage characteristics, with the study area and vicinity located in the Mission San Diego Subarea of the Lower San Diego Hydrologic Area. Drainage within the San Diego HU, including the study area vicinity, is through the San Diego River and associated tributaries. Annual precipitation in the San Diego HU ranges from approximately 11 inches along the coast to 35 inches at Cuyamaca Reservoir (RWQCB 1994, as amended). The study area vicinity averages approximately 10.77 inches of rainfall per year, with January (2.28 inches), February (2.04 inches) and March (2.26 inches) comprising the wettest months, and June (0.09 inches), July (0.03 inches) and August (0.09 inches) representing the driest months (weather.com 2009).

Most of the study area has been developed and includes portions of SR 163, Friars Road and adjacent properties. Existing storm drain facilities within and adjacent to the study area include numerous structures associated with roadway and other development, such as culverts, cross culverts, open channels, asphalt-concrete overside drains, median drains, conduits and curb inlets (as summarized below and described in Appendix C). The study area is within a larger local watershed that includes a number of off-site (upstream) locations and encompasses an area of approximately 488 acres. Existing flow from this watershed (including runoff generated within the study area) is approximately 1,584 cubic feet/second (cfs) for a 25-year storm event and 2,274 cfs for a 100-year storm[1] (Dokken 2009f, 2008a).

[1] 25- and 100-year storms are defined as events that have a four and one percent chance, respectively, of being exceeded in any given year (as opposed to events occurring once every 25 or 100 years).

Drainage within the study area on the west side of SR 163 between Friars Road and Genesee Avenue flows generally east through a number of existing storm drains ranging in size from 24 to 60 inches. These flows are directed east of the freeway where they enter a series of major open channels and underground storm drains, and move south before eventually entering the San Diego River through a quadruple-barrel, corrugated metal pipe culvert. Runoff in the study area that is not collected in the above-described facilities enters a number of smaller conduits and flows south to the river. These smaller facilities capture flows primarily from commercial parking lots and roadway surfaces near the SR 163/Friars Road interchange, including the southbound diamond on-ramp, the southbound off-ramp, and Friars Road between the freeway and Fashion Valley Road. Flows in the San Diego River continue west from the study area vicinity for approximately 5.3 miles before reaching the Pacific Ocean.

Pursuant to the Caltrans Highway Design Manual (2001), flows associated with Caltrans facilities are separated into two categories, roadway drainage and cross drainage. Roadway drainage consists of storm water collected, conveyed and removed from the traveled way, shoulders and adjacent regions. Roadway drainage is accommodated by median inlets, asphalt dikes, curb and gutter facilities, overside drains, grate inlets and roadside ditches. These drainage structures are designed for a 25-year storm event, with an allowable water spread less than the shoulder width (Appendix C). Cross drainage, which describes storm water moved from one side of a roadway to the other, is conveyed via bridges and culverts, which are typically designed for a 100-year storm event.

Floodplains

The study area and vicinity have been mapped for flood hazards by FEMA, with approximately the northern two-thirds of the study area designated as Zone X, or areas outside the 500-year (and therefore the 100-year) floodplain (FEMA 2002, 1997a, 1997b). Beginning north of Friars Road, the study area enters a 100-year floodplain associated with Murray Canyon Creek and designated as Zone AE (Figure 5.3-2, Floodplain Boundaries). South of Friars Road, the study area enters mapped floodplains designated to include areas either within the 500-year floodplain, or within a 100-year floodplain with average flood depths of less than 1 foot or drainage areas of less than 1 square mile. This zone is also termed Zone X by FEMA, but is hereafter referred to as Zone X1 (refer to Figure 5.3-2, Floodplain Boundaries). The study area continues south though the noted Zone X1 designation for approximately 300 feet before entering 100-year floodplains associated with Murray Canyon Creek and the San Diego River (Zones AE and AO, refer to Figure 5.3-2). The study area extends south for approximately 2,000 feet within the noted 100-year floodplains before reentering a Zone X1 designation that continues south to the study area terminus. The portions of the study area extending approximately 800 feet east of SR 163 along Friars Road and along Frazee Road to the north are within an AE Zone associated with Murray Canyon Creek as noted above, while the area extending approximately 1,250 feet west of SR 163 on Friars Road is within an X1 Zone (FEMA 2002). Additional discussion of floodplain boundaries within the study area is provided in Appendix C.

Groundwater

The study area is within the areal extent of the Mission Valley Groundwater Aquifer, which exhibits a surface area of approximately 3.4 square miles along the lower San Diego River (San Diego County Water Authority [SDCWA] 1997). Groundwater was encountered at variable depths in a number of exploratory borings drilled during geotechnical investigation of the study area, as summarized in Table 5.3-1, Observed Groundwater Within the Study Area (see also Appendix C). As indicated from these data, relatively shallow groundwater was observed in the central and southern portions of the study area, with the Project Geotechnical Design Report (SCS&T 2008a, see Appendix F) also noting, "Groundwater levels can fluctuate seasonally, and can rise significantly following periods of rain."

Table 5.3-1
OBSERVED GROUNDWATER WITHIN THE STUDY AREA

Boring Number[1]	**Groundwater Depth (Feet)**
B-1	24.6
B-2	19.7
B-3	33.5
B-8	16.1
B-9	23.0
B-10	15.1

Source: SCS&T 2008a
[1] See Figure 5.6-1, Generalized Geology Map, for boring locations.

Water Quality

Surface Water

As previously described, the principal surface waters located downstream of the study area include the San Diego River and the Pacific Ocean. Surface water within the study area includes municipal irrigation flows and intermittent storm runoff, as well as flows in the San Diego River. No known water quality data are available from within the study area, although irrigation and storm flows are typically subject to variable water quality conditions based on factors such as runoff volume/velocity and local/upstream land uses. A summary of typical urban contaminant sources and loadings is shown in Tables 5.3-2, Summary of Contaminant Sources for Urban Storm Water Runoff, and 5.3-3, Typical Contaminant Loadings in Runoff for Various Urban Land Uses.

Table 5.3-2
SUMMARY OF CONTAMINANT SOURCES FOR URBAN STORM WATER RUNOFF

Contaminant	Contaminant Sources
Sediment and Floatables	Streets, lawns, driveways, roads, construction activities, atmospheric deposition, drainage channel erosion
Pesticides and Herbicides	Residential lawns and gardens, roadsides, utility rights-of-way, commercial and industrial landscaped areas, soil wash-off
Organic Materials	Residential lawns and gardens, commercial landscaping, animal wastes
Oxygen Demanding Substances	Residential lawns and gardens, commercial landscaping, animal wastes, leaky sanitary sewer lines or septic systems
Metals	Automobiles, bridges, atmospheric deposition, industrial area, soil erosion, corroding metal surfaces, combustion processes
Oil and Grease/Hydrocarbons	Roads, driveways, parking lots, vehicle maintenance areas, gas stations, illicit dumping to storm drains
Bacteria and Viruses	Lawns, roads, leaky sanitary sewer lines, sanitary sewer cross-connections, animal waste, septic systems
Nitrogen and Phosphorus	Lawn fertilizers, atmospheric deposition, automobile exhaust, soil erosion, animal waste, detergents

Source: USEPA 1999

Table 5.3-3
TYPICAL CONTAMINANT LOADINGS IN RUNOFF FOR VARIOUS URBAN LAND USES
(pounds/acre-year)

Land Use	TSS	TP	TKN	NH_3 - N	NO_2 + NO_3 - N	BOD	COD	Pb	Zn	Cu
Commercial	1000	1.5	6.7	1.9	3.1	62	420	2.7	2.1	0.4
Parking Lot	400	0.7	5.1	2	2.9	47	270	0.8	0.8	0.04
HDR	420	1	4.2	0.8	2	27	170	0.8	0.7	0.03
MDR	190	0.5	2.5	0.5	1.4	13	72	0.2	0.2	0.14
LDR	10	0.04	0.03	0.02	0.1	N/A	N/A	0.01	0.04	0.01
Freeway	880	0.9	7.9	1.5	4.2	N/A	N/A	4.5	2.1	0.37
Industrial	860	1.3	3.8	0.2	1.3	N/A	N/A	2.4	7.3	0.5
Park	3	0.03	1.5	N/A	0.3	N/A	2	0	N/A	N/A
Construction	6000	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: USEPA 1999
HDR = High Density Residential; MDR = Medium Density Residential; LDR = Low Density Residential
N/A = Not available; insufficient data to characterize
TSS = Total suspended solids; TP = Total phosphorus; TKN = Total Kjeldahl nitrogen; NH_3 – N = Ammonia; nitrogen; NO_2 + NO_3 – N = Nitrate + Nitrite; BOD = Biochemical oxygen demand; COD = Chemical oxygen; demand; Pb = Lead; Zn = Zinc; Cu = Copper

Historic and current water quality monitoring has been/is being conducted in upstream and downstream portions of the San Diego River in association with local/regional water agency programs and requirements under the federal Clean Water Act (CWA), NPDES and the associated Municipal Storm Water Permit. Specifically, these include efforts conducted pursuant to RWQCB Order No. 90-42 in 1993/1994, RWQCB Order No. R9-2007-0001 (the Municipal Permit) for ongoing monitoring beginning with the 2001/2002 storm season, and a separate bioassessment monitoring program conducted by the RWQCB between 1998 and 2002. In addition, an analysis of aerially-deposited lead (ADL) was conducted within the study area, with all described monitoring/sampling efforts outlined below (and additional discussion of regulatory requirements provided below in Section 5.3.1.2, Regulatory Setting).

Monitoring at the San Diego River Station (located approximately 1,600 feet downstream of the study area) was conducted for three storm events during 1993/1994, while monitoring at the San Diego River Mass Loading Station (MLS; located at the same site as the San Diego River Station) covered three storm events each for the 2001/2002 through 2006/2007 storm seasons (18 total monitored storm events). Both monitoring efforts addressed numerous constituents of concern, including nitrogen compounds, phosphorus, oil and grease, bacterial indicators, pH, turbidity, chemical oxygen demand (COD), biochemical oxygen demand (BOD), total suspended solids (TSS), total dissolved solids (TDS) and metals. Testing at the San Diego River MLS also addressed chemical pesticides and toxicity to aquatic test organisms. Monitoring conducted in 1993/1994 observed that applicable water quality objectives were exceeded for the following constituents (MEC Analytical Systems, Inc. [MEC] 2001):

- Fecal/total coliform counts and total Kjeldahl nitrogen in all three storm events.
- Semi-volatile compounds in two storm events.
- TSS and total cyanide in one storm event.

Monitoring at the San Diego River MLS during the 2001/2002 through 2006/2007 storm seasons indicated that applicable water quality objectives were exceeded for the following constituents (Weston Solutions [Weston] 2008):

- Fecal coliform in 16 of 18 monitored storm events.
- Turbidity in 13 of 18 monitored storm events.
- TDS in 7 of 18 monitored storm events.
- Chlorpyrifos (a pesticide) and TSS in 4 of 18 monitored storm events.
- Lead in 3 of 18 monitored storm events.
- BOD, COD and diazinon (a pesticide) in 2 of 18 monitored storm events.
- Un-ionized ammonia (as N), Methylene Blue Activated Substances (MBAS; e.g., commercial detergent), antimony, cadmium and toxicity for three different species in 1 of 18 monitored storm events.

Dry weather sampling also was conducted at a number of sites located both upstream and downstream of the study area during the period of 2004 through 2007. Data from these

efforts documented that water quality objectives were exceeded for numerous constituents, including the following (Weston 2009, 2008, 2007, 2005):

- Turbidity (cloudiness of water caused by individual particles invisible to the naked eye) objectives were exceeded 11 times out of 157 samples; total coliform objectives were exceeded 5 times out of 44 samples; enterococcus (bacteria of the intestine) objectives were exceeded 3 times out of 45 samples; nitrate objectives were exceeded 10 times out of 160 samples; and conductivity objectives were exceeded 10 times out of 166 samples in 2007.
- Turbidity objectives were exceeded 34 times out of 139 samples; total coliform objectives were exceeded 23 times out of 63 samples; enterococcus objectives were exceeded 15 times out of 67 samples; fecal coliform objectives were exceeded 9 times out of 63 samples; and conductivity objectives were exceeded 14 times out of 159 samples in 2006.
- Turbidity objectives were exceeded 31 times out of 165 samples; total coliform objectives were exceeded 16 times out of 62 samples; and nitrate objectives were exceeded 17 times out of 167 samples in 2005.
- Turbidity objectives were exceeded 8 times out of 45 samples; total coliform objectives were exceeded 20 times out of 49 samples; enterococcus objectives were exceeded 12 times out of 49 samples; fecal coliform objectives were exceeded 5 times out of 49 samples; and ammonia objectives were exceeded 7 times out of 46 samples in 2004.

Biological assessment (bioassessment) studies have been conducted as part of both the NPDES Municipal Permit monitoring and a separate program conducted by the RWQCB between 1998 and 2002 (RWQCB 2002, 2001, 1999). All of these efforts included testing at sites both upstream and downstream of the study area, including the following locations and dates:

- The Morena Boulevard overpass (approximately 2.1 miles downstream of the study area), tested in May, September and November 1998; May and November 1999; May and October 2002 through 2006; and May 2007.
- The downstream boundary of Mission Trails Regional Park (approximately 4.5 miles upstream of the study area), tested in May, September and November 1998; May and November 1999 and 2000; May and October 2002 through 2006; and May 2007.
- The Mission Gorge Dam (approximately 7.8 miles upstream of the study area), tested in May, September and November 1998; and May and November 1999.

Bioassessment testing involves evaluation of (among other criteria) the taxonomic richness (i.e., number of taxonomic groups) and diversity (i.e., species diversity within taxonomic groups) of benthic macroinvertebrate (BMI) communities, with all tested sites ranked for the condition of BMI communities. Testing at the noted locations along the San Diego River exhibited somewhat varied results. Specifically, data from the upstream locations indicated generally fair to good bioassessment integrity ratings in 1998 through 2000 and poor to very poor ratings in subsequent years, while ratings for the downstream

site were poor or very poor for all tested events (Weston 2008, 2007, 2005; MEC 2005, 2004, 2003; RWQCB 2002, 2001, 1999). Because BMI communities are sensitive to water quality (including criteria such as dissolved oxygen, sedimentation, nutrients and chemical/organic pollutants), the relatively low rankings after 2000 likely reflect (at least in part) poor local water quality conditions.

The analysis of ADL within the study area included the collection of 126 soil samples from 42 locations, at depths ranging from 0.5 to 2.0 feet below the surface. Of the 126 soil samples tested, 93 samples were determined to have lead concentrations greater than or equal to 50 milligrams per kilogram (mg/kg), which are considered substantial lead concentrations and inappropriate for uncontrolled re-use (refer to Section 5.12 for additional discussion of potential hazardous material classification and re-use implications of ADL within the study area). Based on these data, ADL within the study area may potentially constitute a local source of lead contamination (refer to the San Diego River MLS monitoring results described above).

The SWRCB and RWQCB produce bi-annual qualitative assessments of statewide and regional water quality conditions. Since 1998, these assessments have focused on federal CWA Section 303(d) impaired water listings and priority status for assignment of total maximum daily load (TMDL) requirements and implementation schedules. The Section 303(d) and TMDL assessments involve prioritizing waters on the basis of water quality (i.e., impaired) status and the necessity for assigning quantitative contaminant load restrictions (i.e., TMDL), with these data submitted to the U.S Environmental Protection Agency (USEPA) for review and approval. The most current approved assessment (2006) identifies the lower 16 miles of the San Diego River and 0.37 mile of adjacent coastal waters at the river mouth (Dog Beach) as impaired. Specifically, the San Diego River is listed as impaired for fecal coliform, low dissolved oxygen, phosphorus and TDS, while the costal waters are impaired for bacterial indicators. The identified TMDL completion date for the listed coastal waters and fecal coliform levels in the San Diego River is 2005, while the proposed TMDL date given for other contaminants in the San Diego River is 2019 (SWRCB 2008).

Groundwater

No known groundwater quality data are available for areas within the study area. The Mission Valley Aquifer, which extends along the lower San Diego River (including the study area vicinity), exhibits generally moderate to poor water quality, as characterized by TDS levels ranging between approximately 1,000 and 3,000 milligrams per liter (mg/l, SDCWA 1997). These levels are likely related to the predominantly developed nature of local watersheds and the associated generation of urban contaminants.

<u>Water Quality Summary</u>

Based on the described monitoring data and the largely urbanized nature of the study area and adjacent upstream sites, local surface and groundwater quality is considered generally moderate to poor.

5.3.1.2 Regulatory Setting

The Project is subject to a number of federal, state and local regulatory requirements related to hydrology and water quality. These guidelines are intended to avoid or reduce associated adverse effects through efforts such as maintaining pre-development conditions, providing adequate post-development drainage conditions/facilities, avoiding/minimizing floodplain encroachment, avoiding/minimizing contaminant discharge and treating post-development runoff. Summary descriptions of these regulatory requirements are provided below, with specific applications to the Project discussed below in Sections 5.3.2 through 5.3.4.

Caltrans Standards

Caltrans standards related to hydrology and water quality issues include applicable portions of the Caltrans *Statewide Storm Water Management Plan* (SWMP; 2003a), Storm Water Quality Handbooks (2007, 2003b) and Highway Design Manual (2001). The SWMP was developed to identify the minimum procedures and practices required to reduce the discharge of pollutants from storm drain systems owned or operated by Caltrans, as well as to avoid or minimize increases in post-development runoff volumes. The overall goal of the SWMP is to protect water quality and comply with associated standards, with related requirements and procedures identified in both the SWMP and Storm Water Quality Handbooks. All of the noted standards related to hydrologic and water quality concerns are associated with requirements contained in regulatory sources including the Caltrans NPDES Storm Water Permit and the RWQCB Basin Plan (as outlined below).

Chapters 810 through 830 of the *Highway Design Manual* identify a number of criteria required to be addressed in association with hydrologic and floodplain issues, including topics such as drainage basin and floodplain characteristics, hydrologic conditions, runoff, flooding frequency/magnitude, design discharge, cross drainage, roadway drainage/flooding and storm drain design.

NPDES Standards

The Project is subject to applicable elements of the federal CWA, including the NPDES. Specific NPDES requirements include conformance with the following: (1) the General Construction Activity Storm Water Permit (Construction Permit, NPDES No. CAS000002, SWRCB Order No. 99-08-DWQ); (2) the General Groundwater Extraction Waste Discharge Permit for Discharge to Surface Water in the San Diego Region Except for San Diego Bay (Groundwater Permit, NPDES No. CAG919002, RWQCB Order No. 2008-0002); (3) the NPDES Municipal Storm Water Permit (Municipal Permit, NPDES No. CAS0108758, RWQCB Order No. R9-2007-0001) and related City of San Diego standards (as outlined below); and (4) the Caltrans Permit for Storm Water Discharges from Caltrans Properties, Facilities, and Activities (Caltrans Permit, NPDES No.

CAS000003, SWRCB Order No. 99-06-DWQ). The noted permits are outlined below, with additional discussion provided in Sections 5.3.2 through 5.3.4 as appropriate.

General Construction Activity Permit

Conformance with the Construction Permit is required prior to project development for applicable sites exceeding one acre, with this permit issued by the SWRCB under an agreement with the USEPA. Specifically, construction activities for projects implemented by entities other than Caltrans within Caltrans ROW (encroachments) are subject to this permit, while construction activities conducted by Caltrans within their ROW boundaries are subject to the Caltrans Storm Water Permit as outlined below. Conformance requirements for the Construction Permit include implementing a SWPPP and an associated monitoring program, as well as a Storm Water Sampling and Analysis Strategy (SWSAS) for applicable projects (i.e., those discharging directly into waters impaired due to sedimentation, or involving potential discharge of non-visible contaminants that may exceed water quality objectives). These plans identify detailed measures to prevent and control the off-site discharge of contaminants in storm water runoff. Specific pollution control measures typically involve the use of best available technology economically achievable (BAT) and/or best conventional pollutant control technology (BCT) levels of treatment, with these requirements implemented through best management practices (BMPs). While site-specific BMPs can vary with conditions such as grading, slope and soil characteristics, detailed guidance for construction-related BMPs is provided in the permit text, as well as additional sources including the Caltrans SWMP and Storm Water Quality Handbooks, City of San Diego Municipal Code Land Development Manual-Storm Water Standards (Storm Water Standards, City of San Diego 2008d), USEPA National Menu of Best Management Practices for Storm Water Phase II (USEPA 2008), and California Stormwater Quality Association Storm Water Best Management Practices Handbooks (2003).

General Groundwater Extraction Waste Discharge Permit

Conformance with the noted Groundwater Permit is required by the RWQCB prior to disposal of extracted groundwater. This requirement is generally applicable to all groundwater discharge regardless of volume, with certain exceptions as noted in the permit text. Specific requirements for permit conformance include: (1) submitting a Notice of Intent to the RWQCB; (2) implementing an appropriate sampling and analysis/monitoring program; (3) providing at least 30 days notification to the appropriate local agency prior to discharging to a municipal storm sewer system; (4) conforming with applicable water quality standards (e.g., through appropriate treatment BMPs), including, but not limited to, the Basin Plan, CWA, State Antidegradation and Implementation policies, Porter-Cologne Water Quality Control Act, and Ocean Plan; and (5) submitting applicable monitoring reports.

Municipal Storm Water Permit

This permit was initially adopted by the RWQCB on February 21, 2001 (under Order No. 2001-01), with a revised permit adopted on January 24, 2007 (under Order No. R9-2007-0001). The Municipal Permit identifies waste discharge requirements for urban runoff related to applicable new development, redevelopment and existing development sites under the jurisdiction of co-permittees (e.g., the City of San Diego). The intent of these requirements is to protect environmentally sensitive areas and provide conformance with pertinent water quality standards, including the CWA and the RWQCB Basin Plan. Identified requirements involve using a number of planning, design, operation, treatment and enforcement measures to reduce pollutant discharges from individual development projects (and the municipal storm drain system as a whole) to the maximum extent practicable (MEP). Specifically, these measures include: (1) using jurisdictional planning efforts (such as discretionary general plan approvals) to provide water quality protection; (2) requiring coordination between individual jurisdictions to provide watershed-based water quality protection; (3) implementing applicable low impact development (LID)[2], source control, priority project, and volume- or flow-based (as defined in the permit text) treatment control BMPs to avoid, reduce and/or mitigate effects including increased erosion and sedimentation, hydromodification[3] and the discharge of contaminants in urban runoff; and (4) using appropriate monitoring, reporting and enforcement efforts to ensure proper implementation, documentation and (as appropriate) modification of permit requirements.

Pursuant to the described Municipal Permit requirements, the City of San Diego (along with other applicable co-permittees) developed guidelines to address related water quality issues (as described below under City Standards). These guidelines provide (among other things) direction for project applicants to determine if and how they are subject to Municipal Storm Water Permit (and related) standards, and identify requirements for the inclusion of BMPs to provide regulatory conformance for applicable projects.

Caltrans Permit for Storm Water Discharges From Caltrans Properties, Facilities, and Activities

The Caltrans Permit for Storm Water Discharges addresses the discharge of pollutants from all storm drain systems owned or operated by Caltrans. This permit encompasses both construction (short-term) and operational (long-term) aspects of storm water pollution control, and involves similar requirements as noted above for the General Construction and Municipal permits. Specifically, this includes implementing construction-related BMPs to achieve BAT and/or BCT levels of treatment, and operational BMPs to provide long-term control of pollutants to the MEP. The framework

[2] The LID process is intended to mimic predevelopment hydrologic conditions by using design practices and techniques to effectively capture, filter, store, evaporate, detain and infiltrate runoff close to its source.

[3] Hydromodification is defined in the Municipal Permit as the change in natural watershed hydrologic processes and runoff characteristics (infiltration and overland flow) caused by urbanization or other land use changes that result in increased stream flows, sediment transport and morphological changes in the channels receiving the runoff.

for implementing the Caltrans Permit is provided in the previously described SWMP, with associated permit conditions requiring that workplans explaining program implementation strategies be submitted to the individual RWQCBs, and that the SWMP be updated and resubmitted to the SWRCB annually.

Basin Plan Standards

The RWQCB Basin Plan establishes a number of beneficial uses and water quality objectives for surface and groundwater resources. Beneficial uses are generally defined in the Basin Plan as "the uses of water necessary for the survival or well being of man, plus plants and wildlife." Identified existing and potential beneficial uses identified for applicable portions of the San Diego River and Murray Canyon Creek within and downstream of the study area include agricultural supply; industrial service supply; contact and non-contact water recreation; biological habitats of special significance; warm freshwater habitat; wildlife habitat; and rare, threatened or endangered species. Identified beneficial uses for downstream coastal waters include contact and non-contact water recreation; commercial and sport fishing; estuarine habitat; wildlife habitat; rare, threatened or endangered species; marine habitat; aquaculture; migration of aquatic organisms; spawning, reproduction and/or early development; and shellfish harvesting. Identified beneficial uses for groundwater in the Mission San Diego Hydrologic Subarea include municipal and domestic supply, agricultural supply, industrial service supply and industrial process supply.

Water quality objectives identified in the Basin Plan are based on established beneficial uses and are defined as "the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses." Water quality objectives include both narrative requirements (which can encompass qualitative and quantitative standards) and specific numeric objectives for identified contaminants and waters. Numeric objectives for surface and groundwater quality in the Mission San Diego Subarea are summarized in Table 5.3-4, Surface and Groundwater Quality Objectives for the Mission San Diego Hydrologic Subarea.

City of San Diego Standards

City hydrologic standards include conformance with applicable sources such as Council Policy No. 600-14, *Development Within Areas of Special Flood Hazard*, and the City *Drainage Design Manual* (1984). Council Policy No. 600-14 is intended to regulate development within Special Flood Hazard Areas in accordance with flood protection standards identified in the ordinance, as well as applicable requirements in the City Land Development Code. Specifically, development within Special Flood Hazard Areas requires acquisition of an approved City grading permit, as well as concurrence by the City Engineer that the "[s]tructure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety." Section 143.0146 of the City Municipal Code defines an "adverse effect" associated with Special Flood Hazard Areas as the cumulative effect of the proposed development, when combined with all other existing and anticipated development, that would increase the water surface elevation of the base flood by more than one foot at any point. The City Drainage Design Manual includes specifications for hydrologic

considerations such as runoff calculations, storm drain system design and drainage/hydraulic studies.

Table 5.3-4
SURFACE AND GROUNDWATER QUALITY OBJECTIVES FOR THE MISSION SAN DIEGO HYDROLOGIC SUBAREA[1]

SURFACE WATER												
Constituent (mg/l or as noted)												
TDS	**Cl**	**SO_4**	**% Na**	**N&P**	**Fe**	**Mn**	**MBAS**	**B**	**Odor**	**Turb (NTU)**	**Color Units**	**F**
1,500	400	500	60	--[2]	1.0	1.0	0.5	1.0	None	20	20	--[3]
GROUNDWATER												
Constituent (mg/l or as noted)[4]												
TDS	**Cl**	**SO_4**	**% Na**	**NO_3**	**Fe**	**Mn**	**MBAS**	**B**	**Odor**	**Turb (NTU)**	**Color Units**	**F**
3,000[4]	800[4]	600[4]	60	45[4]	0.3[4]	0.05[4]	0.5	2.0[4]	None	5	15	1.0

Source: RWQCB 1994, as amended
[1] Concentrations not to be exceeded more than 10% of the time during any one-year period; refer to Figure 5.3-1 for hydrologic designation locations.
[2] Shall be maintained at levels below those that stimulate algae and emergent plant growth.
[3] Numeric standards not established.
[4] Detailed salt balance studies recommended to verify appropriate discharge limits.
TDS = Total dissolved solids; Cl = Chlorides; SO_4 = Sulfate; Na = Sodium; N&P = Nitrogen and Phosphorus; NO_3 = Nitrate; Fe = Iron; Mn = Manganese; MBAS = Methylene blue activated substances (e.g., commercial detergent); B = boron; Turb = turbidity (measured in Nephelometric Turbidity Units [NTU]); F = fluoride.

Pursuant to the City Storm Water Management and Discharge Control Ordinance (San Diego Municipal Code §43.03 et seq.), all new development in the City is required to comply with the storm water pollution prevention measures identified in Chapter 14, Article 2, Divisions 1 (grading) and 2 (storm water runoff control and drainage) of the Land Development Code. These measures require that development projects prevent erosion, sedimentation and pollutant discharge to the MEP. Both temporary (construction) and permanent erosion, sedimentation and water pollution control measures are required to be implemented (as appropriate) to the satisfaction of the City Manager, including efforts such as erosion prevention; sediment control; phased grading; LID, source control and treatment control BMPs; hydromodification avoidance/control; and monitoring, maintenance and (as necessary) modification of adopted measures. These requirements are implemented through conformance with applicable water quality standards including pertinent elements of the City Grading Ordinance, City Storm Water Standards, Urban Runoff Management Programs (URMPs) and the Standard Urban Storm Water Mitigation Plan (SUSMP), as outlined below.

In addition to the above requirements, the Project is also subject to applicable provisions of several City ordinances/standards and planning documents, including the General Plan (2008a) as well as the Mission Valley (1985, as amended), Linda Vista (1998) and Serra

Mesa (1977, as amended) community plans. Pertinent elements of these documents are summarized below.

City Grading Ordinance

The City Grading Ordinance (San Diego Municipal Code §142.0101 et seq.) incorporates a number of requirements related to hydrology and water quality, including BMPs necessary to control storm water pollution from sources including erosion/sedimentation and construction materials during project construction and operation phases. Specifically, these include elements related to slope design, erosion/sediment control and revegetation requirements.

City Storm Water Standards

The Storm Water Standards Manual (City of San Diego 2008d) provides detailed information regarding compliance with permanent and construction storm water requirements for all new development projects in the City of San Diego. The Manual was most recently updated in March 2008, and reflects applicable requirements in the previously described 2007 NPDES Municipal Permit, as well as related documents such as the URMPs and SUSMP described below. Specific guidelines in the Storm Water Standards Manual include requirements for completing and submitting a *Storm Water Requirements Applicability Checklist* (to determine BMP requirements); identifying pollutants of concern; determining appropriate BMP categories, types, locations and design; and establishing BMP implementation and maintenance requirements. The identification and analysis of project-related pollutants, BMPs and implementation/maintenance criteria is conducted as part of the required WQTR. The principal goals of the WQTR are to identify and describe the permanent BMPs required to address identified pollutants and related impacts to water quality, and to assess project conformance with City Storm Water Standards and associated NPDES requirements.

Urban Runoff Management Plans

The described NPDES Municipal Permit requires co-permittees to fund and implement URMPs to reduce runoff and contaminant discharges to the MEP. The URMPs were conducted on a countywide basis for the first two years and (as required) transitioned to a watershed-based approach for subsequent efforts. The watershed-based approach is being implemented for the study area through the current San Diego River Watershed URMP (City of El Cajon 2008). The City of San Diego also adopted a Jurisdictional URMP (JURMP) on March 20, 2008 to document local efforts related to improving water quality. The referenced San Diego River WURMP and the City of San Diego JURMP have both been prepared and implemented in compliance with the 2007 NPDES Municipal Permit. Specific requirements addressed in the City of San Diego JURMP include efforts to identify and incorporate water quality control measures related to TMDL, development/redevelopment, construction, existing development, illicit discharges, public education/participation, effectiveness evaluations and fiscal analyses. Similarly, the San Diego River WURMP identifies a number of monitoring, assessment and implementation strategies to provide a collective watershed-based approach to meet

applicable Municipal Permit requirements. These include efforts such as: (1) collecting and evaluating receiving water quality data; (2) identifying and addressing contaminant discharge sources; (3) selecting and implementing appropriate measures to address identified issues; and (4) evaluating the effectiveness of adopted measures and implementing modifications as appropriate. The San Diego River WURMP also includes a five-year strategic plan, which identifies the following general goals: (1) dry weather flow reduction; (2) contaminant source reductions for park, municipal, commercial, industrial and residential land uses; and (3) bacteria source reduction. Annual reports are also prepared to document the ongoing progress and goals of the WURMP process, with the following results and recommendations documented in the most current (January 2009) San Diego River WURMP Annual Report:

- Increased levels of effectiveness were observed in the areas of public knowledge and awareness of watershed issues, behavioral changes related to contaminant discharge and BMP implementation, and overall contaminant load reduction.

- The effectiveness of changes in water quality for discharges and receiving waters was difficult to assess, due to technical and logistical problems in establishing connections between estimates of contaminant reduction and water quality.

- Specific recommendations for fiscal year 2008-09 include: (1) conducting a Source Identification Study to guide future efforts; and (2) using the WURMP strategic goals to improve coordination and collaboration across jurisdictional boundaries.

Standard Urban Storm Water Mitigation Plan

The SUSMP (City of San Diego 2002b) was developed by the co-permittees (including the City) as a requirement under the 2001 NPDES Municipal Permit to reduce negative impacts to receiving waters from development runoff. Specifically, the SUSMP identifies a number of permanent BMP requirements for applicable public and private development/redevelopment projects, with these measures intended to protect and enhance local and regional surface water quality. The SUSMP was used as the basis for developing the City Storm Water Standards described above.

General Plan

Applicable goals related to hydrology and water quality in the General Plan include: (1) protecting beneficial water resources through pollution prevention and interception efforts; (2) reducing pollutants in urban runoff to the MEP; (3) protecting/restoring water bodies; and (4) preserving the natural attributes of floodplains and floodways without endangering life and property.

Local Community Plans

While none of the referenced community plans have specific water quality requirements, all three identify general goals and policies such as monitoring and controlling potential contaminant sources, implementing erosion control measures on grading and construction

sites, using appropriate landscaping, upgrading sewer and water lines, and incorporating sedimentation ponds in flood or runoff control facilities.

5.3.2 Analysis of Issue 1: Hydrology, Flood Control and Drainage

Issue 1: ***How would the proposed project affect the hydrology of the San Diego River and Murray Canyon Creek? What features have been incorporated into the project to protect components and surrounding land uses from inundation during a 100-year flood? What drainage facilities are proposed to control runoff?***

5.3.2.1 Impact Threshold

In accordance with City Significance Determination Thresholds (2007a), a significant impact will be found to hydrology, flood control and drainage if the Project would result in:

1. Increased flooding on- or off-site that would impose flood hazards on other properties or development wholly or partially within the 100-year floodplain identified in the Federal Emergency Management Agency (FEMA) maps. (City Significance Determination Threshold 1)
2. Substantial changes to stream-flow velocities or quantities affecting downstream properties and/or environmental resources. (City Significance Determination Threshold 4)

5.3.2.2 Impact Analysis

Drainage Alteration

As described under Subsection 5.3.1.1, surface drainage within the larger basin that encompasses the study area moves generally east (under the freeway) and south before eventually reaching the San Diego River. Flows in the river continue west from the study area vicinity and ultimately reach the Pacific Ocean. Implementation of the Project would largely retain existing drainage patterns, with relatively minor modifications associated with replacement or alteration of drainage facilities within the study area such as storm drain inlets and culverts (including facilities to direct or reroute applicable flows into water quality treatment facilities as described below in Section 5.3.3.2, refer also to Appendix C). Based on these conditions, no significant short- or long-term impacts to existing drainage patterns in the study area and vicinity would occur from the Project.

Runoff Volumes/Velocities and Drainage Facilities

The study area is located within a larger watershed, with current combined flows from this area for 25- and 100-year storm events totaling approximately 1,584 cfs and 2,274 cfs, respectively. Implementation of the Project would result in a long-term net increase of approximately 10.1 acres of new impervious surface (pavement), with a corresponding net increase in flow volumes of approximately 14.2 cfs (or less than 1

percent) for a 25-year storm and 6.8 cfs (or less than 0.3 percent) for a 100-year storm[4] (Dokken 2009b, 2009f, 2008b).

The projected increases in long-term flow volumes would not represent substantial adverse impacts, based on the minimal nature of additional flow and the proposed use of an infiltration basin for water quality treatment (as described below in Section 5.3.3.2). Specifically, the basin (in addition to providing water quality treatment) would regulate post-development flows such that existing runoff volumes from the study area would not be increased (Appendix C). Similarly, no long-term substantial adverse impacts related to downstream flow velocities would occur, due to the described minimal nature of additional flow, the use of an infiltration basin to maintain pre-development runoff conditions from the study area, and the proposed installation of energy dissipation structures (e.g., riprap aprons and flared outlets) at applicable discharge points (Appendix C). Accordingly, no substantial changes to stream-flow velocities or quantities affecting downstream properties and/or environmental resources would be associated with Project implementation, and no associated significant impacts would result.

Proposed modifications to existing storm drain facilities consist of relatively minor alterations and additions, including: (1) replacement of applicable inlets, overside drains and underground connector pipes; (2) inlet offsets and culvert extensions to accommodate construction of auxiliary freeway lanes; and (3) installation of water quality treatment facilities and related drainage structures (culverts) to direct or reroute flows accordingly (i.e., into treatment facilities). Design of the proposed storm drain systems would conform with applicable federal, state, Caltrans and/or City regulatory guidelines, including design frequency criteria of a 25-year storm for roadway drainage and a 100-year storm for cross drainage, as well as the following parameters. Proposed inlets would encompass applicable design criteria such as runoff volumes, profile grades and cross slopes, roadway geometrics, vehicle and pedestrian volumes/movements, allowable water spread, inlet capacity, maintenance accessibility and debris quantities (Appendix C). Inlets would be placed in appropriate locations, including upstream and downstream of bridges, adjacent to roadway intersections, and upstream of pedestrian crosswalks and curbed median openings. Storm drain pipelines would be designed for full-flow conditions and would encompass slopes adequate to provide a self-cleaning flow velocity of 3 feet/second for half-full flow conditions. A minimum diameter of 24 inches is recommended for proposed storm drain pipelines (Appendix C). Preliminary hydraulic calculations conducted as part of the Project Water Resources Report determined that the existing underground culverts conveying storm flows under SR 163 in the study area have adequate capacity to accommodate post-development 100-year runoff volumes associated with the Project (Appendix C). Based on the described conditions, potentially significant short- and long-term impacts associated with the

[4] The calculated increases are greater for the 25-year storm than for the 100-year storm due to the runoff coefficients (i.e., the percentage of precipitation that occurs as runoff) and related multipliers used for these storm events (i.e., to reflect conditions such as infiltration levels), as well as the fact that much of the watershed areas in question have been previously developed (refer the PWRR contained in Appendix C for details).

capacity and operation of drainage facilities would be effectively avoided or addressed through proposed storm drain design and conformance with applicable regulatory requirements.

Flooding

As described under Subsection 5.3.1.1 and shown on Figure 5.3-2, portions of the study area are located within 100-year floodplains associated with the San Diego River and Murray Canyon Creek. Existing and proposed storm drain facilities associated with the Project are or would be designed to conform to applicable regulatory requirements, including the previously noted design frequency criteria (i.e., a 25-year storm for roadway drainage and a 100-year storm for cross drainage). Based on the nature and adequate capacity of existing storm drain facilities, as well as the proposed conformance with all associated regulatory requirements, potentially significant short- and long-term flooding impacts related to the function or capacity of existing and proposed storm drain facilities within the study area and vicinity would be effectively avoided or addressed.

The Project includes a bridged crossing of the San Diego River and several improvements near Murray Canyon Creek, with a number of associated facilities (e.g., piers) located within the 100-year floodplains and/or floodways. Accordingly, proposed bridge and roadway construction would result in long-term floodplain encroachment pursuant to City Council Policy 600-14 and FEMA. Encroachment is defined by FEMA as "construction, placement of fill or similar alteration of topography in the floodplain that reduces the area available to convey floodwaters" (Appendix C).

Pursuant to the described bridge location and associated regulatory requirements, the referenced San Diego River LHS was prepared to assess potential Project-related floodplain impacts (Dokken 2009c, refer to Appendix C). Specifically, this study evaluated potential impacts from bridge crossings associated with the proposed southbound SR 163 bypass lanes to westbound I-8/Hotel Circle North and the southbound Friars Road flyover on-ramp. The proposed bridges crossing the San Diego River would be adjacent to the existing SR 163 Bridge. Two previous hydraulic analyses were conducted for portions of the San Diego River between Friars Road and the Pacific Ocean (Earth Tech 2003, 2000). These studies included generation of cross sectional data for several locations along the San Diego River, and were associated with requests for a Letter of Map Revision (LOMR) dated November 29, 2000, and a Conditional Letter of Map Revision (CLOMR) dated September 1, 2003. Applicable portions of these data were used in the Project LHS, along with other site-specific information. Specifically, the Project LHS included a hydrologic engineering center-river analysis system (HEC-RAS) evaluation. HEC-RAS is a graphically based computer program developed by the U.S. Army Corps of Engineers Hydrologic Engineering Center to model flow, and includes information such as channel cross-sectional geometry, roughness coefficients, and water surface elevations (WSEs). Additional information on HEC-RAS modeling and the LHS methodology is provided in Appendix C.

Based on the above information, the Project LHS concluded that construction of the proposed bridge would encroach upon, but not increase the elevation of, the existing San Diego River floodplain up- or downstream of the bridge structure (Appendix C). As a result of the described floodplain conditions associated with the Project, the Project would be required to conform to the applicable requirements of City Council Policy 600-14.

The proposed improvements associated with mapped floodplains along Murray Canyon Creek were also evaluated in a separate assessment by Dokken (2009g). This analysis states that the associated proposed improvements would result in an additional flow of approximately 3.46 cfs into Murray Canyon Creek upstream of Friars Road. Based on this increase, the analysis concludes that "[t]here will be a 0.21-foot increase in water surface elevation…" and that "[s]ince the improvements will not increase the water surface elevation by more than 1 foot and the flooding on Friars Road is an existing condition, the … project will not adversely impact Murray Canyon Creek."

Based on the above analyses, pertinent conformance/documentation and public involvement associated with Council Policy 600-14 requirements have been and/or would be conducted as part of the Project design and implementation process. Pursuant to the above conclusions from the Location Hydraulic Study, the Murray Canyon Creek analysis, and the inclusion of Council Policy 600-14 conformance as part of the Project design and implementation process where applicable, no long-term significant effects related to floodplain encroachment or elevations would result from the Project.

Hydromodification

As noted above in Subsection 5.3.1.2, Regulatory Setting, Project implementation requires an assessment of potential hydromodification effects and associated measures to address such effects (if applicable). These potential effects are identified in the referenced City Storm Water Standards as "[c]hanges in the magnitude and frequency of stream flows as a result of urbanization, and the resulting impacts on the receiving channels in terms of erosion, sedimentation and degradation of in stream habitat." An assessment of potential Project hydromodification impacts was conducted by Dokken (2009h). This analysis evaluated potential hydromodification effects from the calculated increase of approximately 6.8 cfs for a 100-year storm event. As described above in this section under the discussion of runoff volumes and velocities (refer also to Subsection 5.3.3.2), the proposed use of an infiltration basin for water quality treatment (as well as applicable energy dissipation) would regulate post-development flows such that existing runoff volumes and velocities from the study area would be maintained. Specifically, the hydromodification assessment concludes that "The basin will reduce hydromodification by retaining over three times the additional runoff created by the Project. During a 100-year storm event, 21.22 cfs is discharged into the basin while only allowing 3.46 cfs to outlet through the overflow headwall near the top of the basin" (Dokken 2009h). Based on these conditions, no significant effects related to hydromodification would result from the Project.

5.3.2.3 Significance of Impact

Implementation of the above-described Project design measures and conformance with applicable federal, state, Caltrans and City regulatory standards would effectively avoid or address potentially significant short- and long-term impacts related to hydrology/drainage, flood control, and hydromodification.

5.3.2.4 Mitigation Measures

Because no significant impacts have been identified, no mitigation measures are required.

5.3.3 Analysis of Issue 2: Water Quality in the San Diego River and Groundwater Supply

Issue 2: ***To what extent would the construction and ultimate development of the project affect the water quality of the San Diego River and Murray Canyon Creek, as well as the ground water supply?***

5.3.3.1 Impact Threshold

The City Significance Determination Thresholds (2007a) note that compliance with the Water Quality Standards for public projects is the responsibility of the particular department implementing the project. Adherence to the City's Storm Water Standards is the Water Quality threshold. The thresholds further note that if it is determined that BMPs are to be used to protect another specific environmental resource (biological resources, etc.) and these BMPs are above what is required for the project to achieve compliance with the City's Water Quality Standards, the BMPs should be regarded as mitigation measures. The BMPs should be discussed and included as mitigation under the heading of the resource they are meant to protect.

In addition, a significant impact to groundwater will be found if the Project would result in:

1. Decreased aquifer recharge that would affect vegetation, surface water replenishment, and landholders who are dependent on well water. (City Significance Determination Threshold 2)

5.3.3.2 Impact Analysis

Water Quality Impacts

Potential water quality impacts associated with the Project would involve both short-term (construction) and long-term (operation) issues as described below. Project-related activities would not result in direct potential effects to groundwater quality through activities such as underground storage of hazardous materials, although proposed water quality treatment BMPs include an infiltration basin (as described below under Long-term Operation and Maintenance). Potential impacts to groundwater quality would

therefore involve the percolation of surface runoff and associated contaminants generated within the study area, with the following assessment of potential water quality impacts including both surface and groundwater resources.

Short-term Construction

Potential water quality impacts related to construction of the Project include erosion/sedimentation, the on-site use and storage of construction-related hazardous materials (e.g., fuels, etc.), the generation of debris or other contaminants from demolition activities, and the disposal of extracted groundwater (if required).

Erosion/Sedimentation. As discussed in Section 5.6, Geology/Seismicity/Soils, the study area includes a number of topsoil or other surficial deposits with moderate to high erosion potential. Proposed excavation, grading and construction activities conducted as part of the Project would increase the potential for erosion and off-site sediment transport. These potential impacts are particularly applicable to proposed activities within and adjacent to the San Diego River, including excavation and/or dredging associated with bridge construction. The influx of sediment into downstream receiving waters could result in direct water quality effects such as turbidity, as well as providing a transport mechanism for other contaminants including hydrocarbons that tend to adhere to sediment particles. Potential short-term water quality effects from Project erosion and sedimentation could potentially affect all downstream waters and associated wildlife habitats, including downstream portions of the San Diego River listed as impaired for (among other contaminants) TDS under CWA 303(d) and TMDL criteria. Accordingly, implementation of the Project could potentially result in significant water quality impacts, although construction activities would be required to comply with existing regulatory requirements related to water quality. Specifically, this would include applicable elements of the Caltrans NPDES Permit, SWMP and Storm Water Quality Handbooks; the NPDES General Construction Permit; and the City Storm Water Standards, URMP and SUSMP guidelines. Specific conformance requirements would include implementing a SWPPP and associated erosion/sedimentation BMPs through the use of BAT and BCT technology, as described in Subsection 5.3.1.2, Regulatory Setting. Conformance with the noted standards would ensure that applicable regulatory standards are met and would effectively preclude potentially significant construction-related water quality impacts from erosion/sedimentation. While specific erosion/sedimentation control BMPs would be determined during the SWPPP process, they would likely include the types of standard industry measures identified in Section 5.6, Geology/Seismicity/Soils.

Construction-related Hazardous Materials. Project construction would involve the on-site use and/or storage of hazardous materials such as fuels, lubricants, solvents, concrete, paint and portable septic system wastes. The accidental discharge of such materials during Project construction could potentially result in significant impacts if such materials reach downstream receiving waters, particularly materials such as petroleum compounds that are potentially toxic to aquatic species in low concentrations. As noted above for erosion/sedimentation (and in Subsection 5.3.1.2, Regulatory Setting), implementation of a SWPPP would be required under Caltrans, NPDES and City

guidelines, and would include detailed measures to avoid or address potential impacts related to the use and potential discharge of construction-related hazardous materials. While specific BMPs would be determined as part of the regulatory SWPPP process based on individual project characteristics, they would likely include the following types of standard industry measures from the sources referenced in Subsection 5.3.1.2, Regulatory Setting:

- Restricting paving operations during wet weather and use of sediment control devices downstream of paving activities.
- Properly containing and disposing of paving wastes and slurry (e.g., use of properly designed and contained concrete washout areas).
- Minimizing the amount of hazardous materials stored on site and restricting storage/use locations to areas at least 50 feet from storm drains and surface waters.
- Using raised (e.g., on pallets), covered and/or enclosed storage facilities for all hazardous materials.
- Maintaining accurate and up-to-date written inventories and labels for all stored hazardous materials.
- Using berms, ditches and/or impervious liners (or other applicable methods) in material storage and vehicle/equipment maintenance and fueling areas to provide a containment volume of 1.5 times the volume of stored/used materials and prevent discharge in the event of a spill.
- Placing warning signs in areas of hazardous material use or storage and along drainages and storm drains (or other appropriate locations) to avoid inadvertent hazardous material disposal.
- Providing training for applicable employees in the proper use, handling and disposal of hazardous materials, as well as appropriate action to take in the event of a spill.
- Storing absorbent and clean-up materials in appropriate on-site locations where they are readily accessible.
- Properly locating and maintaining construction-related trash and wastewater facilities.
- Posting regulatory agency telephone numbers and a summary guide of clean-up procedures in a conspicuous location at or near the job site trailer.
- Regularly (at least weekly) monitoring and maintaining hazardous material use/storage facilities and operations to ensure proper working order.
- Implementing a SWSAS program pursuant to regulatory guidelines.

Based on the described use of appropriate BMPs as part of a Project SWPPP under applicable Caltrans, NPDES and City guidelines, significant water quality impacts from construction-related hazardous materials would be effectively precluded.

<u>Demolition-related Debris Generation.</u> Project development would involve the demolition of existing facilities including structures and pavement. These activities would generate variable amounts of construction debris, potentially including concrete, asphalt, glass, metal, drywall, paint, insulation, fabric and wood materials. Proposed

demolition activities could potentially generate contaminants associated with the described materials, as well as particulates (e.g., dust) from structure razing or pavement demolition. The introduction of demolition-related contaminants into local surface waters or storm drains could result in potentially significant downstream water quality effects.

Project construction would require the implementation of a SWPPP pursuant to the previously described Caltrans, NPDES and City standards. The Project SWPPP would include measures to address potential effects associated with contaminant generation from demolition activities, with detailed requirements to be determined as part of the SWPPP process. A number of standard BMPs would likely be applicable, however, with these measures derived from the previously referenced regulatory and industry sources and including the following:

- Restricting construction debris storage areas to appropriate locations at least 50 feet from storm drain inlets and water courses.
- Using appropriate storage facilities for applicable construction debris, including adequately sized watertight dumpsters, covers to preclude rain from contacting waste materials, impervious liners and surface containment features such as berms, dikes or ditches to prevent runon, runoff and infiltration.
- Employing a licensed waste disposal operator to regularly (at least once a week) remove and dispose of construction debris in an authorized off-site location.
- Recycling appropriate construction debris for on- or off-site use whenever feasible.
- Using dust-control measures such as watering to reduce particulate generation for pertinent locations/activities (e.g., concrete removal).
- Using sediment control devices downstream of all demolition activities.
- Implementing special handling methods for debris containing hazardous materials such as lead-based paint or asbestos insulation, if applicable (and pursuant to existing regulatory requirements).

Based on the required implementation of a project SWPPP under applicable Caltrans, NPDES and City guidelines, potentially significant impacts associated with demolition-related contaminant generation would be effectively precluded.

<u>Disposal of Extracted Groundwater.</u> As described above and in Section 5.6, Geology/Seismicity/ Soils, shallow groundwater may be encountered during Project excavation and construction. Disposal of groundwater extracted during Project construction into local drainages and/or storm drain facilities could generate potentially significant impacts to surface water quality through erosion and sedimentation (i.e., if discharged into graded or unstabilized areas), as well as the possible occurrence of contaminants in local groundwater aquifers.

The Project applicant would be required to conform with applicable NPDES Groundwater Extraction and Waste Discharge Permit criteria prior to disposal of extracted groundwater (as outlined in Subsection 5.3.1.2, Regulatory Setting). While

specific BMPs to address potential water quality concerns from disposal of extracted groundwater would be determined based on individual project characteristics, they are likely to include the following types of standard industry measures derived from the NPDES Permit text and the previously referenced agency/industry sources:

- Use erosion prevention and sediment catchment devices (similar to those described above for erosion and sedimentation).
- Test extracted groundwater for appropriate contaminants prior to discharge.
- Treat extracted groundwater prior to discharge if required to provide conformance with applicable discharge criteria (e.g., through methods such as filtration, aeration, adsorption, disinfection, and/or conveyance to a municipal wastewater treatment plant).
- Remove contaminated groundwater for off-site treatment and disposal by a licensed operator in conformance with applicable legal requirements.

Based on the required conformance with applicable regulatory standards and the implementation of related BMPs, potentially significant water quality impacts related to disposal of extracted groundwater would be effectively avoided or addressed.

Long-term Operation and Maintenance

Potential long-term water quality impacts from the Project would be associated primarily with the generation of contaminants from sources such as vehicle operation and landscape maintenance activities. Potential erosion related to long-term Project activities would generally not represent a substantial concern, as described in Section 5.6, Geology/Seismicity/Soils, although a number of the proposed long-term BMPs described below would help to avoid erosion or remove sediment (among other contaminants) from study area runoff.

Long-term roadway operation and maintenance typically results in the generation of a number of contaminants including sediment, particulates (e.g., from tire and brake lining wear), metals, organic compounds, trash and debris, oil and grease, nutrients (e.g., nitrogen and phosphorus), and oxygen-demanding substances (e.g., organic materials such as vegetation clippings). The primary pollutant source identified for the study area in the Project Storm Water Data Report is sediment (Appendix C). Sediment and the other types of contaminants listed above accumulate in streets and drainage facilities, and are picked up in runoff generated during storm events and/or by urban sources such as irrigation. Contaminant loading is typically higher during initial storm runoff generation (i.e., the "first flush"), and contaminant loading in arid climates (such as southern California) is generally higher during the first storm event of the rainy season due to the accumulation of contaminants during the drier months. Post-development runoff within the study area is projected to increase by approximately 14.2 cfs for a 25-year storm and 6.8 cfs for a 100-year storm, with a corresponding increase in runoff loading potential. The transport of roadway-generated contaminants from the study area to downstream receiving waters could potentially result in significant water quality effects related to issues such as increased turbidity from sediment discharge (with these materials also

providing a transport mechanism for other contaminants such as hydrocarbons which tend to adhere to sediment particles), as well as oxygen depletion and toxicity to attendant biological habitats and species. All downstream waters and associated biological resources potentially could be affected, including portions of the San Diego River and adjacent coastal waters listed as impaired under CWA 303(d) and TMDL criteria.

Based on the above discussion, implementation of the Project could potentially result in significant long-term water quality impacts in association with facility operation and maintenance. As described under Subsection 5.3.1.2, Regulatory Framework, long-term Project activities would be required to comply with existing regulatory requirements related to water quality, including applicable elements of the Caltrans NPDES Storm Water Permit and SWMP; the NPDES Municipal Permit; the City Storm Water Standards, URMP and SUSMP guidelines; and the RWQCB Basin Plan. The application of these requirements to long-term Project operation and maintenance is addressed in the referenced WQTR (and associated *Storm Water Requirements Applicability Checklist*), Storm Water Data Report and Water Resources Report (see Appendix C), with a number of associated BMPs identified to provide regulatory conformance.

Three specific long-term BMP categories are identified under Caltrans guidelines, with corresponding categories included in NPDES and City criteria. Specifically, these categories are termed maintenance, design pollution prevention, and treatment BMPs by Caltrans, with corresponding BMP categories under NPDES and City guidelines referred to as LID, source control, and treatment control BMPs. In addition, City Storm Water Standards and NPDES guidelines require the assessment of potential hydromodification effects and (if applicable) related design measures. All the noted BMP categories are summarized below for the Project, based on applicable requirements in the referenced WQTR, Storm Water Data and Water Resources reports (with hydromodification criteria discussed above in Section 5.3.2.2). The noted NPDES and City BMP terminology is used hereafter in this analysis for simplicity.

<u>Low Impact Development BMPs.</u> The use of LID measures is intended to mimic predevelopment hydrologic conditions by effectively capturing, filtering, storing, evaporating, detaining and/or infiltrating runoff close to its source. Specific LID BMPs are identified in the Project WQTR and Storm Water Data Report, and include the following measures:

- Minimizing the impervious footprint through efforts such as limiting streets, sidewalks and other applicable facilities to the minimum widths required to conform with safety and design guidelines.
- Using native or drought-tolerant varieties in landscaped areas (particularly slopes) to reduce irrigation requirements and chemical applications (e.g., fertilizer, pesticide and herbicide).
- Preserving undeveloped/vegetated areas wherever feasible.
- Maintaining pre-development peak flow discharges from the study area for design storm events.

- Using energy dissipators (e.g., riprap aprons) and flared end sections at pertinent locations, including applicable outlets for storm drains, culverts, conduits or channels that flow into unlined channels.
- Installing facilities such as retaining walls and brow ditches (and/or other appropriate facilities) on manufactured slopes to increase stabilization, reduce grading requirements and/or control runoff.

The identified LID BMPs would help improve long-term water quality within and downstream from the Project site by maintaining predevelopment hydrologic conditions to the MEP and reducing potential contaminant use. The Project WQTR also notes that the proposed use of an infiltration basin for treatment control (as described below) would constitute a LID BMP, based on the use of infiltration for water quality treatment and flow regulation.

Source Control BMPs. Source control BMPs are intended to avoid or minimize the introduction of contaminants into the storm drain and natural drainage systems by reducing the potential generation of contaminants at the point of origin to the MEP. The following source control BMPs are derived from the Project Storm Water Data Report and WQTR, as well as the previously referenced regulatory and industry sources:

- Installing storm drain stencils, signs and/or tiles that meet current Caltrans and/or City of San Diego criteria at appropriate locations (such as storm drain inlets and public access points) to discourage illicit discharges.
- Implementing controls and monitoring for landscape efforts to collect/recycle green waste (and prevent organic materials from entering the storm drain system), minimizing the use of chemical pesticides/herbicides/fertilizers, and ensuring conformance with regulatory requirements for associated chemical use, storage and disposal (e.g., limiting application events/amounts and restricting use during the rainy season [October 1 to May 1]).
- Minimizing the use of potential pollutant sources such as paints and related chemicals, through methods including the use of appropriate textures in architectural treatments.
- Implementing applicable irrigation controls for landscaped areas, such as tailoring irrigation schedules to site-specific needs (i.e., to prevent over-watering) and using moisture/pressure sensors and automatic shutoff devices to preclude irrigation during precipitation or in the event of broken sprinkler heads or lines.

The above measures would help reduce long-term urban contaminant generation by avoiding and/or reducing the discharge of identified urban contaminants.

Treatment Control BMPs. Treatment control BMPs are intended to mitigate (infiltrate, filter or treat) runoff from developed areas and are required to incorporate (at a minimum) either volume- or flow-based treatment control design standards (as described in Caltrans, NPDES and City standards). Proposed treatment control BMPs identified in the Project WQTR and SWDR include an infiltration basin and biofiltration facilities, with these structures and related maintenance requirements outlined below (refer to

Appendix C for additional information). Based on the nature and location of the Project study area and the existing and proposed drainage patterns and facilities, the identified long-term BMPs would be located exclusively within the Caltrans portion of the study area and would treat associated runoff. Specifically, the proposed long-term BMPs would be designed to treat an amount of runoff equivalent to the Project-related flow increases associated with a design storm event. This would entail treating all Project-related flow increases generated within the Caltrans portion of the study area, as well as an appropriate amount of existing (and currently untreated) flow within the Caltrans area. Accordingly, while flows generated within the City portion of the study area would not be treated under this scenario (due to physical/logistical restrictions in these areas), the overall treatment of long-term storm flows within the study area would be equal to the noted Project-related flow increases for the design storm.

Infiltration basins are shallow impoundments designed to filter storm water by percolating stored runoff from a design storm event. Infiltration basins exhibit a high level of removal efficiency for most contaminants, and are also considered LID BMPs (as previously noted). The proposed infiltration basin would treat applicable storm runoff from the Caltrans portion of the study area, and would be located in the northeast quadrant of the SR 163/Friars Road interchange (refer to the SWDR in Appendix C).

Typical maintenance requirements for infiltration basins include: (1) frequent inspections to identify potential issues (e.g., clogging of underlying soil); (2) soil scarification to improve infiltration capacity; (3) removal of accumulated sediment, trash and debris; (4) vegetation management; (5) repair of eroded banks; and (6) vector (e.g., mosquito breeding) control. Maintenance responsibilities and details (e.g., specific schedules and responsibilities) for the proposed infiltration basin would be determined by a Maintenance Agreement between the City and Caltrans.

Biofiltration facilities are vegetated areas over which storm water moves slowly as either sheet flow (biofiltration strips) or point flow (biofiltration swales). Both of these facilities provide filtration as flows move over and through vegetated areas, as well as some infiltration. Biofiltration strips provide a high level of pollutant removal efficiency for sediment, metals and oil and grease, and a moderate level of pollutant removal efficiency for trash and organic materials. Biofiltration (or vegetated) swales provide a moderate level of pollutant removal efficiency for sediment, metals, oil and grease, and organic materials. The proposed biofiltration strip is located just north of Hazard Center Drive and east of SR 163, and would be approximately 65 feet long (i.e., in the direction of flow) and 260 feet wide. The proposed biofiltration swales are located along portions of the east side of SR 163 between Genesee Avenue and Friars Road, as well as along the Friars Road northbound on-ramp to SR 163 and in the southeast quadrant of the SR 163/Friars Road interchange (refer to the SWDR in Appendix C for specific biofiltration facility locations).

Typical maintenance requirements for biofiltration facilities include: (1) conducting inspections at least twice a year to identify potential issues (e.g., erosion, vegetation damage/mortality and sediment/debris accumulation); (2) removal of accumulated

sediment, trash and debris; (3) vegetation management (e.g., mowing, pruning and/or replacement); (4) repair of eroded banks; and (5) vector (e.g., mosquito breeding) control through efforts such as removal of standing water. Maintenance responsibilities and details (e.g., specific schedules and responsibilities) for the proposed biofiltration facilities would be determined by a Maintenance Agreement between the City and Caltrans.

Groundwater Recharge and Water Quality Impacts

No significant impacts to groundwater recharge capacity or related effects such as the reduction of available groundwater for vegetation, surface water replenishment, or the level of groundwater in local wells, would occur from Project implementation. This conclusion is based on a number of considerations, including: (1) the relatively small area of new impervious surface (approximately 10 acres) associated with the Project, and the related minor reduction of infiltration/recharge capacity; (2) the proposed use of infiltration basins for storm water treatment; (3) the fact that all flows from the study area would enter the San Diego River, which serves as a recharge area for the same groundwater basin that underlies the study area; and (4) the lack of active groundwater wells in the Project vicinity (Appendix C).

Percolation of storm water runoff in the proposed infiltration basin and (to a lesser extent) biofiltration facilities would provide treatment via filtration through underlying soil and/or geologic deposits. Accordingly, this water would be treated prior to intersecting any local groundwater aquifers, with no associated significant water quality impacts anticipated. In addition, as noted above, no active drinking water (or other) wells are located in the Project vicinity (Appendix C).

5.3.3.3 Significance of Impact

Based on the above discussions and additional information provided in Appendix C, implementation of the described short- and long-term measures (including LID, source control and treatment control BMPs), as well as conformance with applicable regulatory requirements, would comply with existing Caltrans, NPDES, City of San Diego and Basin Plan water quality criteria. Accordingly, associated potentially significant surface or groundwater quality impacts would be effectively precluded.

Based on the relatively small area of new impervious surfaces, the associated minor reduction of infiltration/recharge capacity, the nature of proposed drainage/treatment facilities, the lack of local active wells, and the location of the study area relative to local groundwater basins, no significant impacts related to aquifer recharge would occur from Project implementation.

5.3.3.4 Mitigation Measures

Because no significant impacts related to water quality or groundwater supply would result from the Project, no mitigation measures are required.

5.3.4 Analysis of Issue 3: Cumulative Water Quality and Hydrology in the San Diego River

Issue 3: ***Would the project, when considered in combination with past, current, and future projects in the San Diego River watershed, result in cumulative significant impacts on hydrology and water quality of the San Diego River or Murray Canyon Creek?***

5.3.4.1 Impact Threshold

In accordance with City Significance Determination Thresholds (2007a), a significant impact to San Diego River hydrology or water quality will be found if the Project would result in:

1. Grading, clearing, or grubbing of more than 1.0 acre of land, especially into slopes over a 25 percent grade, and drainage into a sensitive water body or stream with uncontrolled runoff resulting in erosion and subsequent sedimentation of downstream water bodies. (City Significance Determination Threshold 3)
2. Modifications to existing drainage patterns affecting environmental resources such as biological communities and archaeological resources, where existing vegetation would decline because long- or short-term, soil-plant-water relationships would no longer meet habitat requirements, where the function and value of the existing habitat would be degraded, or where the habitat type would be altered. (City Significance Determination Threshold 4)

5.3.4.2 Impact Analysis

Development of the projects listed in Table 9-1, Cumulative Projects, of this EIR (including the Project) could potentially result in significant cumulative water quality impacts, from effects such as increased erosion/sedimentation and the downstream transport of water-borne contaminants. A comprehensive regional water quality control program is now in place, however, in the form of the RWQCB NPDES Municipal Storm Water Permit and related City requirements including the Storm Water Standards (refer to Section 5.3.1.2, Regulatory Setting). These requirements are intended to protect receiving water beneficial uses (as identified in the RWQCB Basin Plan) by implementing site-specific and watershed-based requirements to meet related water quality objectives on a regional scale.

Implementation of the Project would result in the generation of short- and long-term contaminants, and would contribute to cumulative water quality impacts in downstream waters including the San Diego River, Murray Canyon Creek and the Pacific Ocean. As described in the preceding analysis and in Subsection 9.3.3 (Cumulative Impacts, Hydrology/Water Quality), implementation of the Project would require conformance with a number of regulatory requirements related to hydrology and water quality, including applicable elements of the CWA, City Storm Water Standards, NPDES and RWQCB Basin Plan. Based on such conformance (including the measures described

above and in Appendix C of this EIR), all identified Project-level hydrology and water quality impacts from the Project would be avoided or reduced to below a level of significance. Because these described efforts would not (and cannot) completely eliminate the generation of contaminants, the Project would incrementally contribute to cumulative water quality impacts. These cumulative impacts are considered less than significant, however, based on the following considerations: (1) all identified Project-level water quality impacts would be avoided or reduced below a level of significance through site-specific Project design features and conformance with existing regulatory requirements; and (2) the Project and applicable cumulative projects (refer to Table 9-1, Cumulative Projects) would be subject to the identified water quality standards, with these requirements implemented through the referenced NPDES Municipal Permit, City Storm Water Standards, and related requirements. As outlined below, these requirements are specifically intended to limit urban runoff contaminants, conform to Basin Plan water quality objectives and beneficial uses, and address regional (i.e., cumulative) water quality impacts on a watershed-wide basis within the San Diego Basin.

The referenced NPDES Municipal Storm Water Permit and related City standards identify waste discharge requirements for urban runoff related to applicable new development, redevelopment and existing development sites under the jurisdiction of co-permittees (e.g., the City). The intent of these requirements is to protect environmentally sensitive areas and provide conformance with applicable water quality standards, including the CWA and the RWQCB Basin Plan beneficial uses and water quality objectives. To this end, the Municipal Permit requires co-permittees to fund and implement jurisdictional and watershed based URMPs that would reduce runoff and contaminant discharges to the MEP, with the goal of "[p]romoting attainment of water quality objectives necessary to support designated beneficial uses." Specific measures identified to meet these goals include (among other criteria) a number of numeric and qualitative standards related to water quality and runoff discharge. In addition to these site-specific elements, the noted regulatory requirements recognize both the regional nature of contaminant generation and the contribution of existing development to cumulative water quality effects. With respect to the first point, the Municipal Permit identifies the fact that "[u]rban runoff does not recognize political boundaries…," and that "[w]atershed-based land use planning (pursued collaboratively by neighboring local governments) can greatly enhance the protection of shared natural water resources." Specific measures identified to address these concerns include the following:

- Collaboration between individual co-permittees is required to establish URMPs for specific watersheds that extend across jurisdictional boundaries and to (among other tasks) compile associated data bases (including mapping); assess receiving water quality; identify, prioritize and monitor water quality problems; generate proposed mitigation efforts and responsibilities (including the assessment of long-term effectiveness); and document the described efforts in annual reports to the RWQCB. The described tasks were conducted on a jurisdictional basis for the first two years, and were expanded to include a watershed-based approach for subsequent efforts. This requirement is being implemented for the study area

watershed through adoption of the current San Diego River Watershed URMP in March 2008.

- Co-permittees are required to designate a principal permittee to coordinate the above described activities among the co-permittees; coordinate the preparation of a regional "Unified Jurisdictional URMP Document" (including assessment, monitoring and reporting efforts similar to those described above); and serve as a liaison to the RWQCB. The City of San Diego is a participating co-permittee for the San Diego River Watershed URMP (with the City of El Cajon designated as the Lead Co-permittee).
- Co-permittees are required to assess and (if applicable) modify general plan, environmental review and development approval processes to reflect the Municipal Permit requirements, including the noted watershed-based assessment of water quality issues. This requirement has been met through the referenced City Storm Water Standards and San Diego River Watershed URMP.
- Co-permittees are required to implement education programs to ensure that planning, development review and other applicable staff members, as well as project applicants (and other applicable non-regulatory personnel), adequately understand water quality laws and regulations, the connection between land use decisions/development and water quality impacts, and the methodology for reducing such impacts. This requirement has been met through the referenced City Storm Water Standards and related documents (e.g., the City Storm Water Management and Discharge Control Ordinance, SUSMP and San Diego River Watershed URMP, refer to Subsection 5.3.1.2, Regulatory Setting).

The Municipal Permit also identifies the contribution of existing development to cumulative water quality issues, and requires co-permittees to implement the following measures to assess and reduce cumulative impacts:

- Co-permittees are required to include and implement existing development components in their URMPs for existing municipal, residential, commercial and industrial sites, to "[m]inimize the short and long-term impacts on receiving water quality from all types of existing development." Specific methods identified to achieve this requirement include efforts such as contaminant source control and implementation of retrofit BMPs.
- Co-permittees are required to implement URMP components to actively seek and eliminate illicit discharges and connections to municipal storm drains, including efforts to monitor, detect and eliminate such conditions, as well as measures to provide alternative disposal options (e.g., hazardous material collection sites/events) and enforcement capacity.

These requirements have been met through the referenced San Diego River Watershed URMP, City Storm Water Standards and related documents (as noted above).

5.3.4.2 Significance of Impact

Based on the cumulative water quality considerations included in the NPDES Municipal Permit, the City Storm Water Standards and related requirements, no significant impacts related to cumulative water quality would occur from implementation of the Project.

5.3.4.3 Mitigation Measures

Because no significant impacts related to cumulative water quality would result from the Project, no mitigation measures are required.

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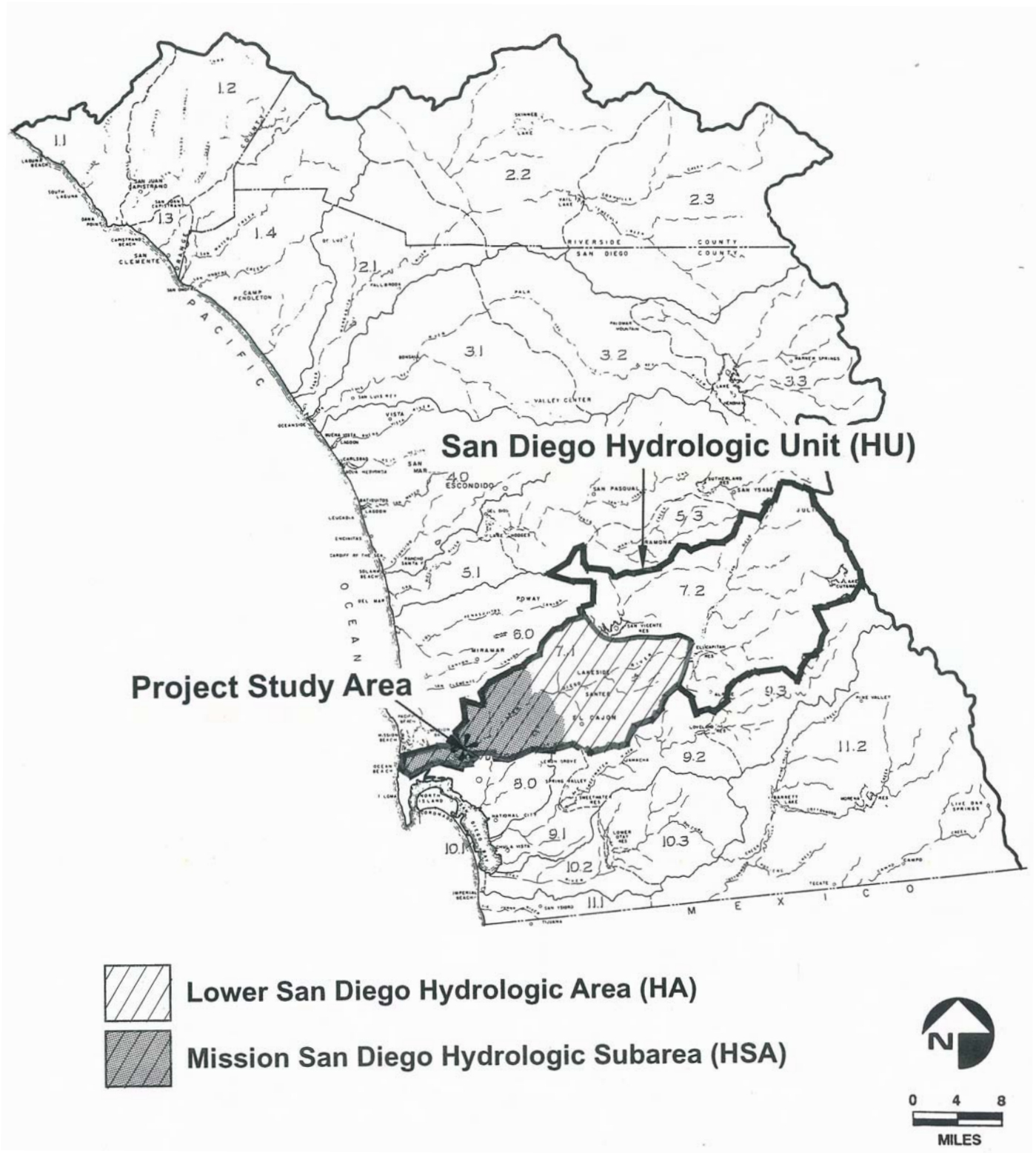

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Study Area Location Within Local Hydrologic Designations

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.3-1

5.4 BIOLOGICAL RESOURCES

A Natural Environment Study (NES; HELIX Environmental Planning, Inc. [HELIX] 2010a) and a Biological Technical Report (BTR; Appendix K of the NES; HELIX 2010b) were prepared to evaluate the biological resources and potential impacts to such resources within the Biological Study Area (BSA) identified for the Project. Information presented in this section is summarized from the NES and BTR, which are included in Appendix D to this EIR.

The BSA encompasses areas that may be subject to direct footprint impacts (e.g., roadway/bridge improvements, associated grading, staging areas, utilities relocations, sound wall installation), as well as areas that may be subject to indirect impacts (e.g., habitat potentially containing noise-sensitive protected species along the San Diego River). The following studies were completed for this Project: vegetation mapping, general wildlife surveys, rare plant surveys, jurisdictional wetland delineation and habitat evaluations/protocol surveys for sensitive species.

5.4.1 Existing Conditions

5.4.1.1 Affected Environment

Natural Communities

Natural communities within the BSA include both mesic (wet) riparian habitats as well as more xeric (dry) upland habitats. Figures 5.4-1a and 5.4-1b, Vegetation and Sensitive Resources, illustrate the natural communities observed within the BSA; the extent of each natural community is summarized in Table 5.4-1. The northern portion of the BSA consists primarily of developed land/non-native vegetation and eucalyptus woodland directly abutting SR 163; with small patches of disturbed Diegan coastal sage scrub, non-native grassland and disturbed land generally farther from the roadway. The southern portion of the BSA encompasses the San Diego River and consists of freshwater marsh/disturbed wetlands, southern willow scrub (including disturbed), disturbed mule fat scrub, southern cottonwood-willow riparian forest, open water, Diegan coastal sage scrub (including disturbed), chaparral, non-native grassland (including disturbed), eucalyptus woodland, non-native vegetation, disturbed land and developed land. A brief discussion of these vegetation communities within the BSA is provided below.

Sensitive vegetation communities are those considered rare within the region or sensitive by USFWS, CDFG (Holland 1986), the Corps or the City (City 1997a and 2007a). These communities are considered sensitive because historically they have been depleted, are naturally uncommon or support sensitive species. The site supports eight sensitive vegetation communities: freshwater marsh/disturbed wetlands, southern willow scrub (including disturbed), disturbed mule fat scrub, southern cottonwood-willow riparian forest, open water, Diegan coastal sage scrub (including disturbed), chaparral and non-native grassland (including disturbed).

Table 5.4-1
EXISTING VEGETATION COMMUNITIES

Vegetation Community	Tier[2]	Acreage[3]
Freshwater marsh/disturbed wetland	--	1.03
Southern willow scrub (including disturbed)	--	0.36
Disturbed mule fat scrub	--	0.04
Southern cottonwood-willow riparian forest	--	14.45
Open water	--	6.07
Diegan coastal sage scrub (including disturbed)	II	15.6
Chaparral	IIIA	0.2
Non-native grassland (including disturbed)	IIIB	6.1
Eucalyptus woodland	IV	9.3
Non-native vegetation	IV	37.5
Disturbed land	IV	12.5
Developed land	IV	196.9
TOTAL		**300.0**

Source: HELIX 2010
[1]Vegetation categories are from Holland (1986) and Oberbauer (2008)
[2]Tiers refer to the MSCP habitat classification system
[3]Upland habitats are rounded to the nearest 0.1 acre, while wetland habitats are rounded to the nearest 0.01; totals reflect rounding

Freshwater Marsh/Disturbed Wetland

Freshwater marsh is dominated by perennial, emergent monocots (a plant with one seed leaf), which reach a height of 12 to 15 feet. This vegetation community occurs in areas that are permanently flooded by fresh water yet lack substantial current (Holland 1986). Disturbed wetland is dominated almost exclusively by exotic wetland species within areas that have undergone periodic disturbance. Approximately 1.03 acres of freshwater marsh/disturbed wetland occur within a drainage channel located east of SR 163 and north of Hazard Center Drive.

Southern Willow Scrub (including disturbed)

Southern willow scrub often consists of dense, broad-leaved, deciduous stands of trees dominated by shrubby willows. This vegetation community occurs on loose, sandy or fine gravelly alluvium deposited near stream channels during flood flows. Approximately 0.36 acre of southern willow scrub (including disturbed) is located north of Friars Road, east of Ulric Street, and west of SR 163.

Disturbed Mule Fat Scrub

Mule fat scrub is a shrubby riparian scrub community dominated by mule fat (*Baccharis salicifolia*) and interspersed with shrubby willows. This vegetation community typically

occurs along intermittent stream channels with a fairly coarse substrate and moderate depth to the water table. It occurs in areas subject to periodic flooding or other disturbances, or where there is not enough water to support riparian tree species. Approximately 0.04 acre of disturbed mule fat scrub, which is surrounded by disturbed land, is located north of Hazard Center Drive and east of SR 163.

Southern Cottonwood-willow Riparian Forest

Southern cottonwood-willow riparian forest consists of tall, open, broad-leaved, winter-deciduous stands of trees dominated by Fremont cottonwood, black cottonwood (*Populus trichocarpa*) and several tree willows. Approximately 14.45 acres of southern cottonwood-willow riparian forest occur within the BSA.

Open Water

Open water includes bodies of water that do not support emergent plant cover. Approximately 6.07 acres of open water are located within the San Diego River channel within the BSA.

Diegan Coastal Sage Scrub (Including Disturbed)

Diegan coastal sage scrub occupies xeric sites characterized by shallow soils and is dominated by subshrubs that are adapted to drought conditions. Species in this vegetation community have relatively shallow root systems and open canopies. Approximately 15.6 acres of Diegan coastal sage scrub, including disturbed, occurs within the BSA.

Chaparral

Chaparral is the most prominent vegetation type within the portions of California with a Mediterranean climate. Evergreen shrubs with small, hard leaves dominate chaparral communities. Deep root systems appear primarily adapted to obtaining moisture from deep recesses, often penetrating into unweathered bedrock (Kirkpatrick and Hutchinson 1980). Approximately 0.2 acre of chaparral is located within the BSA.

Non-native Grassland (Including Disturbed)

The flora of non-native grasslands includes a dense to sparse cover of introduced grasses and sometimes numerous species of showy flowered, native, annual forbs (herbaceous plants that differ from grasses; Holland 1986). Introduction of exotic grasses in California due to grazing and agricultural practices, coupled with severe droughts, has contributed to the conversion of native grasslands to non-native grassland (Jackson 1985). Grassland expansion in the region also may be a result of increased fire frequency. Whereas native grasslands supported mostly perennials, such as needlegrass (*Nassella* spp.), non-native grasslands (including those in the BSA) support mostly

annuals. Approximately 6.1 acres of non-native grassland (including disturbed) are located within the BSA.

Eucalyptus Woodland

Eucalyptus woodland is dominated by eucalyptus, an introduced tree that is often planted as a wind block, or for ornamental and hardwood production purposes. Eucalyptus can naturalize and spread if conditions allow. This species produces a large amount of leaf and bark litter, the chemical and physical characteristics of which limit the ability of other species to grow in the understory.

Eucalyptus woodland within the BSA covers 9.3 acres and mostly occurs as part of the landscaping on both sides of SR 163 between Genesee Avenue and Friars Road, and within the landscaped portions of the intersection of Genesee Avenue and Friars Road with SR 163. Additional eucalyptus woodland occurs north of Friars Road west of Ulric Street and on slopes west of SR 163 within the road right-of-way north of Friars Road.

Non-native Vegetation

The non-native vegetation category includes existing freeway planting and/or irrigated roadscape installed as part of roadway or abutting development. It also includes landscaped yards within the finger canyons of the BSA. Non-native vegetation within the BSA covers approximately 37.5 acres.

Disturbed Land

Disturbed land includes land cleared of vegetation (e.g., dirt roads), land containing a preponderance of non-native plant species such as ornamentals or ruderal, exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land that shows signs of past or present animal usage that removes any capability of providing viable habitat. Disturbed land within the BSA covers approximately 12.5 acres.

Developed Land

Developed land is where permanent structures and/or pavement have been placed or where fire clearing occurs, preventing the growth of vegetation. Developed land also applies to private residential landscaping and areas maintained as part of the residential fuel modification zone. Developed land within the BSA covers approximately 196.9 acres.

Jurisdictional Areas

Jurisdictional delineations were conducted within the jurisdictional delineation study area (which is smaller than the BSA) in July 2003, March 2004 and July 2007. A field visit to verify the delineation was conducted with staff from the Corps, CDFG and RWQCB in February 2010. All potential wetlands/Waters of the U.S. areas were evaluated according

to the Corps wetland delineation guidelines as well as CDFG and City definitions (see Figure 5.4-2, Jurisdictional Delineation).

Within the BSA, 1.03 acres of freshwater marsh/disturbed wetland is Corps and CDFG jurisdictional and City wetlands; 0.05 acre of southern willow scrub (including disturbed) is Corps jurisdictional, and 0.36 acre is CDFG jurisdictional and City wetlands; 0.22 acre of southern cottonwood-willow riparian forest is Corps jurisdictional, and 0.64 acre is CDFG jurisdictional and City wetlands. The disturbed mule fat scrub in the BSA is not Corps, CDFG or City jurisdictional because it is in an upland. Approximately 83.4 square feet of open water is Corps non-wetland Waters of the U.S., CDFG jurisdictional streambed and City wetland; approximately 0.20 acre of floodplain is Corps non-wetland Waters of the U.S.; and approximately 2.12 acres of streambed is CDFG jurisdictional (Table 5.4-2).

Table 5.4-2
EXISTING JURISDITIONAL AREAS (acre)

HABITAT	CORPS	CDFG	CITY
Wetlands			
Freshwater marsh/disturbed wetland	1.03	1.03	1.03
Southern willow scrub (including disturbed)	0.05	0.36	0.36
Southern cottonwood-willow riparian forest	0.22	0.64	0.64
Non-wetlands			
Open water	<0.01*	<0.01*	<0.01*
Floodplain/streambed	0.20	2.12	0
TOTAL	**1.50**	**4.15**	**2.03**

* Open water totals 83.4 square feet within the BSA

Sensitive Plants

Sensitive plant species may be considered rare, a characteristic that may be based on three distributional traits: geographic range, habitat specificity or population size (Rabinowitz et al. 1986). A species that exhibits a small or restricted geographic range (such as those endemic to the San Diego region) are geographically rare. A species may be more or less abundant but occur only in very specific habitats. Lastly, a species may be widespread but exist naturally in small populations. USFWS and CDFG share regulatory responsibility for the protection of special status plant species. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Other special status plant species include state species of special concern, California Native Plant Society (CNPS; 2008) listed species, and MSCP covered and narrow endemic species.

Habitats within the BSA were specifically evaluated for five threatened and endangered plant species (San Diego thornmint [*Acanthomintha ilicifolia*], San Diego ambrosia [*Ambrosia pumila*], Orcutt's spineflower [*Chorizanthe orcuttiana*], San Diego button-celery [*Eryngium aristulatum* var. *parishii*] and willowy monardella [*Monardella viminea*]). Rare plant surveys, which focused on habitat areas most likely to support San Diego thornmint and San Diego ambrosia, were conducted in May 2003, January 2005 and May 2007. No federally or state-listed endangered or threatened plant species were observed within the BSA; however, two sensitive plant species were observed: San Diego barrel cactus (*Ferocactus viridescens*) and San Diego County viguiera (*Viguiera laciniata*).

The San Diego barrel cactus is included on the CNPS List 2.1 of sensitive species and is covered under the MSCP. This plant occurs on coastal sage scrub hillsides and mesas with mima mound topography, often in association with vernal pool communities. Approximately 194 individual San Diego barrel cacti were observed in the Diegan coastal sage scrub north of Friars Road and west and east of Ulric Street.

The San Diego County viguiera is included on the CNPS List 4.2 of sensitive species. San Diego County viguiera occurs within chaparral and coastal sage scrub. A scattered population of this species was observed north of Friars Road and east of Ulric Street (KEA 1997) and north of Friars Road and west of Ulric Street during the 2007 rare plant survey.

City narrow endemic plant species not observed but with potential to occur within the BSA are described in Table 5.4-3, Potential for Narrow Endemic Species to Occur, below. Table 5.4-4, Special Status Plant Species with Potential to Occur, contains additional special status plant species found within an five-mile radius that, according to the CDFG California Natural Diversity Database (CNDDB; CDFG 2008), have potential to occur within the BSA as a result of the presence of potentially suitable habitat.

Table 5.4-3
POTENTIAL FOR NARROW ENDEMIC SPECIES TO OCCUR

Species	Status*	Habitat	Potential to Occur
San Diego thorn-mint (*Acanthomintha ilicifolia*)	FT/SE CNPS List 1B.1	Grassy openings in chaparral or sage scrub, or near vernal pools, with friable or broken clay soils are the preferred habitat. Range includes San Diego County and Baja.	Low. Appropriate habitat (vernal pools) absent. Highly visible species not observed during rare plant surveys.
Shaw's agave (*Agave shawii*)	--/-- CNPS List 2.1	Found in coastal sage scrub and maritime succulent scrub, often on volcanic soils. Range includes coastal San Diego County and Baja.	Low. Appropriate soils absent. Conspicuous species that would have been observed if present.

Table 5.4-3 (cont.)
POTENTIAL FOR NARROW ENDEMIC SPECIES TO OCCUR

Species	Status*	Habitat	Potential to Occur
San Diego ambrosia (*Ambrosia pumila*)	FE/-- CNPS List 1B.1	Found in disturbed areas within chaparral, coastal sage scrub and grasslands. Range includes San Diego and Riverside Counties south to Baja.	Low. No reported populations in the Project vicinity. Species not observed during rare plant surveys.
Aphanisma (*Aphanisma blitoides*)	--/-- CNPS List 1B.2	Occurs in sandy places along the coast. Range includes islands off the coast of southern California and from San Onofre to Imperial Beach in San Diego County.	Low. Species' range is west of BSA. Only one known population in San Diego County.
Coastal dunes milk vetch (*Astragalus tener* var. *titi*)	FE/SE CNPS List 1B.1 CA Endemic	Occurs in sandy places along the coast, including coastal dunes. Range includes coastal areas of Monterey, Los Angeles and San Diego counties.	Low. Species' range is west of BSA.
Encinitas baccharis (*Baccharis vanessae*)	FT/SE CNPS List 1B.1 CA Endemic	Occurs in chaparral associated with poor nutrient soils, such as southern maritime chaparral. San Diego County endemic; also found in Riverside County.	Low. Species' range is north of BSA.
Otay tarplant (*Deinandra conjugens*)	FT/SE CNPS List 1B.1	Occurs in coastal sage scrub and grassland habitats on clay lenses. Ranges from near Sweetwater Reservoir south to the U.S./Mexico border.	Low. Species' range is south of BSA.
Short-leaved dudleya (*Dudleya brevifolia*)	--/SE CNPS List 1B.1 CA Endemic	Perennial herb occurring in chaparral or coastal sage scrub on Torrey sandstone soils.	Low. Appropriate habitat/soils absent. Known from fewer than five occurrences in Del Mar and La Jolla areas.
Variegated dudleya (*Dudleya variegata*)	--/-- CNPS List 1B.2	Occurs on dry hillsides and mesas in chaparral, coastal sage scrub, grasslands and near vernal pools. Ranges from San Diego County south to Baja.	Low. Not observed during three rare plant surveys conducted within the BSA.
Spreading navarretia (*Navarretia fossalis*)	FT/-- CNPS List 1B.1	Occurs in vernal pools, vernal swales, or roadside depressions. Population size is strongly correlated with rainfall. Depth of pool appears to be a significant factor as this species is rarely found in shallow pools. Range includes western Riverside and southwestern San Diego counties as well as northwestern Baja.	Low. Appropriate habitat/soils absent.

Table 5.4-3 (cont.)
POTENTIAL FOR NARROW ENDEMIC SPECIES TO OCCUR

Species	Status*	Habitat	Potential to Occur
Snake cholla (*Cylindropuntia californica* var. *californica*)	--/-- CNPS List 1B.1	Occurs in chaparral and coastal sage scrub. Ranges from Point Loma south to Baja.	Low. Appropriate soils do not occur within the BSA. Species' range is south of BSA. Would have been observed if present.
California Orcutt grass (*Orcuttia californica*)	FE/SE CNPS List 1B.1	Vernal pool species. Ranges from Ventura County inland to Riverside County and south to Baja.	Low. Appropriate habitat/soils absent.
San Diego mesa mint (*Pogogyne abramsii*)	FE/SE CNPS List 1B.1 CA Endemic	Occurs in vernal pools in grasslands, chamise chaparral, and coastal sage scrub on mesas.	Low. Appropriate habitat/soils absent.
Otay Mesa mint (*Pogogyne nudiscula*)	FE/SE CNPS List 1B.1	Otay Mesa vernal pool species. Ranges from southern San Diego County (mainly Otay Mesa) south to Baja.	Low. Species' range is south of BSA. Appropriate habitat/soils absent.

*Refer to Appendix E of the NES for a listing and explanation of status and sensitivity codes

Table 5.4-4
SPECIAL STATUS PLANT SPECIES WITH POTENTIAL TO OCCUR

Species	Status*	Habitat	Potential to Occur
California adolphia (*Adolphia californica*)	--/-- CNPS List 2.1	Coastal sage scrub and chaparral communities, often in association with streams or creeks	Low. Species not reported for the Project vicinity. This is a conspicuous shrub that would have been detected during surveys if present.
White coast ceanothus (*Ceanothus verrucosus*)	--/-- CNPS List 2.2 MSCP Covered	Occurs among mesic coastal chaparral vegetation	Low. A conspicuous species that often dominates chaparral hillsides where it is present. Would have been detected if present. BSA is further inland than vast majority of reported sightings.
Orcutt's spineflower (*Chorizanthe orcuttiana)*	FE/SE CNPS List 1B.1 CA Endemic	Maritime chaparral, closed-cone coniferous forest and coastal scrub/sandy openings between 10 to 410 feet	Low. The nearest known population is Point Loma. Species not observed during rare plant surveys.
Summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*)	--/-- CNPS List 1B.2	Mesic chaparral, often on steep drainage slopes	Low. Would have been detected during rare plant surveys if present. Chaparral within the BSA occurs on a revegetated fill slope and is likely unsuitable to support this species. Not reported for the Project vicinity.
Campbell's liverwort (*Geothallus tuberosus*)	--/-- CNPS List 1B.1 CA Endemic	Vernal pools and mesic coastal sage scrub communities	Low. No vernal pools or mesic coastal sage scrub are present within the BSA. The closest sighting of this species was within Balboa Park, approximately 3 miles to the southeast.

Table 5.4-4 (cont.)
SPECIAL STATUS PLANT SPECIES WITH POTENTIAL TO OCCUR

Species	Status*	Habitat	Potential to Occur
Robinson's pepper-grass (*Lepidium virginicum*)	--/-- CNPS List 1B.2	Xeric openings in coastal sage scrub and chaparral	Low. No reported sightings in the Project vicinity. Closest observation of this species since 1935 is an unconfirmed sighting along Florida Street near Balboa Park, approximately 2 miles to the southeast.
San Diego goldenstar (*Muilla clevelandii*)	--/-- CNPS List 1B.1	Valley grasslands, mima mounds, generally among vernal pools	Low. Would have been observed during rare plant surveys if present.
Prostrate navarretia (*Navarretia prostrata*)	--/-- CNPS List 1B.1 CA Endemic	Occurs in coastal scrub, valley and foothill grasslands with alkaline soil, and vernal pools	Low. Appropriate habitat/soils absent.
Nuttall's scrub oak (*Quercus dumosa*)	--/-- CNPS List 1B.1	Found in chaparral and coastal sage scrub, generally with clay loam soils within coastal zone	Low. This is a conspicuous species that would have been detected within the BSA if present.
Rayless ragwort (*Senecio aphanactis*)	--/-- CNPS List 2.2	Coastal sage scrub and woodland communities	Low. Although coastal sage scrub is present, it lies on a revegetated fill slope that is unlikely to support this species. The eucalyptus woodland on site is not appropriate to support this species. No recently reported sightings in the Project vicinity. Not observed during rare plant survey.
Bottle liverwort (*Sphaerocarpos drewei*)	--/-- CNPS List 1B.1 CA Endemic	Openings in chaparral and coastal sage scrub	Low. Not recently reported for the Project vicinity. Most reported locations are presumed eradicated. Closest reported population within Balboa Park approximately 3 miles southeast.

Source: HELIX 2010
*Refer to Appendix E of the NES for a listing and explanation of status and sensitivity codes

Sensitive Animals

As with sensitive plant species, sensitive animal species may be considered rare, based on three distributional traits: geographic range, habitat specificity or population size (Rabinowitz et al. 1986). USFWS and CDFG share regulatory responsibility for the protection of special status animal species. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the FESA and/or the CESA. Other special status animal species include state species of special concern and MSCP covered species.

The USFWS identified coastal California gnatcatcher, least Bell's vireo and light-footed clapper rail (*Rallus longirostris levipes)* as listed animal species potentially occurring in the BSA in its letter dated April 24, 2003 (Appendix A of the NES). The southwestern willow flycatcher was added to this list by the City because suitable habitat for this federally listed endangered species occurs within the BSA. Based on vegetation mapping conducted for the Project, the BSA does not contain suitable habitat (coastal salt marsh and freshwater marsh dominated by cordgrass [*Spartina* sp.], cattails [*Typha* sp.] and/or tules [*Scirpus* sp.]) for the light-footed clapper rail; therefore, focused surveys were not conducted for this species.

Protocol surveys were conducted in 2003, 2005 and 2007 for coastal California gnatcatcher with positive results, as further discussed below. Protocol surveys were conducted in 2003 and 2007 for least Bell's vireo and southwestern willow flycatcher with negative results. Surveys also were conducted in 2003 and 2004 for burrowing owl (*Athene cunicularia hypugea*) with negative results. A survey was also conducted in 2004 for bats and nesting swallows under the SR 163 Bridge over the San Diego River with negative results.

Sensitive Animal Species Known to Occur

One federally listed threatened species, coastal California gnatcatcher, was observed/detected within the BSA. In addition, five sensitive animal species were observed/detected: orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), yellow-breasted chat (*Icteria virens*), western bluebird (*Sialia mexicana*) and Cooper's hawk (*Accipiter cooperii*). The locations of the observed/detected sensitive species are illustrated on Figures 5.4-1a and b, Vegetation and Sensitive Resources. Other raptor species (not considered sensitive) such as red-shouldered hawk (*Buteo lineatus*) and red-tailed hawk (*B. jamaicensis*) also were observed within the BSA.

Coastal California Gnatcatcher (*Polioptila californica californica*). The coastal California gnatcatcher is federally listed as threatened, a state species of special concern, and covered by the MSCP. The habitat of this species is primarily Diegan coastal sage scrub, although it sometimes uses other habitats adjacent to Diegan coastal sage scrub. Critical habitat for the coastal California gnatcatcher does not occur within the BSA.

One coastal California gnatcatcher pair was observed within the Diegan coastal sage scrub north of Friars Road and west of Ulric Street during USFWS protocol surveys conducted between May 6 and June 13, 2003. Although an additional coastal California gnatcatcher was observed/detected approximately 250 feet northwest of the potential grading impact area west of SR 163 on July 5, 2005, it was not found in the impact area during modified protocol surveys in late July and August 2005 (modified protocol approved by USFWS prior to study; refer to Appendix F of the NES). Furthermore, no gnatcatcher was found during the use area survey in the same vicinity. It is possible that the July 5, 2005 observation occurred as the gnatcatcher was passing through the area. Protocol surveys for the coastal California gnatcatcher were conducted within suitable

habitat throughout the BSA in 2007. One pair of coastal California gnatcatchers was observed within the BSA in the Diegan coastal sage scrub near the corner of Friars Road and Ulric Street. An individual coastal California gnatcatcher was incidentally observed in disturbed Diegan coastal sage scrub north of the SR 163 southbound on-ramp from Friars Road in 2009.

Orange-throated Whiptail *(Cnemidophorus hyperythrus beldingi)*. The orange-throated whiptail is a state species of special concern and is covered under the MSCP. This lizard occurs in a variety of habitats, including coastal sage scrub, chaparral, riparian woodlands, grasslands and disturbed areas adjacent to these communities. During biological investigations, this species was observed within coastal sage scrub vegetation, just northwest of the intersection of Ulric Street and Friars Road and upslope from the roadways.

San Diego Black-tailed Jackrabbit *(Lepus californicus bennettii)*. The San Diego black-tailed jackrabbit is a state species of special concern. This species occurs in a variety of open habitats with at least some shrub or tall herbaceous cover, including open coastal sage scrub and chaparral, grasslands, croplands and some disturbed shrubby areas. A San Diego black-tailed jackrabbit was observed during biological investigations in Diegan coastal sage scrub north of Friars Road and west of Ulric Street.

Yellow-breasted Chat *(Icteria virens)*. The yellow-breasted chat is a state species of special concern. This species occurs in mature riparian woodland. It was observed/detected in the San Diego River corridor.

Western Bluebird *(Sialia mexicana)*. The western bluebird is not considered sensitive by USFWS or CDFG, but is covered under the MSCP. This species prefers montane coniferous forests and oak and riparian woodland, where it nests in holes in trees. It is commonly seen in San Diego County and in the Project vicinity. One western bluebird was observed/detected in coastal sage scrub north of Friars Road and east of Ulric Street.

Cooper's Hawk *(Accipiter cooperii)*. The Cooper's hawk is a state watch-list species and is covered under the MSCP. This species frequents riparian areas and eucalyptus woodland for nesting and roosting and forages in scrub and grassland habitats. A Cooper's hawk was noted in the San Diego River corridor.

Other Raptors. Other raptor species that were observed foraging within the BSA include red-tailed hawk and red-shouldered hawk. No raptor nests were observed during biological surveys; it is unlikely that these raptors use the eucalyptus trees in the BSA for nesting due to high noise and activity levels within the BSA. Eucalyptus and other trees within the BSA do, however, have some potential to support nesting raptors.

Sensitive Animals with Potential to Occur

Table 5.4-5, Special Status Animal Species with Potential to Occur, contains the special status animal species occurring within a five-mile radius that, according to the CNDDB,

and based on the presence of potentially suitable habitat, have potential to occur within the BSA. Southwestern willow flycatcher and least Bell's vireo, federally and state listed as endangered species, are discussed below.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*). Southwestern willow flycatcher is federally and state listed as endangered and is covered under the MSCP. This species breeds in dense riparian habitats along rivers, streams or other wetlands. Almost all southwestern willow flycatcher breeding habitats are within proximity to water or very saturated soil.

Critical habitat for the southwestern willow flycatcher does not occur within the BSA. Protocol surveys conducted in 2003 and 2007 were negative (refer to Appendix G of the NES, which contains the letter report for species survey, for additional details). The USFWS database shows no record of southwestern willow flycatcher in the San Diego River Valley within three miles upstream or downstream of the Project area (Appendix A of the NES). A southwestern willow flycatcher was observed on an island in the San Diego River approximately 1,000 feet east of the SR 163 bridge on several occasions between June 9 and July 14, 2009 (Mike Wellik, personal communication).

Least Bell's Vireo *(Vireo bellii pusillus).* Least Bell's vireo is federally and state listed as endangered and is covered by the MSCP. This species breeds in riparian woodlands and is most frequent in areas that combine an understory of dense, young willows or mule fat with a canopy of tall willows. Critical habitat for the least Bell's vireo does not occur within the BSA. Protocol surveys conducted in 2003 and 2007 were negative (refer to Appendix G of the NES, which contains the letter report for species survey, for additional details). Surveys in 2003 and 2007 indicated that least Bell's vireo are absent downstream as far as the River Walk Golf Course, approximately 2,400 feet west of the SR 163 Bridge. According to the USFWS database, five records of vireo were documented within the San Diego River valley between 1999 and 2003, approximately 1.5 miles downstream and 1.75 miles upstream of the Project area. The USFWS determined that the riparian habitat in the Project area is sub-optimal vireo habitat, as a structured forest consisting of dense cover and a dense stratified canopy is absent (Appendix A of NES).

Table 5.4-5
SPECIAL STATUS ANIMAL SPECIES WITH POTENTIAL TO OCCUR

Species	Status*	Habitat	Potential to Occur
REPTILES			
Coast horned lizard (*Phrynosoma coronatum blainvillei*)	--/SSC MSCP Covered	Found in a variety of communities including coastal sage scrub, chaparral, grassland and woodlands up to 6,000 ft. Not common where Argentine ants (*Linepithema humile*) have excluded native harvester ants (*Pogonomyrmex* sp.)	Low. Project site is likely too patchy and urbanized. Not reported for the Project vicinity.

Table 5.4-5 (cont.)
SPECIAL STATUS ANIMAL SPECIES WITH POTENTIAL TO OCCUR

Species	Status*	Habitat	Potential to Occur
BIRDS			
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	--/WL MSCP Covered	Found in coastal sage scrub and open chaparral communities	Low. Would have been detected during protocol surveys for the coastal California gnatcatcher.
Burrowing owl (*Athene cunicularia hypugea*)	BCC/SSC MSCP NE	Restricted to essentially flat, open country with suitable nest sites within native or non-native grassland, open coastal sage scrub and fallow agricultural fields	Low. Would have been observed during summer and winter protocol surveys for this species if present.
Coastal cactus wren *Campylorhynchus brunneicapillus couesi*	BCC/SSC MSCP Covered	Found in coastal sage scrub and chaparral with tall cactus in which they nest	Low. Cactus within the on-site coastal sage scrub and chaparral is not of suitable size or density to support nesting cactus wrens.
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE/SE MSCP Covered	Inhabits riparian woodlands	Low. Would have been observed during protocol surveys for this species if present.
Least Bell's vireo (*Vireo bellii pusillus*)	FE, BCC/SE MSCP Covered	Inhabits riparian woodlands and riparian forests	Low. Would have been observed during protocol surveys for this species if present.

Source: HELIX 2010
*Refer to Appendix E of the NES for a listing and explanation of status and sensitivity codes

Wildlife (Migration) Corridors

Wildlife corridors can be local or regional in scale; their functions may vary temporally and spatially based on conditions and species presence. Wildlife corridors represent areas where wildlife movement is concentrated due to natural or anthropogenic constraints. Local corridors provide access to resources such as food, water and shelter. Animals use these corridors, which are often hillsides or tributary drainages, to move between different habitats. Regional corridors provide these functions and link two or more large habitat areas. They provide avenues for wildlife dispersal, migration and contact between otherwise distinct populations.

The portion of the BSA near the Friars Road interchange location and northerly along SR 163 includes patches of habitat that are surrounded by urbanization. The wildlife value and wildlife corridor function supported by these areas is very limited. The City's MSCP Subarea Plan includes urban habitat areas within its designated preserve system (the MHPA) that contribute in some form to the MHPA, either by providing habitat for

native species to continue to reproduce and find new territories, or by providing necessary shelter and forage for migrating species (mostly birds). This northern portion of the BSA is not designated as MHPA, which further supports a finding that wildlife movement in this area is very limited.

In contrast, the San Diego River in the southern portion of the BSA provides a contiguous riparian corridor from the Pacific Ocean to central San Diego County. The portion of the San Diego River within the BSA is also within the City's MSCP Subarea Plan MHPA. The Final MSCP Plan (City of San Diego 1997; Table 2-2) identifies the portion of the San Diego River west of Mission Trails as a constrained linkage between core resource areas. This area is expected to contain important wildlife linkages or critical locations for the regional wildlife species. Though larger mammal movement is limited due to the urbanized setting and the multiple road crossings that extend over the river, this corridor does provide a habitat linkage or corridor for riparian bird species.

Non-native Species

A number of non-native invasive plant species occur within the BSA. Most areas of natural communities within the BSA are moderately to highly infested with weedy plant species. The degree of infestation varies through the BSA, as well as from year to year. The most abundant invasive species observed within the BSA include fennel (*Foeniculum vulgare*), garland daisy (*Chrysanthemum coronarium*), ice plant (*Carpobrotus edulis*), yellow star thistle (*Centaurea melitensis*), wild lettuce (*Lactuca serriola*), bristly ox-tongue (*Picris echioides*), sow thistles (*Sonchus* sp.), black mustard (*Brassica nigra)*, Australian saltbush (*Atriplex semibaccata*), castor-bean (*Ricinus communis*), filarees (*Erodium* sp.), cheeseweed (*Malva parviflora*), giant reed, pampas grass, Russian thistle and many other non-native grasses. The European starling (*Sturnus vulgaris*), a non-native species that sometimes requires control, also was observed within the BSA. In addition, non-native and invasive ant species may be present. It is assumed that cats (*Felis domesticus*) and dogs (*Canis familiaris*), both feral and from the adjacent residences (i.e., pets), roam within the San Diego River corridor and along undeveloped slopes north of Friars Road. These species, particularly cats, are known to prey upon small mammals, reptiles, amphibians and birds.

5.4.1.2 Regulatory Setting

Federal

Federal Endangered Species Act

The primary federal law protecting threatened and endangered species is the FESA (16 USC Section 1531, et seq. [see also 50 CFR Part 402]). This act and subsequent amendments provide for the conservation of threatened and endangered species and the ecosystems upon which they depend.

A Section 7 consultation with USFWS was completed. The consultation was informal, as it was determined that the impact area is not used by coastal California gnatcatchers, the only threatened or endangered species identified within the Project BSA. The informal

consultation concluded in a letter issued by USFWS on June 6, 2007 (Appendix A of the NES) which determined that the Project may affect, but is not likely to adversely affect, the coastal California gnatcatcher and that adverse impacts would not occur to southwestern willow flycatcher and least Bell's vireo. The letter included conservation measures intended to avoid potential impacts to gnatcatchers and otherwise minimize impacts to biological resources.

Federal Migratory Bird Treaty Act

All migratory bird species that are native to the United States or its territories are protected under the MBTA, as amended under the Migratory Bird Treaty Reform Act of 2004 (FR Doc. 05-5127; USFWS 2004). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, the MBTA is now used to place restrictions on disturbance of active bird nests during the nesting season (generally February 1 to July 30). In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests. Construction activities are commonly precluded within 500 feet of an active bird nest (at a minimum).

Clean Water Act

At the federal level, the CWA (33 USC 1344) is the primary law regulating the discharge of dredge or fill material into Waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the CWA, three criteria are used, including the presence of hydrophytic (water-loving) vegetation, wetland hydrology and hydric soils (soils subject to saturation/inundation). All three criteria must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that no discharge of dredge 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 Corps with oversight by the USEPA.

<u>State</u>

California Endangered Species Act

California has enacted a law similar to the FESA at the state level: CESA (California Fish and Game Code, Section 2050, et seq.). 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 may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

California Natural Communities Conservation Planning Act

The Natural Communities Conservation Program (NCCP) initiated by the state of California in 1991 resulted in the promulgation of the special 4(d) rule of FESA. This rule focuses on conserving coastal sage scrub habitat in order to avoid the need for future federal and state listing of myriad individual coastal sage scrub dependent species. Due to impacts to Diegan coastal sage scrub habitat and the sensitive species that are associated with it, consultation with CDFG is required, and has been initiated.

California Native Plant Protection Act

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. NPPA regulates collection, transport and commerce in plants that are listed. The California ESA followed and is similar to the NPPA in that it provides a process by which sensitive species are listed. It is a process by which plants and animals can be recognized as being endangered or threatened with extinction. (Plants listed as rare under the NPPA were designated threatened under the California ESA.)

California Fish and Game Code

Waters of the State are regulated primarily by CDFG and the RWQCB. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that would 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 significantly affect fish or wildlife resources, a Lake or Streambed Alteration Agreement (SAA) is 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 Corps may or may not be included in the area covered by an SAA obtained from the CDFG.

Porter-Cologne Water Quality Control Act

The RWQCB was established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications in compliance with Section 401 of the CWA. Please refer to Section 5.3, Hydrology/Water Quality, for additional details.

<u>Regional/Local</u>

Multiple Species Conservation Program (MSCP)

The City, USFWS, CDFG and other local jurisdictions joined together in the late 1990s to develop the MSCP, a program to ensure (generally upland) habitat and species viability throughout the region, while still permitting some level of continued development. On March 18, 1997, the San Diego City Council unanimously adopted the MSCP (R-28455) and in July 1997 entered into a 50-year MSCP Implementing

Agreement with the USFWS and CDFG (City 1997b). Through this agreement, the City received its federal Endangered Species Act section 10(a) incidental take permit (PRT-830421) on July 18, 1997. Pursuant to its MSCP permit, the City of San Diego has incidental "take" authority over 85 rare, threatened and endangered species.

The MSCP designates regional preserves (MHPA) that are intended to be mostly void of development activities, while allowing development of other areas subject to the requirements of the program. Impacts to most species covered by the MSCP are considered to be mitigable through appropriate habitat preservation within the MHPA.

Because of the highly developed setting, the vast majority of the BSA is not within the MHPA. Portions of the San Diego River drainage within the BSA are in the City's MSCP Subarea Plan MHPA (Figure 5.4-1b). SR 163 currently crosses the San Diego River (an identified MHPA river and associated vegetation) on a bridge structure. The MHPA in this area is approximately 330 feet wide.

Land uses adjacent to the MHPA are to be managed to ensure that indirect impacts to the MHPA are minimized. The City has published Land Use Adjacency Guidelines, which outline these requirements, in the City's MSCP Subarea Plan. Because the BSA includes areas within and adjacent to the MHPA, the adjacency guidelines are applicable. These guidelines address indirect effects related to water quality (drainage and toxics), lighting, noise, invasive species, barriers and brush management.

Although the Project could have received incidental take authorization through the City's MSCP Subarea Plan, because of FHWA involvement, a Section 7 informal consultation was required for federally listed species impacts, as described above.

Special Conditions for Covered Species

Special conditions apply to covered species (narrow endemics as well as other species specifically identified in the City's MSCP Subarea Plan) that would be potentially impacted by a project. The Project would be required to comply with the conditions for each of the applicable species contained in Table 3-5 of the MSCP. (No area-specific management directives are in place for San Diego County viguiera, western bluebird, yellow-breasted chat, or San Diego black-tailed jackrabbit.) The conditions relevant to MSCP-covered species within the BSA are noted below.

<u>San Diego Barrel Cactus</u>. Area-specific management directives must include measures to protect species from edge effects and unauthorized collection and include appropriate fire management/control practices to protect against a too frequent fire cycle.

<u>Orange-throated Whiptail</u>. Area-specific management directives must address edge effects.

<u>Coastal California Gnatcatcher</u>. Area-specific management directives must include measures to reduce edge effects and minimize disturbance during the nesting period, fire

protection measures to reduce the potential for habitat degradation due to unplanned fire, and management measures to improve habitat quality including vegetation structure. No clearing of occupied habitat within the City's MHPA may occur between March 1 and August 15.

Cooper's Hawk. Area-specific management directives must include 300-foot impact avoidance areas around active nests, and minimization of disturbance in oak woodlands and oak riparian forests.

Environmentally Sensitive Lands

City Biology Guidelines (2002c) aid implementation and interpretation of the Environmentally Sensitive Lands (ESL) regulations, which also serve as standards for the determination of impacts and mitigation under CEQA in the City. The Biology Guidelines, in accordance with the Land Development Code, define sensitive biological resources as those lands included within the MHPA as identified in the City's MSCP Subarea Plan (1997a) and other lands outside of the MHPA that contain wetlands; vegetation communities classifiable as Tier I, II, IIIA or IIIB; and habitat for rare, endangered, threatened, narrow endemic or MSCP-covered species. Each tier is based on rarity and ecological importance (the first includes the most sensitive habitat, the fourth includes the least sensitive habitat). The ESL regulations require that development avoid impacts to certain sensitive biological resources as much as possible. These habitats include all MHPA lands, wetlands and vernal pools in naturally occurring complexes, listed non-covered species and narrow endemics.

The ESL states that impacts to wetlands should be avoided and unavoidable impacts should be minimized to the maximum extent practicable. In addition to protecting the wetlands themselves, the ESL requires that a wetland buffer be maintained around wetlands as appropriate to protect associated functions and values. While a 100-foot width is generally recommended, this width may be increased or decreased on a case-by-case basis. The ESL recognizes that impacts from essential public facilities (including essential roadways) may be unavoidable. Unavoidable impacts must be mitigated in accordance with the City's Biology Guidelines.

5.4.2 Analysis of Issue 1: Sensitive Habitats, Plants and Animals

Issue 1: ***Would the project result in impacts to important upland or riparian habitat or sensitive plants and/or animal species?***

5.4.2.1 Impact Thresholds

In accordance with the City Significance Determination Thresholds (2007a) and Biology Guidelines (2002c), the Project would have a significant impact if it would:

1. Result in a substantial adverse impact on any Tier I Habitats, Tier II Habitats, Tier IIIA Habitats or Tier IIIB habitats as identified in the Biology Guidelines of the Land Development manual or other sensitive natural community identified in

local or regional plans, policies, regulations, or by the CDFG or USFWS. (City Initial Study Checklist Question 2)

2. Result in a substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in the MSCP or other local or regional plans, policies or regulations, or by the CDFG or USFWS. (City Initial Study Checklist Question 1)
3. Result in a substantial adverse impact on wetlands (including, but not limited to, marsh, vernal pool, riparian, etc.) through direct removal, filling, hydrological interruption or other means. (City Initial Study Checklist Question 3)

5.4.2.2 Impact Analysis

Impacts are either direct or indirect, and may be permanent or temporary. An impact is direct when the primary effect is removal of existing habitat, often replacing it with developed area. An indirect impact consists of secondary effects of a project (such as noise) that lead to habitat degradation. Permanent impacts are assessed to areas that are permanently altered or shaded as a result of constructed project features. Temporary impacts are assessed to areas that would be disturbed by construction activities but not ultimately converted to hardscape or landscaping. Such areas would be revegetated with native species following project completion.

<u>Sensitive Habitats</u>

Figure 5.4-3a and 3b, Vegetation and Sensitive Resources/Impacts, depicts the Project's impacts to natural communities and Table 5.4-6, Impacts to Natural Communities, indicates the quantity of each natural community occurring within the BSA and impacts associated with the Project.

The Project would avoid impacts to freshwater marsh/disturbed wetland, disturbed mule fat scrub, open water and chaparral. It would impact a total of 2.8 acres of sensitive habitat consisting of 0.69 acre of sensitive wetland/riparian habitats and 2.1 acres of sensitive upland habitats, as described below. Eucalyptus woodland, disturbed land, developed land and non-native vegetation also would be impacted but are not considered sensitive and therefore are not discussed further.

Southern Willow Scrub (Including Disturbed)

Permanent direct impacts would occur to 0.15 acre of disturbed southern willow scrub in a patch located north of Friars Road at the junction of Ulric Street and the southbound on-ramp to SR 163. Temporary direct impacts would occur to 0.11 acre of disturbed southern willow scrub at this location. This habitat is associated with a storm water drainage system, and is the result of urban runoff from houses upslope and the adjacent roadway. It has a large proportion of non-native species, including Canary Island date palm (*Phoenix canariensis*) and Mexican fan palm (*Washingtonia robusta*). Herbaceous growth in the disturbed southern willow scrub in this area is sparse with the exception of

areas of giant reed (*Arundo donax*) and pampas grass (*Cortaderia jubata*). As a result of these considerations, this habitat is generally of low quality.

The southern willow scrub at this location primarily functions to increase groundwater discharge and reduce surface water pollutants. The disturbed nature and location of this small patch make it of minimal use for wildlife. The buffer around this wetland habitat is constrained in that Ulric Street occurs immediately adjacent to the west and the SR 163 southbound on-ramp occurs immediately to the south. The permanent impacts to southern willow scrub (including disturbed) have been reduced to the extent feasible while maintaining the minimum roadway design criteria (i.e., curve radii and skew of the proposed flyover on-ramp to southbound SR 163 from Ulric Street). In addition, the temporary construction zone beyond the direct impact footprint has been pulled back from the southern willow scrub (including disturbed) to the extent feasible. The wetland buffer to the north, east, and northeast of this patch of southern willow scrub habitat would not be affected.

The proposed permanent and temporary impacts are assessed as significant.

Table 5.4-6
IMPACTS TO NATURAL COMMUNITIES (acres)[1]

NATURAL COMMUNITY[2]	EXISTING WITHIN BSA (ac)	IMPACTS		
		Temp.	Perm.	Total
Wetlands				
Southern willow scrub (including disturbed)	0.36	0.11	0.15	0.26
Southern cottonwood-willow riparian forest	14.45	0.20	0.23	0.43
Subtotal	**14.81**	**0.31**	**0.38**	**0.69**
Native Upland Habitat (Tier II)[3]				
Diegan coastal sage scrub (including disturbed)[4]	15.6	0.2	0.1	0.3
Subtotal	**15.6**	**0.2**	**0.1**	**0.3**
Naturalized Upland Habitat (Tier IIIB)[3]				
Non-native grassland (including disturbed)	6.1	0.4	1.4	1.8
Subtotal	**6.1**	**0.4**	**1.4**	**1.8**

Table 5.4-6 (cont.) IMPACTS TO NATURAL COMMUNITIES (acres)[1]				
NATURAL COMMUNITY[2]	**EXISTING WITHIN BSA** (ac)	**IMPACTS**		
		Temp.	**Perm.**	**Total**
Other Uplands (Tier IV) [3]				
Eucalyptus woodland	9.3	2.7	2.8	5.5
Disturbed land	12.5	2.2	2.4	4.6
Developed land	196.9	5.0	25.8	30.8
Non-native vegetation	37.5	5.8	10.3	16.1
Subtotal	**256.2**	**15.7**	**41.3**	**57.0**
TOTAL	**292.7**	**16.6**	**43.2**	**59.8**

Source: HELIX 2010
[1] Upland habitats are rounded to the nearest 0.1 acre, while wetland habitats are rounded to the nearest 0.01; totals reflect rounding
[2] Vegetation categories are from Holland (1986) and Oberbauer (2008)
[3] Tiers refer to the MSCP habitat classification system
[4] Impacts to San Diego barrel cactus are incorporated in the impacts for Diegan coastal sage scrub (see discussion on page 5.4-26, Sensitive Plant Species)

Southern Cottonwood-willow Riparian Forest

The Project would temporarily impact 0.20 acre and permanently impact 0.23 acre (of which 0.01 acre would be permanently removed and 0.22 acre would be subject to shading) of southern cottonwood-willow riparian forest within the San Diego River corridor. Because of anticipated loss of riparian vegetation due to shading, permanent adverse effects caused by the bridge crossing over the river have been assessed. In addition, the temporary construction zone added to the area assessed for direct footprint impacts was reviewed and established at 40 feet in width. The habitat that would be affected is of moderate quality, supporting numerous species, but has been subject to human disturbance and excessive noise levels from the adjacent existing freeway. The habitat has some groundwater recharge and surface water quality purification function but mostly serves as potential cover for wildlife moving along the river.

In this area, the San Diego River corridor is constrained by Camino de la Reina and developed land to the south and the San Diego Trolley line and development to the north, which essentially precludes the existence of a wetland buffer. Certain wetland areas north of the channel are adjacent to disturbed lands that support minimal buffer function between the wetland habitat and existing developed areas. These areas of disturbed land are mostly devoid of vegetation due to human disturbance/vehicle access. Non-native grassland mapped within the corridor does not act as a wetland buffer since it is surrounded on all sides by wetland.

Resolution of current weaving patterns on SR 163 requires the addition of new travel lanes between Friars Road and I-8; there is insufficient existing hardscape to address the issue via re-striping. As a result, there is no way to avoid additional impacts to southern cottonwood-willow riparian forest. However, impacts would be minimized to the level possible. As noted above, impacts would include permanent impacts from shading, permanent impacts associated with pier walls/footings and temporary construction impacts. New facility width is restricted to the minimum appropriate for state route design, and the new lanes have been placed adjacent to an existing bridge so that impacts would be focused in a portion of the river that is already disturbed. The new lanes are proposed for the west side of the existing bridge, which is the area where the MHPA is most narrow, as well as the area with the least amount of sensitive habitat. Similarly, the piers that are required to support the bridge would be placed in alignment with the existing bridge piers. In order to further minimize permanent vegetation removal, spans would be increased in areas with riparian vegetation such that pier walls would not be placed adjacent to every existing pier (refer to Figure 3-2). This would allow complete avoidance of riparian vegetation within the low-flow river channel and substantial minimization of direct removal of other riparian vegetation. Further increasing the spans to avoid all riparian vegetation is not considered feasible from an engineering perspective. Also, relocating piers such that they are not in alignment with existing piers in order to avoid the small patches of vegetation that would be impacted by the current design would result in an overall increase in hydrological (and ultimately downstream biological) impacts to the river system.

Areas temporarily impacted by bridge construction would be planted with native riparian species (including tree and shrub containers as well as a hydroseed mix containing herbs and grasses) following the completion of construction activities. This planting would be for erosion control and visual purposes only; it would not be considered biological mitigation. Because of the temporal loss of habitat and the anticipated loss of riparian vegetation due to shading, all impacts caused by the bridge crossing over the river have conservatively been assessed as permanent. All temporary and permanent impacts are assessed as significant and are subject to mitigation in accordance with the ratios specified in the City's Biology Guidelines.

In order to identify a suitable location for mitigation of Project impacts to wetland habitats, the Project team considered a range of feasible sites. The search included contact with 15 individual staff representatives of various governmental agencies, non-profit organizations and private organizations with knowledge of potential wetland mitigation opportunities along the San Diego River. A list of 27 sites within the San Diego River watershed and owned by the City of San Diego was initially assembled. These sites were screened based on the following: (1) whether the site was suitable for habitat creation, restoration and/or enhancement (based on review of aerial photographs or knowledge of the area); (2) whether the site was within City limits, within the MHPA and/or adjacent to other wetland mitigation efforts; and (3) identification of the managing City department. This initial screening effort resulted in identification of 10 potentially suitable parcels, which were presented to Caltrans and City Engineering & Capital Projects staff on July 24, 2008. At this meeting, three potential locales comprised of four

parcels were identified as having the greatest potential and subject to further evaluation. These sites included: (1) two parcels located south of Friars Road and east of Morena Boulevard; (2) the southern portion of the Carlton Oaks Country Club, adjacent to State Route 52 and west of Fanita Parkway; and (3) the southwestern portion of Mission Trails Park, north of Mission Gorge Road and west of Jackson Drive. These sites were further evaluated based on impacts to existing biological resources, long-term conservation value, human disturbance/vandalism potential, feasibility of work access, presence of existing easements, potential conflicts with future projects planned in the area, community acceptance and potential to impact historic resources. Field review revealed that there was insufficient opportunity to create the required amount of wetland habitat at the two sites located south of Friars Road and east of Morena Boulevard, and that habitat maintenance in that location was likely to pose challenges due to ongoing human disturbance in the area. Also based on field review, it was determined that logistical and engineering constraints would likely preclude effective wetland mitigation at the Mission Trails Park site.

A portion of the Carlton Oaks Country Club property (owned by the City Water Department) located south of SR 52 was identified as being biologically appropriate and preliminarily feasible to conduct wetland creation activities. Testing to determine the soil characteristics and depth to groundwater to verify feasibility for wetland creation was conducted on May 7, 2009. Based on the depth to groundwater (approximately 15 feet), combined with the presence of the Mission Valley Trunk Sewer located approximately 13 feet below the surface across the northwestern portion of the property, it was determined that wetland creation on this site did not support the desired likelihood of success.

When the above-described exhaustive screening of City-owned parcels within City limits did not result in the identification of a suitable wetland creation site, the City expanded its search to include parcels outside City limits. Specifically, the City initiated consideration of the Mast Park wetland mitigation site, located east of Carlton Hills Boulevard and north of Willow Grove Avenue in the City of Santee (Figure5.4-4). The site is located immediately adjacent to the San Diego River (the river historically flowed through the site prior to channelization), within the historical floodplain and the City's proposed MSCP preserve.

The restoration site currently is undeveloped. Surrounding land uses include a Wal-Mart store to the east, residential development to the south, and a habitat restoration site to the west. Habitat restoration for another project was proposed (but has not been implemented) on another immediately adjacent area. The San Diego River and undeveloped land border the restoration area to the north. The proposed restoration area supports intermixed patches of native habitats and disturbed areas. The proposed mitigation area is considered suitable for wetland habitat enhancement and creation due to the presence of a patchwork of existing riparian vegetation, the presence of alluvial soils throughout the site, and the site's location adjacent to the San Diego River, within the river's floodplain.

A conceptual mitigation plan including success criteria, a five-year maintenance and monitoring period, and the estimated cost of the mitigation has been developed (Appendix D). The plan recommends measures to improve the quality of existing habitat (enhancement) and create additional habitat in disturbed areas on site. Enhancement of the existing habitat would include weeding and seeding/planting within bare or sparsely vegetated areas. Habitat creation would include removal of existing fill from the floodplain and planting of appropriate species to convert existing upland disturbed areas into native riparian forest and riparian scrub habitat.

If it ultimately is determined that mitigation at Mast Park is not feasible, the City will consult with the applicable regulatory agencies to identify and implement appropriate mitigation at an alternative location. The alternative site(s) must be at a location in the San Diego River watershed capable of supporting a minimum of 0.26 acre of riparian scrub and 0.43 acre of riparian forest creation, along with a minimum of 0.52 acre of riparian scrub and 0.86 acre of riparian forest enhancement, subject to approval by ADD, ACOE and CDFG.

Diegan Coastal Sage Scrub (Including Disturbed)

In an effort to minimize impacts to Diegan coastal sage scrub, potential temporary effects to the habitat were decreased through adjustments to potential staging area boundaries and restriction of other incursions into this habitat to the permanent footprint. In addition, permanent impacts were minimized through redesign of the Ulric Street expansion, which resulted in avoidance of Diegan coastal sage scrub on the west side of that street. Nonetheless, implementation of the Project would cause permanent impacts to 0.1 acre and temporary impacts to 0.2 acre of Diegan coastal sage scrub (including disturbed). Although small in extent, such impacts would be significant.

Non-native Grassland (Including Disturbed)

Potential temporary construction effects to non-native grassland were minimized through adjustment of potential staging area boundaries during initial Project planning. Implementation of the Project would cause temporary impacts to 0.4 acre and permanent impacts to 1.4 acres of non-native grassland. Such impacts would be significant.

Jurisdictional Areas

Implementation of the Project would result in impacts to 0.21 acre of Corps jurisdictional areas, 1.92 acres of CDFG jurisdictional areas and 0.69 acre of City-defined wetlands (Figure 5.4-5; Table 5.4-7). These impacts would be significant. Indirect impacts from potential discharge of pollutants into jurisdictional features are discussed in Subsection 5.4.4.2, below.

Table 5.4-7 IMPACTS TO JURISDICTIONAL AREAS (acre)			
Vegetation Community	**Corps**	**CDFG**	**City**
Southern willow scrub (including disturbed)	0.05	0.26	0.26
Southern cottonwood-willow riparian forest	0	0.43	0.43
Non-wetlands			
Floodplain	0.16	0	0
Streambed	0	1.23	0
TOTAL	**0.21**	**1.92**	**0.69**

Source: HELIX 2010

Disturbed Southern Willow Scrub

The Project would temporarily impact 0.11 acre and permanently impact 0.15 acre of disturbed southern willow scrub considered CDFG jurisdictional/City wetlands. Thus, the total area of impact to jurisdictional disturbed southern willow scrub would be 0.26 acre. This area is located in a patch north of Friars Road at the junction of Ulric Street and the southbound on-ramp to SR 163. As stated above, this area is associated with a storm water drainage system and is generally of low quality as it contains a large proportion of non-native species. It primarily functions to increase groundwater discharge and reduce surface water pollutants. The disturbed nature and location of this small patch make it of minimal use for wildlife. No impacts to function and value would occur. Nonetheless, such jurisdictional impacts are assessed as significant. As discussed in detail above, impacts would be unavoidable and have been minimized to the maximum extent practicable.

Southern Cottonwood-willow Riparian Forest

The Project would temporarily impact 0.20 acre and permanently impact 0.23 acre (of which 0.01 acre would be permanently removed and 0.22 acre would be subject to shading) of southern cottonwood-willow riparian forest considered CDFG jurisdictional/City wetlands. Thus, the total area of impact to jurisdictional southern cottonwood-willow riparian forest would be 0.43 acre. As noted above, all impacts are conservatively treated as permanent. The affected southern cottonwood-willow riparian forest in the San Diego River channel is of moderate quality within the river floodplain but in an area that has not been restored to a high functioning level because it is subject to human disturbance and excessive noise levels from the existing freeway.

The habitat has some groundwater recharge and surface water quality purification function but mostly serves as potential cover for certain wildlife moving along the river. It is not expected that many species would reside in this habitat due to the high noise levels. As discussed in detail above, impacts would be unavoidable and have been

minimized to the maximum extent practicable. All impacts are assessed as significant and are subject to mitigation in accordance with the ratios specified in the City's Biology Guidelines.

Floodplain/Streambeds

The Project would impact 0.16 acre of ACOE jurisdictional floodplain, including 0.14 acre of temporary impact and 0.02 acre of permanent impact (fill). The Project also would impact 1.23 acre of CDFG jurisdictional streambed, including 1.11 acre of temporary impact and 0.12 acre of permanent impact (fill).

These areas only flood periodically and encompass non-native grassland, disturbed habitat and/or developed areas (i.e., landscaping). Their functions include short- or long-term surface water storage, subsurface water storage, moderation of groundwater flow or discharge, dissipation of energy, cycling of nutrients, removal of elements and compounds and retention/transport of particulates. As described above, impacts would be unavoidable and have been minimized to the maximum extent practicable. All impacts are assessed as significant and are subject to mitigation in accordance with requirements of the Corps and CDFG.

Sensitive Plant Species

Figures 5.4-3a, b and c show where special status plant species were observed during biological surveys in relationship to the Project's footprint. No federally listed or narrow endemic plant species were observed within the BSA.

Incorporation of standard BMPs into the Project design would be sufficient to prevent potential indirect impacts to a known population of San Diego thornmint located approximately 0.6 mile west of the BSA in the river area. A nearby population of San Diego button-celery (approximately 0.6 mile east of the BSA) is located on a mesa and would not be subject to indirect impacts. All known nearby populations of San Diego ambrosia and willowy monardella are located upstream of the BSA and would not be affected by Project construction or implementation. The closest known location of Orcutt's spineflower is in Point Loma and therefore would not be affected by Project construction or implementation.

The Project would impact 2 individuals of San Diego barrel cactus and 39 individuals of San Diego County viguiera. It should be noted that the habitat in which San Diego barrel cactus is located is not suitable habitat for coastal cactus wren *(Campylorhynchus brunneicapillus couesi*). See Table 5.4-5 for more information on coastal cactus wren. Impacts to the sensitive plant species would be significant. Such impacts would be mitigated through payment into the City's Habitat Acquisition Fund as detailed in Mitigation Measure BR-3. In addition, the two San Diego barrel cactus would be transplanted as discussed in Mitigation Measure BR-7. The locations where the remaining San Diego barrel cactus and San Diego County viguiera occur are upslope from potential runoff issues. Therefore, no indirect impacts to these species would occur.

Area-specific management directives for San Diego barrel cactus must include measures to protect species from edge effects and unauthorized collection and include appropriate fire management/control practices to protect against a too frequent fire cycle.

Sensitive Animal Species

Figures 5.4-3a, b and c show where special status animal species were observed/detected during biological surveys within the BSA, relative to the Project's footprint.

Sensitive Animal Species Known to Occur

Coastal California Gnatcatcher. One coastal California gnatcatcher pair was observed in Diegan coastal sage scrub within the BSA during USFWS protocol surveys conducted in 2003. This pair was observed outside of the Project impact footprint. One gnatcatcher was observed within the BSA (not during a protocol survey) in 2005; however, it was not found during modified protocol surveys later that year. Furthermore, no gnatcatcher was found during the use area survey in the same vicinity. It is possible that the 2005 observation occurred as the gnatcatcher was passing through the area. Based on the results of these surveys, it appears that gnatcatchers (which were observed/detected outside the MHPA) do not use the habitat that would be affected by grading for breeding purposes. Accordingly, no direct impacts to locations where gnatcatchers were observed/detected would occur from the Project.

Implementation of the Project would avoid effects to the vast majority of Diegan coastal sage scrub, the preferred habitat of the coastal California gnatcatcher. It would, however, cause direct temporary impacts to 0.2 acre and direct permanent impacts to 0.1 acre of Diegan coastal sage scrub (including disturbed). Direct effects to potential gnatcatcher habitat (Diegan coastal sage scrub) would be mitigated through in-kind preservation at a 1:1 ratio through payment into the City's Habitat Acquisition Fund as detailed in Mitigation Measure BR-3.

Construction noise from such sources as grading and additional vehicular traffic could cause temporary effects to nesting gnatcatchers within the BSA. Given that the gnatcatchers reported within the BSA are outside the MHPA, and the City has take authority for this species, effects due to construction and operational noise are considered less than significant by the City.

It should be noted, however, that preconstruction surveys to determine breeding activity and nest locations for gnatcatcher would occur within coastal sage scrub habitat west of SR 163 and north of Friars Road, as required in the Biological Opinion (see Appendix A of the NES). These surveys would be performed by a USFWS-approved biologist and the results would be reported to the USFWS.

If it is determined that breeding activities (e.g. territorial defense, nest building, brooding) are occurring, the locations and/or perimeter of the territory and/or nest would be documented and the USFWS consulted. Project activities expected to adversely affect the

gnatcatcher would immediately halt within 500 feet of the territory or nest. If gnatcatchers are observed within the Project impact area, the Section 7 consultation would be reinitiated.

In addition, area-specific management directives for gnatcatchers must include measures to reduce edge effects and minimize disturbance during the nesting period, fire protection measures to reduce the potential for habitat degradation due to unplanned fire, and management measures to improve habitat quality including vegetation structure. No clearing of occupied habitat within the City's MHPA may occur between March 1 and August 15.

Orange-throated Whiptail. Direct impacts to two locations where orange-throated whiptail were observed would occur upon implementation of the Project. In addition, impacts to the habitat of orange-throated whiptail (coastal sage scrub and non-native grassland) would occur. These impacts would be would be significant. Such impacts would be mitigated through payment into the City's Habitat Acquisition Fund, as detailed in Mitigation Measure BR-3. Due to the short-term and localized nature of construction effects, species mobility and presence of unimpacted adjacent habitat, temporary impacts due to construction noise and dust are not assessed as significant. As stated above, area-specific management directives must address edge effects.

San Diego Black-tailed Jackrabbit. No impacts would occur to the locations where San Diego black-tailed jackrabbit was observed/detected; therefore, direct impacts to the species are not anticipated. Implementation of the Project would cause permanent direct impacts to habitat that could be used by the San Diego black-tailed jackrabbit, including to 0.1 acre of Diegan coastal sage scrub and 0.4 acre of non-native grassland, in addition to temporary impacts to 0.2 acre of Diegan coastal sage scrub and 1.4 acres of non-native grassland. These impacts would be significant and would be mitigated through payment into the City's Habitat Acquisition Fund as detailed in Mitigation Measure BR-3. Due to the short-term and localized nature of construction effects, species mobility and presence of unimpacted adjacent habitat, temporary impacts due to construction noise and dust are not assessed as significant.

Western Bluebird. Although western bluebird typically occurs in open woodlands and grasslands, a single individual was observed/detected in coastal sage scrub north of Friars Road and east of Ulric Street. The Project would not result in direct impacts to the location where the western bluebird was observed/detected; however, impacts to Diegan coastal sage scrub (the habitat in which the species was observed/detected) and grasslands (preferred habitat) would occur. Impacts to habitats would be significant and would be mitigated through payment into the City's Habitat Acquisition Fund as detailed in Mitigation Measure BR-3. Indirect impacts related to construction also could occur during the avian breeding season (February 1 to July 30) if birds are nesting within 500 feet of the construction. Such indirect impacts would be significant.

Yellow-breasted Chat. Yellow-breasted chat typically occurs in mature riparian woodland and was observed/detected within the southern cottonwood willow riparian

forest within the BSA along the San Diego River. The Project would not impact the location where the yellow-breasted chat was observed/detected; however, impacts to 0.43 acre of southern cottonwood-willow riparian forest would occur. This impact would be significant and would be mitigated through habitat creation and restoration/enhancement as described in Mitigation Measure BR-2. Indirect impacts related to construction also could occur during the avian breeding season (February 1 to July 30) if birds are nesting within 500 feet of the construction. Such indirect impacts would be significant.

Raptors (Loss of nests). As previously stated, Cooper's hawk, red-tailed hawk and red-shouldered hawk were observed flying over the BSA during biological surveys. Implementation of the Project would temporarily impact 0.20 acre and permanently impact 0.23 acre of southern cottonwood-willow riparian forest and temporarily impact (with staging areas, where trees would not be removed) 2.6 acres and permanently impact 2.7 acres of eucalyptus woodland, the preferred nesting habitats of these species. While it is unlikely these species or other raptors use the eucalyptus trees in the BSA for nesting due to high noise and activity levels, and no raptor nests were observed during surveys, direct impacts to nesting raptors would be significant. This impact would be mitigated through habitat creation and restoration/enhancement as described in Mitigation Measure BR-2.

Implementation of the Project also would temporarily impact 0.2 acre of Diegan coastal sage scrub and 0.4 acre of non-native grassland and permanently impact 0.1 acre of Diegan coastal sage scrub and 1.4 acre of non-native grassland, the preferred foraging habitats of the Cooper's hawk. These impacts would be significant and would be mitigated through habitat mitigation as described in Mitigation Measure BR-3.

Indirect impacts related to construction also could occur during the raptor breeding season (February 1 to August 31) if birds are nesting within 500 feet of the construction. Such indirect impacts would be significant.

In addition, area-specific management directives must include 300-foot impact avoidance areas around active nests, and minimization of disturbance in oak woodlands and oak riparian forests.

Sensitive Animal Species with Potential to Occur

The Project would temporarily impact 0.20 acre and permanently impact 0.23 acre of southern cottonwood-willow riparian forest, the most likely habitat to be used by the southwestern willow flycatcher and least Bell's vireo in the BSA. The habitat within the BSA is not critical habitat; therefore, the Project would not have a significant impact on critical habitat for these species. No significant direct impacts to the flycatcher or vireo are anticipated from implementation of the Project, as protocol surveys for this species were negative. New southbound lanes crossing the river have been designed as close to the existing facility as possible, thereby minimizing effects to potential vireo and flycatcher habitat. Effects to southern cottonwood-willow riparian forest, the preferred

habitat of the southwestern willow flycatcher and least Bell's vireo, would be mitigated at a 3:1 ratio, as detailed in Mitigation Measure BR-2.

The USFWS concluded that adverse impacts would not occur to these species. A conservative approach to potential future effects, however, is being taken in this EIR to account for the potential for indirect noise to affect individuals that may nest in the portion of San Diego River within the BSA in the future. Although the ambient noise level from freeway traffic is very high (up to 80 dB), some construction activities could result in adverse noise effects if either of these species is present. These impacts would be considered significant.

5.4.2.3 Significance of Impact

Direct impacts to disturbed southern willow scrub, southern cottonwood-willow riparian forest, Diegan coastal sage scrub, non-native grassland and non-wetland waters of the U.S./streambed are considered significant. Direct impacts to San Diego barrel cactus and San Diego County viguiera would be significant as would direct impacts to orange-throated whiptail. Potential indirect impacts to western bluebird, yellow-breasted chat, raptors, least Bell's vireo and southwestern willow flycatcher also are considered significant.

5.4.2.4 Mitigation Measures

The following mitigation measures have been formulated to satisfy the requirements of the City of San Diego's MSCP (1997) and Biology Guidelines (2002). The mitigation ratios used in this report follow the City of San Diego's ESL Regulation categorized tier system for impacts to sensitive vegetation/habitat communities within the MSCP (as summarized on Table 5.4-8, Habitat Mitigation Requirements, and detailed below).

Table 5.4-8
HABITAT MITIGATION REQUIREMENTS

VEGETATION COMMUNITIES/HABITAT	RATIO	IMPACTS	MITIGATION
Wetland/Riparian			
Southern willow scrub (including disturbed)	3:1[1]	0.26	0.78
Southern cottonwood-willow riparian forest	3:1[1]	0.43	1.29
Subtotal Wetland/Riparian[2]		**0.69**	**2.07**

Table 5.4-8 (cont.) HABITAT MITIGATION REQUIREMENTS			
VEGETATION COMMUNITIES/HABITAT	**RATIO**	**IMPACTS**	**MITIGATION**
Uplands			
Diegan Coastal Sage Scrub (including disturbed)	1:1	0.3	0.3[3]
Non-native Grassland (permanent impacts)	0.5:1	1.8	0.9[4]
Subtotal Uplands**		**2.1**	**1.2**
TOTAL**		**2.8**	**3.3**

Source: HELIX 2010
[1] To be verified through the permitting process; will involve both preservation and restoration/creation
[2] Totals reflect rounding
[3] Temporary and permanent impacts to 0.3 acre of Diegan coastal sage scrub would be mitigated through payment into the City's Habitat Acquisition Fund in an amount equal to 0.3 acre
[4] Temporary and permanent impacts to 1.8 acres of non-native grassland would be mitigated through payment into the City's Habitat Acquisition Fund in an amount equal to 0.9 acre

The temporary and permanent loss of sensitive upland habitat (Diegan coastal sage scrub and non-native grassland) would be mitigated through the purchase of upland habitat credits through the City of San Diego Habitat Acquisition Fund (Fund #10571). The Project proposes to purchase a total of 1.2 acres of credit from the City of San Diego Habitat Acquisition Fund and pay the required fees. Prior to the issuance of any authorization to proceed, the Assistant Deputy Director (ADD) of Entitlements Division or Environmental Designee shall ensure that the applicant has provided verification of the payment into the City of San Diego's Habitat Acquisition Fund as mitigation for impacts to 0.3 acre of coastal sage scrub and 1.8 acres of non-native grassland. (The payment shall be calculated based on the current Habitat Acquisition Fund fee at the time of grading permit issuance for the Project.

In addition, all areas affected by temporary impacts would be planted/reseeded for erosion control and visual purposes only with native habitat palettes, consistent with adjacent native habitats.

Impacts to wetlands (0.26 acre of disturbed southern willow scrub and 0.43 acre of southern cottonwood-willow riparian forest) would be mitigated at a 3:1 ratio (with a minimum 1:1 creation component and 2:1 enhancement component). The function of the mitigated wetland would be the same as or better than the impacted habitat, and plant species in the creation/enhancement areas would be similar to those within the impacted areas. As described in detail on page 5.4-23, wetland creation activities are proposed on the Mast Park property, located in the City of Santee. A conceptual mitigation plan, including success criteria, a five-year maintenance and monitoring period, and the estimated cost of the mitigation is appended to this EIR (Appendix D).

To ensure that site development would avoid significant environmental impacts, a Mitigation, Monitoring, and Reporting Program (MMRP) is required. Compliance with the mitigation measures shall be the responsibility of the owner/permittee. The mitigation measures are described below.

Implementation of the following measures would reduce Project impacts to biological resources to below a level of significance.

Prior to the issuance of a Notice to Proceed (NTP) or any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits the ADD or environmental designee of the City's Entitlements Division shall verify that the following statement is shown on the grading and/or construction plans as a note under the heading *Environmental Requirements*: "State Route 163/Friars Road Interchange Project is subject to a Mitigation, Monitoring and Reporting Program and shall conform to the mitigation conditions as contained in the EIR, Project No. 72782, State Clearinghouse No. 2005111032."

BR-1 Impacts to 0.26 acre (consisting of 0.11 acre of temporary impact and 0.15 acre of permanent impact) of disturbed southern willow scrub shall be mitigated at a 3:1 ratio (with a minimum 1:1 creation component) through the creation of 0.26 acre and the restoration/enhancement of 0.52 acre of southern willow scrub, for a total of 0.78 acre, as detailed in Appendix D. If mitigation in accordance with the plan contained in Appendix D is determined not to be feasible, the City shall identify and implement an appropriate alternate mitigation program, subject to approval by the ADD, ACOE and CDFG.

BR-2 Impacts to 0.43 acre total (consisting of 0.20 acre of temporary impact and 0.23 acre of permanent impact) of southern cottonwood-willow riparian forest shall be mitigated at a 3:1 ratio (with a minimum 1:1 creation component) through the creation of 0.43 acre and the restoration/enhancement of 0.86 acre of southern cottonwood-willow riparian forest, for a total of 1.29 acres, as detailed in Appendix D. If mitigation in accordance with the plan contained in Appendix D is determined not to be feasible, the City shall identify and implement an appropriate alternate mitigation program, subject to approval by the ADD, ACOE and CDFG.

BR-3 Prior to issuance of a Notice to Proceed (NTP) or any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits, and Building Plans/Permits, the owner/permittee shall contribute to the City of San Diego HAF to mitigate for the loss of 0.3 acre of Diegan coastal sage scrub (Tier II) and 1.8 acres of non-native grassland (Tier IIIB). This fee is based on mitigation ratios, per the City of San Diego Biology Guidelines, of 1:1 for Diegan coastal sage scrub and 0.5:1 for non-native grassland impacts (of which both impacts occurred outside the MHPA, yet mitigation would be required inside the MHPA). Therefore, the resulting total mitigation required for direct Project

impacts is for a total of 1.2 acres equivalent contribution to the City's Habitat Acquisition Fund (HAF) [fee amount subject to change] plus a ten percent (10%) administrative fee.

BR-4 Prior to the issuance of a NTP or any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits, and Building Plans/Permits, the ADD or Environmental Designee of the City's Entitlements Division shall incorporate the following mitigation measures into the Project design and include them verbatim on all appropriate construction documents.

Prior to Permit Issuance

A. Entitlements Division Plan Check
   1. Prior to the NTP or issuance for any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits, and Building Plans/Permits, whichever is applicable, the ADD or environmental designee shall verify that the requirements for the revegetation/restoration plans and specifications, including mitigation of direct impacts to southern willow scrub (0.26 acre) and southern cottonwood-willow riparian forest (0.43 acre) have been shown and noted on the appropriate landscape construction documents. The landscape construction documents and specifications must be found to be in conformance with the Wetland Restoration Plan prepared by HELIX Environmental Planning, November 2009, the requirements of which are summarized below:
B. Revegetation/Restoration Plan(s) and Specifications
   1. Landscape Construction Documents (LCD) shall be prepared on D-sheets and submitted to the City of San Diego Development Services Department, Landscape Architecture Section (LAS) for review and approval. LAS shall consult with Mitigation Monitoring Coordination (MMC) and obtain concurrence prior to approval of LCD. The LCD shall consist of revegetation/restoration, planting, irrigation, and erosion control plans, including all required graphics, notes, details, specifications, letters, and reports, as outlined below.
   2. Landscape Revegetation/Restoration Planting and Irrigation Plans shall be prepared in accordance with the San Diego Land Development Code (LDC) Chapter 14, Article 2, Division 4, the LDC Landscape Standards submittal requirements, and Attachment "B" (General Outline for Revegetation/ Restoration Plans) of the City of San Diego's LDC Biology Guidelines (July 2002). The Principal Qualified Biologist (PQB) shall identify and adequately document all pertinent information concerning the revegetation/restoration goals and requirements, such as but not limited to, plant/seed palettes, timing of installation, plant installation specifications, method of watering, protection of adjacent habitat, erosion and sediment control, performance/success criteria, inspection schedule by City staff, document submittals, reporting schedule, etc. The LCD shall also include comprehensive graphics and notes

addressing the ongoing maintenance requirements (after final acceptance by the City).

3. The Revegetation Installation Contractor (RIC), Revegetation Maintenance Contractor (RMC), Construction Manager (CM), and Grading Contractor (GC), where applicable, shall be responsible for ensuring that all grading and contouring, clearing and grubbing, installation of plant materials, and any necessary maintenance activities or remedial actions required during installation and the 120-day plant establishment period are done per approved LCD. The following procedures at a minimum, but not limited to, shall be performed:
   a. The RMC shall be responsible for the maintenance of the wetland mitigation areas for a minimum period of 120 days. Maintenance visits shall be conducted on a weekly basis throughout the plant establishment period.
   b. At the end of the 120 day period, the PQB shall review the mitigation area to assess the completion of the short-term plant establishment period and submit a report for approval by the MMC.
   c. The MMC will provide approval in writing to begin the five-year long-term establishment/maintenance and monitoring program.
   d. Existing indigenous/native species shall not be pruned, thinned, or cleared in the revegetation/mitigation area.
   e. The revegetation site shall not be fertilized.
   f. The RIC is responsible for reseeding (if applicable) if weeds are not removed, within one week of written recommendation by the PQB.
   g. Weed control measures shall include the following: (1) hand removal, (2) cutting, with power equipment, and (3) chemical control. Hand removal of weeds is the most desirable method of control and will be used wherever possible.
   h. Damaged areas shall be repaired immediately by the RIC/RMC. Insect infestations, plant diseases, herbivory, and other pest problems will be closely monitored throughout the five-year maintenance period. Protective mechanisms such as metal wire netting shall be used as necessary. Diseased and infected plants shall be immediately disposed of off site in a legally-acceptable manner at the discretion of the PQB or Qualified Biological Monitor (QBM; City approved). Where possible, biological controls will be used instead of pesticides and herbicides.
4. If a Brush Management Program is required, the revegetation/restoration plan shall show the dimensions of each brush management zone and notes shall be provided describing the restrictions on planting and maintenance and identify that the area is impact-neutral and shall not be used for habitat mitigation/credit purposes.

C. Letters of Qualification Have Been Submitted to ADD
   1. The applicant shall submit, for approval, a letter verifying the qualifications of the biological professional to the MMC. This letter shall identify the PQB, Principal Restoration Specialist (PRS), and QBM, where applicable, and the

names of all other persons involved in the implementation of the revegetation/restoration plan and biological monitoring program, as they are defined in the City of San Diego Biological Review References. Resumes and the biology worksheet should be updated annually.

2. The MMC will provide a letter to the applicant confirming the qualifications of the PQB/PRS/QBM and all City-approved persons involved in the revegetation/restoration plan and biological monitoring of the Project.
3. Prior to the start of work, the applicant must obtain approval from the MMC for any personnel changes associated with the revegetation/restoration plan and biological monitoring of the Project.
4. The PBQ must also submit evidence to the MMC that the PQB/QBM has completed Storm Water Pollution Prevention Program training.

Prior to Start of Construction

A. PQB/PRS Shall Attend Preconstruction (Precon) Meetings
   1. Prior to beginning any work that requires monitoring:
      a. The owner/permittee or their authorized representative shall arrange and perform a Precon Meeting that shall include the PQB or PRS, CM, and/or GC, Landscape Architect (LA), RIC, RMC, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC.
      b. The PQB shall also attend any other grading/excavation-related Precon Meeting to make comments and/or suggestions concerning the revegetation/restoration plan(s) and specifications with the RIC, CM, and/or GC.
      c. If the PQB is unable to attend the Precon Meeting, the owner shall schedule a focused Precon Meeting with the MMC, PQB/PRS, CM, BI, LA, RIC, RMC, RE, and/or BI, if appropriate, prior to the start of any work associated with the revegetation/ restoration phase of the Project, including site grading preparation.
   2. Where Revegetation/Restoration Work Will Occur
      a. Prior to the start of any work, the PQB/PRS shall also submit a revegetation/restoration monitoring exhibit (RRME) based on the appropriate reduced LCD (reduced to 11" x 17" format) to the MMC and RE, identifying the areas to be revegetated/restored, including the delineation of the limits of any disturbance/grading and any excavation.
      b. The PQB shall coordinate with the construction superintendent to identify appropriate BMPs on the RRME.
   3. When Biological Monitoring Will Occur
      a. Prior to the start of any work, the PQB/PRS shall also submit a monitoring procedures schedule to the MMC and RE indicating when and where biological monitoring and related activities will occur.
   4. PQB Shall Contact MMC to Request Modification
      a. The PQB may submit a detailed letter to the MMC prior to the start of work or during construction requesting a modification to the revegetation/ restoration plans and specifications. This request shall be based on relevant

information (such as other sensitive species not listed by federal and/or state agencies and/or not covered by the MSCP and to which any impacts may be considered significant under CEQA), which may reduce or increase the potential for biological resources to be present.

During Construction

A. PQB or QBM Present During Construction/Grading/Planting
   1. The PQB or QBM shall be present full-time during construction activities, including but not limited to, site preparation, cleaning, grading, excavation, and landscape establishment in association with Project construction and/or grading activity which could result in impacts to sensitive biological resources as identified in the LCDs and on the RRME. **The RIC and/or QBM is responsible for notifying the PQB/PRS of changes to any approved construction plans, procedures, and/or activities. The PQB/PRS is responsible to notify the CM, LA, RE, BI, and MMC of the changes.**
   2. The PQB or QBM shall document field activity via the Consultant Site Visit Record Forms (CSVR). The CSVR shall be faxed by the CM on the first day of monitoring, the last day of monitoring, monthly, and in the event that there is a deviation from conditions identified within the LCD and/or biological monitoring program. The RE shall forward copies to MMC.
   3. The PQB or QBM shall be responsible for maintaining and submitting the CSVR at the time that CM responsibilities end (i.e., upon the completion of construction activity other than that associated with biology).
   4. All construction activities (including staging areas) shall be restricted to the development areas as shown on the LCD. The PQB/PRS or QBM staff shall monitor construction activities as needed, with MMC concurrence on method and schedule. This is to ensure that construction activities do not encroach into biologically sensitive areas beyond the limits of disturbance as shown on the approved LCD.
   5. The PQB or QBM shall supervise the placement of orange construction fencing or City approved equivalent along the limits of potential disturbance adjacent to (or at the edge of) all sensitive habitats (southern willow scrub, southern cottonwood-willow riparian forest, Diegan coastal sage scrub and non-native grassland), as shown on the approved LCD.
   6. The PBQ shall provide a letter to the MMC indicating that limits of potential disturbance have been surveyed, staked, and that the construction fencing is installed properly.
   7. The PQB or QBM shall oversee implementation of BMPs, such as gravel bags, straw logs, silt fences or equivalent erosion control measures, as needed, to ensure prevention of any significant sediment transport. In addition, the PQB/QBM shall be responsible for verifying the removal of all temporary construction BMPs upon completion of construction activities. Removal of temporary construction BMPs shall be verified in writing on the final construction phase CSVR.

8. The PQB shall verify in writing on the CSVR that no trash stockpiling or oil dumping, fueling of equipment, storage of hazardous wastes or construction equipment/material, parking, or other construction-related activities shall occur adjacent to sensitive habitat. These activities shall occur only within the designated staging area located outside the area defined as biological sensitive area.
9. The long-term establishment inspection and reporting schedule per LCD must all be approved by the MMC prior to the issuance of the Notice of Completion or any bond release.

B. Disturbance/Discovery Notification Process
   1. If unauthorized disturbances occur or sensitive biological resources are discovered that where not previously identified on the LCD and/or RRME, the PQB or QBM shall direct the contractor to temporarily divert construction in the area of disturbance or discovery and immediately notify the RE or BI, as appropriate.
   2. The PQB shall also immediately notify the MMC by telephone of the disturbance and report the nature and extent of the disturbance and recommend the method of additional protection, such as fencing and appropriate BMPs. After obtaining concurrence with the MMC and RE, the PQB and CM shall install the approved protection and agreement on BMPs.
   3. The PQB shall also submit written documentation of the disturbance to the MMC within 24 hours by fax or email with photos of the resource in context (e.g., show adjacent vegetation).

C. Determination of Significance
   1. The PQB shall evaluate the significance of disturbance and/or discovered biological resource and provide a detailed analysis and recommendation in a letter report with the appropriate photo documentation to the MMC to obtain concurrence and formulate a plan of action that may include fines, fees, and supplemental mitigation costs.
   2. The MMC shall review this letter report and provide the RE with MMC's recommendations and procedures.

<u>Post Construction</u>

A. Mitigation Monitoring and Reporting Period
   1. Five-Year Mitigation Establishment/Maintenance Period
      a. The RMC shall be retained to complete maintenance monitoring activities throughout the five-year mitigation monitoring period.
      b. Maintenance visits will be conducted twice per month for the first six months, once per month for the remainder of the first year, and quarterly thereafter.
      c. Maintenance activities will include all items described in the LCD.
      d. Plant replacement will be conducted as recommended by the PQB (note: plants shall be increased in container size relative to the time of initial

installation or establishment or maintenance period may be extended to the satisfaction of the MMC).

2. Five-Year Biological Monitoring
   a. All biological monitoring and reporting shall be conducted by a PQB or QBM, as appropriate, consistent with the LCD.
   b. Monitoring shall involve both qualitative horticultural monitoring and quantitative monitoring (i.e., performance/success criteria). Horticultural monitoring shall focus on soil conditions (e.g., moisture and fertility), container plant health, seed germination rates, presence of native and non-native (e.g., invasive exotic) species, any significant disease or pest problems, irrigation repair and scheduling, trash removal, illegal trespass, and any erosion problems.
   c. After plant installation is complete, qualitative monitoring surveys will occur monthly during year one and quarterly during years two through five.
   d. Upon the completion of the 120-days short-term plant establishment period, quantitative monitoring surveys shall be conducted at 0, 6, 12, 24, 36, 48, and 60 months by the PQB or QBM. The revegetation/restoration effort shall be quantitatively evaluated once per year (in spring) during years three through five, to determine compliance with the performance standards identified on the LCD. All plant material must have survived without supplemental irrigation for the last two years.
   e. Quantitative monitoring shall include the use of fixed transects and photo points to determine the vegetative cover within the revegetated habitat. Collection of fixed transect data within the revegetation/restoration site shall result in the calculation of percent cover for each plant species present, percent cover of target vegetation, tree height and diameter at breast height (if applicable), and percent cover of non-native/non invasive vegetation. Container plants will also be counted to determine percent survivorship. The data will be used to determine attainment of performance/success criteria identified within the LCD.
   f. Biological monitoring requirements may be reduced if, before the end of the fifth year, the revegetation meets the fifth year criteria and the irrigation has been terminated for a period of the last two years.
   g. The PQB or QBM shall oversee implementation of post-construction BMPs, such as gravel bags, straw logs, silt fences, or equivalent erosion control measure, as needed to ensure prevention of any significant sediment transport. In addition, the PBQ/QBM shall be responsible for verifying the removal of all temporary post-construction BMPs upon completion of construction activities. Removal of temporary post-construction BMPs shall be verified in writing on the final post-construction phase CSVR.

B. Submittal of Draft Monitoring Report
   1. A draft monitoring letter report shall be prepared to document the completion of the 120-day plant establishment period. The report shall include discussion on weed control, horticultural treatments (pruning, mulching, and disease

control), erosion control, trash/debris removal, replacement planting/ reseeding, site protection/signage, pest management, vandalism, and irrigation maintenance. The revegetation/ restoration effort shall be visually assessed at the end of a 120-day period to determine mortality of individuals.

2. The PQB shall submit two copies of the Draft Monitoring Report that describes the results, analysis, and conclusions of all phases of the Biological Monitoring and Reporting Program (with appropriate graphics) to the MMC for review and approval within 30 days following the completion of monitoring. Monitoring reports shall be prepared on an annual basis for a period of five years. Site progress reports shall be prepared by the PQB following each site visit and provided to the owner, RMC and RIC. Site progress reports shall review maintenance activities, qualitative and quantitative (when appropriate) monitoring results (including progress of the revegetation relative to the performance/success criteria), and the need for any remedial measures.
3. Draft annual reports (three copies) summarizing the results of each progress report (including quantitative monitoring results and photographs taken from permanent viewpoints) shall be submitted to the MMC for review and approval within 30 days following the completion of monitoring.
4. The MMC shall return the Draft Monitoring Report to the PQB for revision or for preparation of each report.
5. The PQB shall submit a revised Monitoring Report to the MMC (with a copy to the RE) for approval within 30 days.
6. The MMC will provide written acceptance to the PQB and RE of the approved report.

C. Final Monitoring Reports(s)

1. The PQB shall prepare a Final Monitoring upon achievement of the fifth year performance/success criteria and completion of the five-year maintenance period.
    a. This report may occur before the end of the fifth year if the revegetation meets the fifth year performance /success criteria and the irrigation has been terminated for a period of the last two years.
    b. The Final Monitoring report shall be submitted to the MMC for evaluation of the success of the mitigation effort and final acceptance. A request for a pre-final inspection shall be submitted at this time, which the MMC will schedule after review of the report.
    c. If any of the revegetated area fails to meet the project's final success standards, the applicant must consult with the MMC. This consultation shall take place to determine whether the Revegetation effort is acceptable. The applicant understands that failure of any significant portion of the revegetation/restoration area may result in a requirement to replace or renegotiate that portion of the site and/or extend the monitoring and establishment/maintenance period until all success standards are met.

BR-5 Prior to the issuance of any construction permits, the ADD Environmental Designee shall verify that all MHPA boundaries and limits of disturbance have been delineated on all construction documents.

A. Prior to the first Precon Meeting, the owner/permittee shall provide a letter of verification to the Mitigation Monitoring Coordination Section stating that a qualified Biologist, as defined in the City of San Diego Biological Review References, has been retained to implement the projects MSCP monitoring Program. The letter shall include the names and contact information of all persons involved in the Biological Monitoring of the project.

B. At least thirty days prior to the Precon Meeting, the QB shall submit all required documentation to MMC, verifying that any special reports, maps, plans and time lines, such as but not limited to, revegetation plans, plant relocation requirements and timing, MSCP requirements, avian or other wildlife protocol surveys, impact avoidance areas or other such information has been completed and updated.

C. The QB (project biologist) shall attend the first Precon Meeting and discuss the projects biological monitoring program.

D. In addition the following mitigation measures related to the MHPA Land Use Adjacency Guidelines shall be implemented:

    1. Prior to initiation of any construction-related grading, the construction foreman and/or project biologist shall discuss the sensitive nature of the adjacent habitat with the crew and subcontractor.

    2. The limits of grading shall be clearly delineated by a survey crew prior to brushing, clearing or grading. The limits of grading, as shown on approved Exhibit A, shall be defined with silt fencing or orange construction fencing and checked by the biological monitor before initiation of construction grading. All native plants or species of special concern, (i.e., the coast barrel cactus) as identified in the biological technical report, shall be staked, flagged and avoided within Brush Management Zone 2.

    3. Invasive non-native plant species shall not be introduced into areas adjacent to the MHPA. Landscape plans shall contain non-invasive native species adjacent to sensitive biological areas as shown on approved Exhibit A.

    4. All lighting adjacent to the MHPA shall be shielded, unidirectional, low pressure sodium illumination (or similar) and directed away from preserve areas using appropriate placement and shields. If lighting adjacent to the MHPA is required for nighttime construction, it shall be directed away from the preserve and the tops of adjacent trees with potentially nesting raptors, using appropriate placement and shielding.

5. All construction activities (including staging areas and/or storage areas) shall be restricted to the development area as shown on the approved Exhibit A. No equipment maintenance shall be conducted within or near the adjacent open space and/or sensitive areas and shall be restricted to the development area as shown on the approved Exhibit A and shall not encroach into sensitive biological areas within either the open space and/or MHPA areas. The project biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas beyond the limits of disturbance as shown on the approved Exhibit A.

6. Natural drainage patterns shall be maintained as much as possible during construction. Erosion control techniques, including the use of sandbags, hay bales, and/or the installation of sediment traps, shall be used to control erosion and deter drainage during construction activities into the adjacent open space. Drainage from all development areas adjacent to the MHPA shall be directed away from the MHPA, or if not possible, must not drain directly into the MHPA, but instead into sedimentation basins, grassy swales, and/or mechanical trapping devices as specified by the City Engineer.

7. No trash, oil, parking or other construction-related activities shall be allowed outside the established limits of grading, as shown on approved Exhibit A. All construction-related debris shall be removed off site to an approved disposal facility.

BR-6 Pursuant to Sections 401 and 404 of the CWA and Section 1600 et seq. of the California Fish and Game Code, evidence of compliance is required, if applicable. Evidence shall include either copies of permits issued, letters of resolution issued by the Responsible Agency documenting compliance, or other evidence documenting compliance and deemed acceptable by the ADD or Environmental Designee.

BR-7 Prior to the Precon Meeting, the two San Diego barrel cacti within the project footprint shall be salvaged and relocated to areas of suitable habitat within the BSA.

BR-8 If Project grading/brush management is proposed in or adjacent to native habitat during the typical bird breeding season (i.e., February 1 to September 15), the Project biologist shall conduct a pre-grading survey for active nests in the development area and within 300 feet of it, and submit a letter report to the MMC prior to the Precon Meeting.

A. If active nests are detected, or considered likely, the report shall include mitigation in conformance with the City's Biology Guidelines (i.e., appropriate follow-up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) to the satisfaction of the ADD of the Entitlements Division. Mitigation requirements determined by the Project

biologist and the ADD shall be incorporated into the Project's Biological Construction Monitoring Exhibit (BCME) and monitoring results incorporated in to the final biological construction monitoring report.

B. If no nesting birds are detected per "A" above, mitigation under "A" is not required.

BR-9 If Project grading is proposed during the raptor breeding season (February 1 through September 15), the Project biologist shall conduct a pre-grading survey for active raptor nests in within 500 feet of the development area and submit a letter report to the Mitigation Monitoring Coordinator prior to the Precon Meeting.

A. If active raptor nests are detected, the report shall include mitigation in conformance with the City's Biology Guidelines (i.e. appropriate buffers, monitoring schedules, etc.) to the satisfaction of the ADD of the Entitlements Division or Environmental Designee. Mitigation requirements determined by the project biologist and the ADD of Entitlements Division shall be incorporated into the project's Biological Construction Monitoring Exhibit and monitoring results incorporated in to the final biological construction monitoring report.

B. If no nesting raptors are detected during the pre-grading survey, no mitigation is required.

BR-10 LEAST BELL'S VIREO (State Endangered/Federally Endangered)

Prior to the Precon Meeting, the ADD or Environmental Designee shall verify that the following project requirements regarding the least Bell's vireo are shown on the construction plans:

No clearing, grubbing, or other construction activities shall occur between March 15 and September 15, the breeding season of the least Bell's vireo, until the following requirements have been met to the satisfaction of the ADD or Environmental Designee:

A. A QB (possessing a valid Endangered Species Act Section 10(a)(l)(A) Recovery Permit) shall survey those wetland areas that would be subject to construction noise levels exceeding 60 dB(A) hourly average for the presence of the least Bell's vireo. Surveys for the least Bell's vireo shall be conducted pursuant to the protocol survey guidelines established by the USFWS within the breeding season prior to the commencement of construction. If the least Bell's vireo is present, then the following conditions must be met:

I. Between March 15 and September 15, no clearing, grubbing, or grading of occupied least Bell's vireo habitat shall be permitted.

Areas restricted from such activities shall be staked or fenced under the supervision of a QB; and

II. Between March 15 and September 15, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB(A) hourly average at the edge of occupied least Bell's vireo habitat. An analysis showing that noise generated by construction activities would not exceed 60 dB(A) hourly average at the edge of occupied habitat must be completed by a Qualified Acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animals) and approved by the ADD or Environmental Designee at least two weeks prior to the commencement of construction activities. Prior to the commencement of construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a QB; or

III. At least two weeks prior to the commencement of any construction activities, under the direction of a Qualified Acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) hourly average at the edge of habitat occupied by the least Bell's vireo. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring* shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the Qualified Acoustician or QB, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (September 15).

* Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the ADD or Environmental Designee, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

B. If least Bell's vireo are not detected during the protocol survey, the QB shall submit substantial evidence to the ADD or Environmental Designee and applicable resource agencies which demonstrates whether or not

mitigation measures such as noise walls are necessary between March 15 and September 15 as follows:

I. If this evidence indicates the potential is high for least Bell's vireo to be present based on historical records or site conditions, then condition A.III shall be adhered to as specified above.

II. If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.

BR-11 SOUTHWESTERN WILLOW FLYCATCHER (Federally Endangered)

Prior to the Precon Meeting, the ADD or Environmental Designee shall verify that the following project requirements regarding the southwestern willow flycatcher are shown on the construction plans:

No clearing, grubbing, or other construction activities shall occur between May 1 and September 1, the breeding season of the southwestern willow flycatcher, until the following requirements have been met to the satisfaction of the ADD Environmental Designee:

A. A QB (possessing a valid Endangered Species Act Section 10(a)(l)(A) Recovery Permit) shall survey those wetland areas that would be subject to construction noise levels exceeding 60 dB(A) hourly average for the presence of the southwestern willow flycatcher. Surveys for this species shall be conducted pursuant to the protocol survey guidelines established by the USFWS within the breeding season prior to the commencement of any construction. If the southwestern willow flycatcher is present, then the following in conditions must be met:

I. Between May 1 and September 1, no clearing, grubbing, or grading of occupied southwestern willow flycatcher habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a QB; <u>AND</u>

II. Between May 1 and September 1, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB(A) hourly average at the edge of occupied southwestern willow flycatcher habitat. An analysis showing that noise generated by construction activities would not exceed 60 dB(A) hourly average at the edge of occupied habitat must be completed by a Qualified Acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the ADD or Environmental Designee at least two weeks prior to the commencement of construction activities. Prior to the commencement of construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a QB; or

III. At least two weeks prior to the commencement of any construction activities, under the direction of a Qualified Acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) hourly average at the edge of habitat occupied by the southwestern willow flycatcher. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring* shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the Qualified Acoustician or QB, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (September 1).

* Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the ADD or Environmental Designee, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

B. If southwestern willow flycatcher are not detected during the protocol survey, the qualified biologist shall submit substantial evidence to the ADD or Environmental Designee and applicable resource agencies which demonstrates whether or not mitigation measures such as noise wall are necessary between May 1 and September 1 as follows:

I. If this evidence indicates the potential is high for southwestern willow flycatcher to be present based on historical records or site conditions, then condition A.III shall be adhered to as specified above.

II. If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.

5.4.3 Analysis of Issue 2: Wildlife Corridors

Issue 2: ***Would the Project interfere with the movement of any resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors?***

5.4.3.1 Impact Thresholds

In accordance with the City Significance Determination Thresholds (2007a) and Biology Guidelines (2002c), the Project would have a significant impact if it would:

1. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP Plan, or impede the use of native wildlife nursery sites. (City Initial Study Checklist Question 4)

5.4.3.2 Impact Analysis

As described in Section 5.4.1.1, the San Diego River provides a valuable swath of riparian habitat that extends from the coast far into the inland area of San Diego County. The proposed improvements within the San Diego River corridor would consist of a new two-lane bridge over the river, with accompanying issues related to direct footprint impacts to habitat, shading and expansion of vehicular noise envelopes.

The Project would not substantially obstruct or alter the flow of the river, and the bridge would continue to allow east/west passage along the river. Similarly, the facility is not anticipated to result in a significant effect on wildlife movement or corridor function because the corridor is restricted in function and subject to such a high degree of existing disturbance that species continuing to use the corridor are not substantially affected by human encroachment (i.e., smaller mammals such as skunks [*Mephitis mephitis*]; raccoons [*Procyon lotor*]; opossums [*Didelphis virginiana*]; and bats, birds, lizards, amphibians, or insects). In addition, the new bridge would be located adjacent to the existing SR 163 bridge over the San Diego River. Thus, the bridge would be placed in an area that has been subject to previous construction disturbance and is subject to elevated traffic noise. Placement of bridge pilings in line with pilings of the existing bridge also would minimize potential effects to wildlife movement.

Construction of the bridge may result in short-term impacts to wildlife due to noise in the vicinity of the improvements, although it must be recognized that current noise and the proximity of development already limits wildlife use to some extent. Accordingly, the Project is not anticipated to significantly inhibit wildlife movement.

5.4.3.3 Significance of Impact

No significant impacts to wildlife corridors or movement are anticipated to occur as a result of implementation of the Project.

5.4.3.4 Mitigation Measures

As no significant impacts are anticipated, no mitigation measures are required.

5.4.4 Analysis of Issue 3: Long-term Conservation

Issue 3: ***Would the Project affect the long-term conservation of biological resources?***

5.4.4.1 Impact Thresholds

In accordance with the City Significance Determination Thresholds (2007a) and Biology Guidelines (2002c), the project would have a significant impact if it would:

1. Result in a conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, either within the MSCP plan area or in the surrounding region. (City Initial Study Checklist Question 5)
2. Introduce land use within an area adjacent to the MHPA that would result in adverse edge effects. (City Initial Study Checklist Question 6)
3. Result in a conflict with any local policies or ordinances protecting biological resources. (City Initial Study Checklist Question 7)
4. Introduce invasive species of plants into a natural open space area. (City Initial Study Checklist Question 8)

5.4.4.2 Impact Analysis

The Project would require bridge lane additions across the San Diego River, which is within the MHPA, in order to eliminate current weaving/traffic patterns that result in unacceptable levels of service along this portion of the freeway. New bridge piers would be installed. A total of 0.3 acre of sensitive habitat within the MHPA (southern cottonwood-willow riparian forest and non-native grassland) would be permanently impacted and 0.18 acre of sensitive habitat within the MHPA (southern cottonwood-willow riparian forest) would be temporarily affected during construction activities.

The MSCP Subarea Plan specifically notes (City 1997a: 45, 46) that existing roads are considered compatible uses within the MHPA and that where locating the road outside of the MHPA is not feasible, then the road must be designed to cross the shortest length possible of the MHPA in order to minimize impacts and fragmentation of sensitive species and habitat, with bridges being the preferred construction method. Refer to Section 5.1, Land Use, of this EIR, Section 5.1 of the BTR, which is Appendix K of the NES (Appendix D of the EIR) for a detailed discussion of project conformity with the MSCP.

In addition, because the Project crosses or would be adjacent to the MHPA, it would be required to conform with the MSCP Land Use Adjacency Guidelines, which address potential indirect impacts to the MHPA. The Project would minimize indirect impacts to the MHPA by implementation of project design measures, as described below.

Drainage/Toxics

Water quality could be adversely affected during construction or operation by potential surface runoff, including sedimentation, fertilizers and car petroleum products. Decreased water quality may adversely affect vegetation, aquatic animals and terrestrial wildlife that depend upon these resources. All potential drainage and toxic impacts to downstream waters due to urban runoff would be minimized through Project design features, including the use of structural and non-structural Best Management Practices (BMPs). Details regarding the proposed BMPs are provided in Section 5.3, Hydrology/Water Quality. In brief, short-term water quality conformance requirements would include implementing a Stormwater Pollution Prevention Plan and associated BMPs through the use of best available technology and best conventional pollutant control technology. The proposed long-term BMPs (an infiltration basin and biofiltration facilities) would be designed to treat an amount of runoff equivalent to the Project-related flow increases associated with a design storm event. This would entail treating all associated Project-related flow increases generated within the Caltrans portion of the study area, as well as an appropriate amount of existing (and currently untreated) flow within the Caltrans area. Therefore, no significant impacts related to drainage or toxics would occur upon implementation of the Project.

Lighting

Night lighting exposes adjacent wildlife species to an unnatural light regime and may alter their behavior patterns, consequently resulting in a loss of species diversity. Lighting along SR 163 is included as part of the operations of the Project to enhance public safety . There is potential for night lighting at staging areas during construction and it is anticipated that some construction activities would occur at night. Construction and operational lighting within or adjacent to the MHPA would be of the lowest illumination allowed for human safety, and would be selectively placed, shielded and directed towards the road surfaces and away from the habitat areas in the MHPA. All Project-related lighting would be required to adhere to Chapter 14, Article 2, Division 7 of the City of San Diego Municipal Code. As such, no significant indirect lighting impacts are expected.

The MSCP Subarea Plan identifies noise within and adjacent to the MHPA as a potentially significant impact. Construction- and operational-related noise from such sources as clearing, grading and vehicular traffic result in impacts to wildlife. If sensitive species were displaced from their nests or territories and failed to breed, noise-related impacts would be considered significant. Coastal California gnatcatchers were not observed, and are not expected to occur, in the MHPA along the San Diego River. In order to avoid potential indirect noise impacts to least Bell's vireo, southwestern willow flycatcher and raptors, preconstruction surveys would be conducted for these species, and measures to avoid noise effects, such as avoidance of bridge construction during the breeding season, would be implemented if necessary (refer to Mitigation Measures BR-10 and BR-11 for additional information). No long-term effects to wildlife from operational noise are anticipated given that a roadway already exists and noise is not expected to increase substantially.

Invasives

Non-native plants could colonize areas disturbed by construction and potentially spread into adjacent preserve areas, particularly following disturbances. Such invasions could displace native plant species, reduce diversity, increasing flammability and fire frequency, change ground and surface water levels, and adversely affect the native wildlife that are dependent on native vegetation. The Project would comply with the MHPA adjacency guidelines. All areas disturbed by Project construction activities would either be converted to hardscape (e.g., new pavement or sidewalks) or landscaped/revegetated upon the completion of construction activities. Within 100 feet of the MHPA, only native, non-invasive species would be planted and landscaping would not use plants that require intensive irrigation, fertilizers or pesticides. The Landscape Concept Plan (Figures 3-3a and b) includes the use of appropriate native and non-invasive plant species to revegetate the temporary disturbance areas. Native species used in the plan include sages, California sagebrush, California buckwheat, California poppy, dwarf goldfields, arroyo lupine, monkeyflower, and native grasses. Specific elements and other species proposed for use in the Landscape Concept Plan are discussed in detail in Subsection 3.2.5, Landscaping. The landscape plan has been reviewed by a qualified biologist. Invasive species that are included on the California Invasive Plant Council (Cal-IPC; 2006) lists and/or the City's invasive plants list would not be used anywhere within the BSA. A qualified biologist reviewed the landscape plans. As such, no significant impacts are anticipated from invasion of exotic plant species.

Fugitive Dust

Construction control measures and BMPs discussed in Subsection 3.2.7.5, Construction Control Measures, would avoid or minimize potential construction-related air quality impacts such as dust generation and construction equipment emissions, and the discharge of surface and groundwater contaminants during construction.

Barriers

To protect sensitive environmental resources along the construction zone, a poster and handouts would be prepared identifying sensitive habitats and species the construction workers should avoid. Avoidance areas also would be flagged, temporarily fenced and monitored during construction when construction activities occur in the vicinity as described in Mitigation Measure BR-5.

Natural communities adjacent to the Project's footprint currently are surrounded by development and are affected by human intrusion. Construction and operation of the Project are not anticipated to increase human intrusion or support increases in European starlings, exotic ant species, or domesticated animals into undeveloped areas and the MHPA.

As described under Issue 1, the Project would significantly impact sensitive upland and wetland/riparian habitats, including sensitive habitats within the MHPA, as well as potentially resulting in significant direct and indirect impacts to sensitive species. Such impacts, however, would be mitigated as required by the City's ESL and Biology Guidelines and would include the creation and restoration/enhancement of

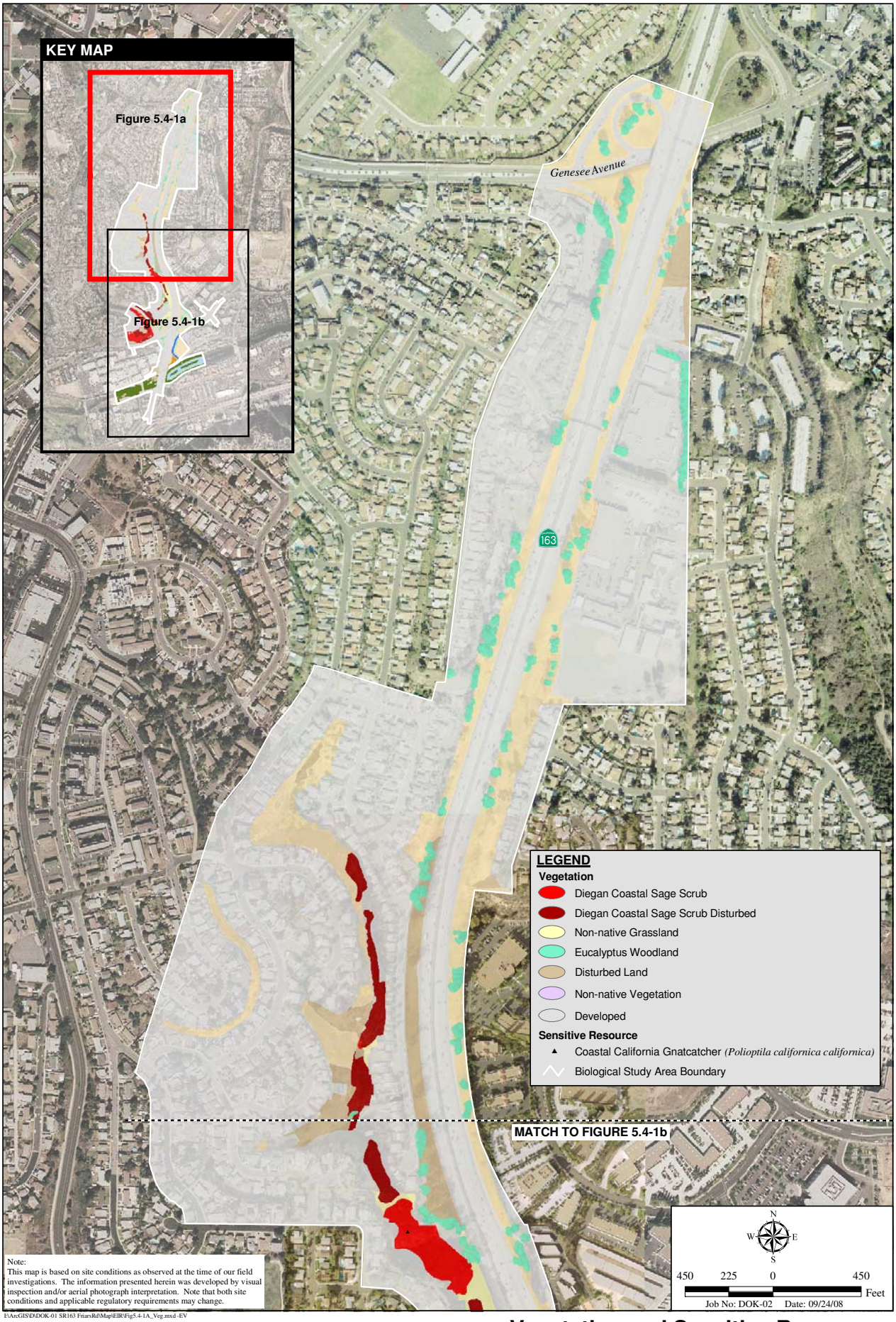
wetland/riparian habitat within the MHPA. The Project therefore would not affect the long-term conservation of the biological resources of the region.

5.4.4.3 Significance of Impact

No significant impacts related to the long-term conservation of biological resources are anticipated.

5.4.4.4 Mitigation Measures

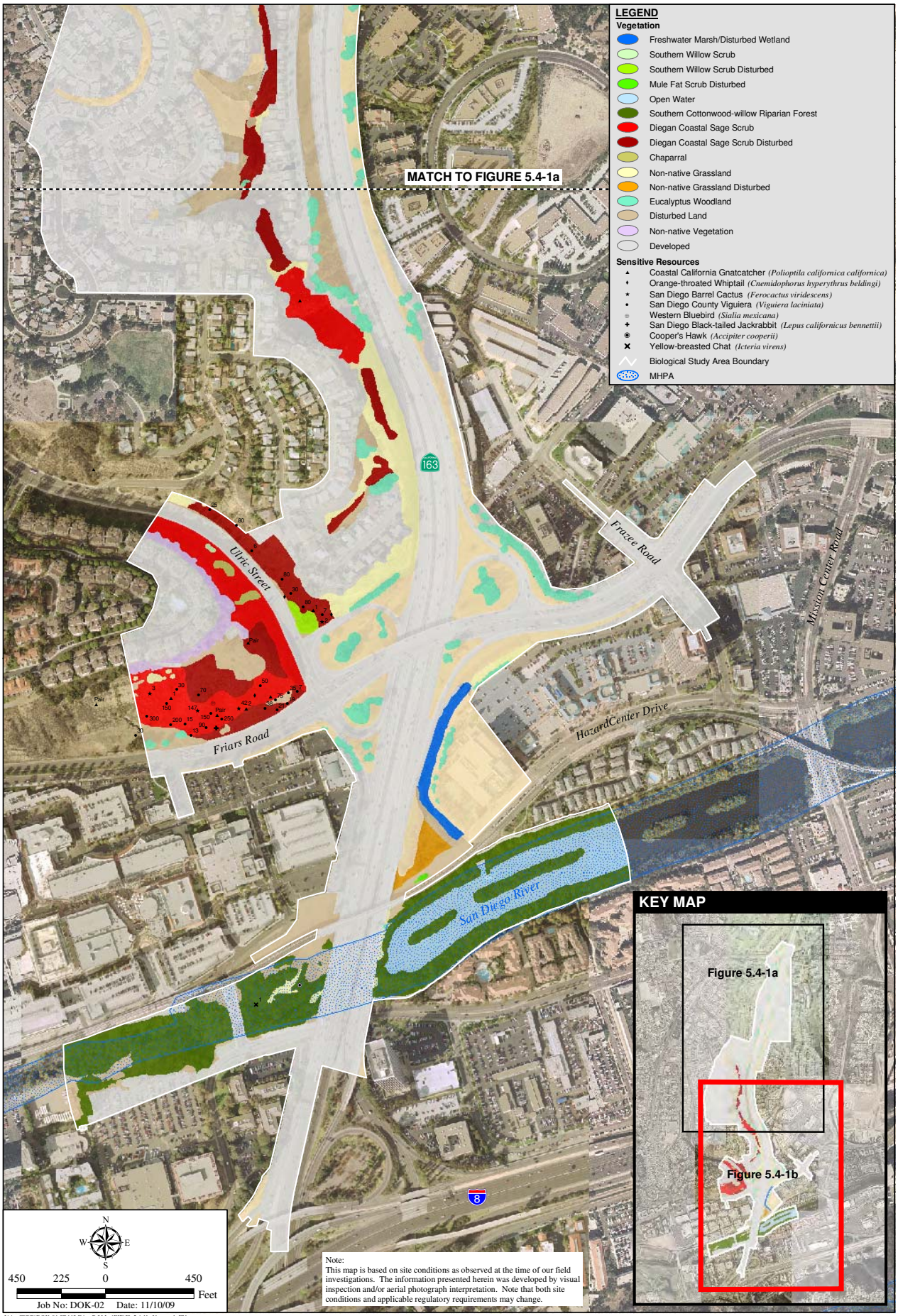
As no significant impacts are anticipated, no mitigation measures are required.



Vegetation and Sensitive Resources

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.4-1a



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Vegetation and Sensitive Resources

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.4-1b

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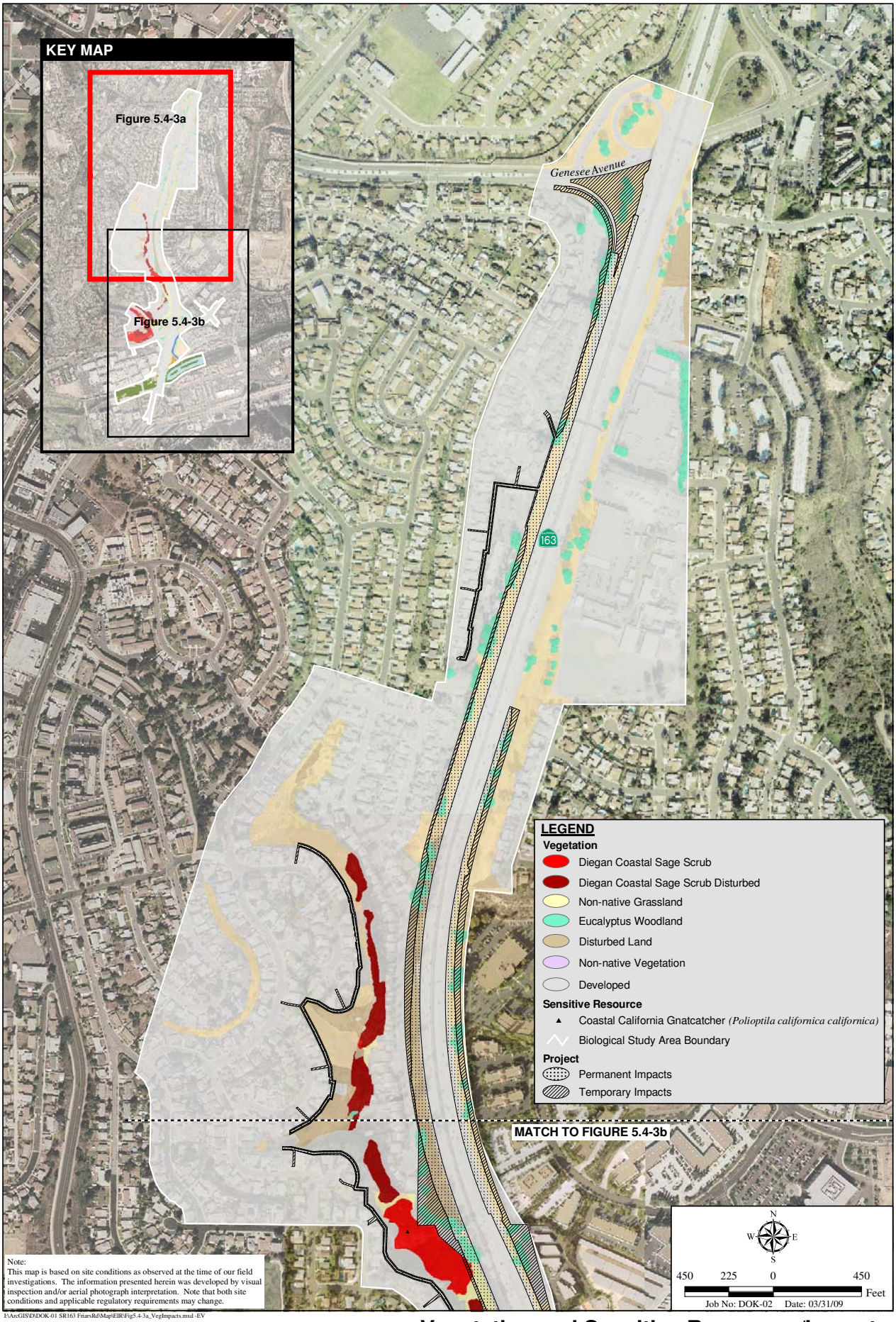
Jurisdictional Delineation

SR-163/FRIARS ROAD INTERCHANGE PROJECT

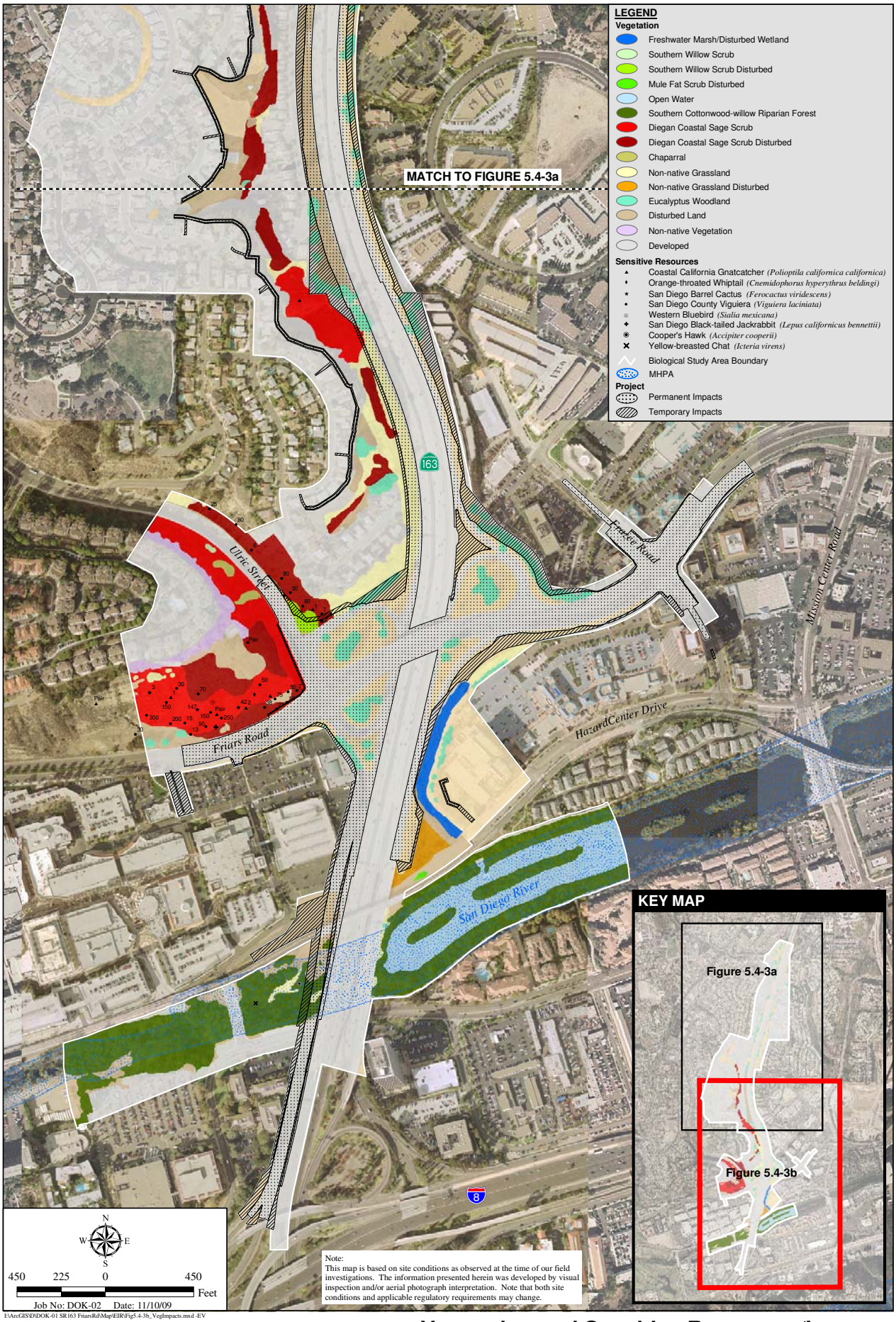
Figure 5.4-2



Vegetation and Sensitive Resources/Impacts

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.4-3a



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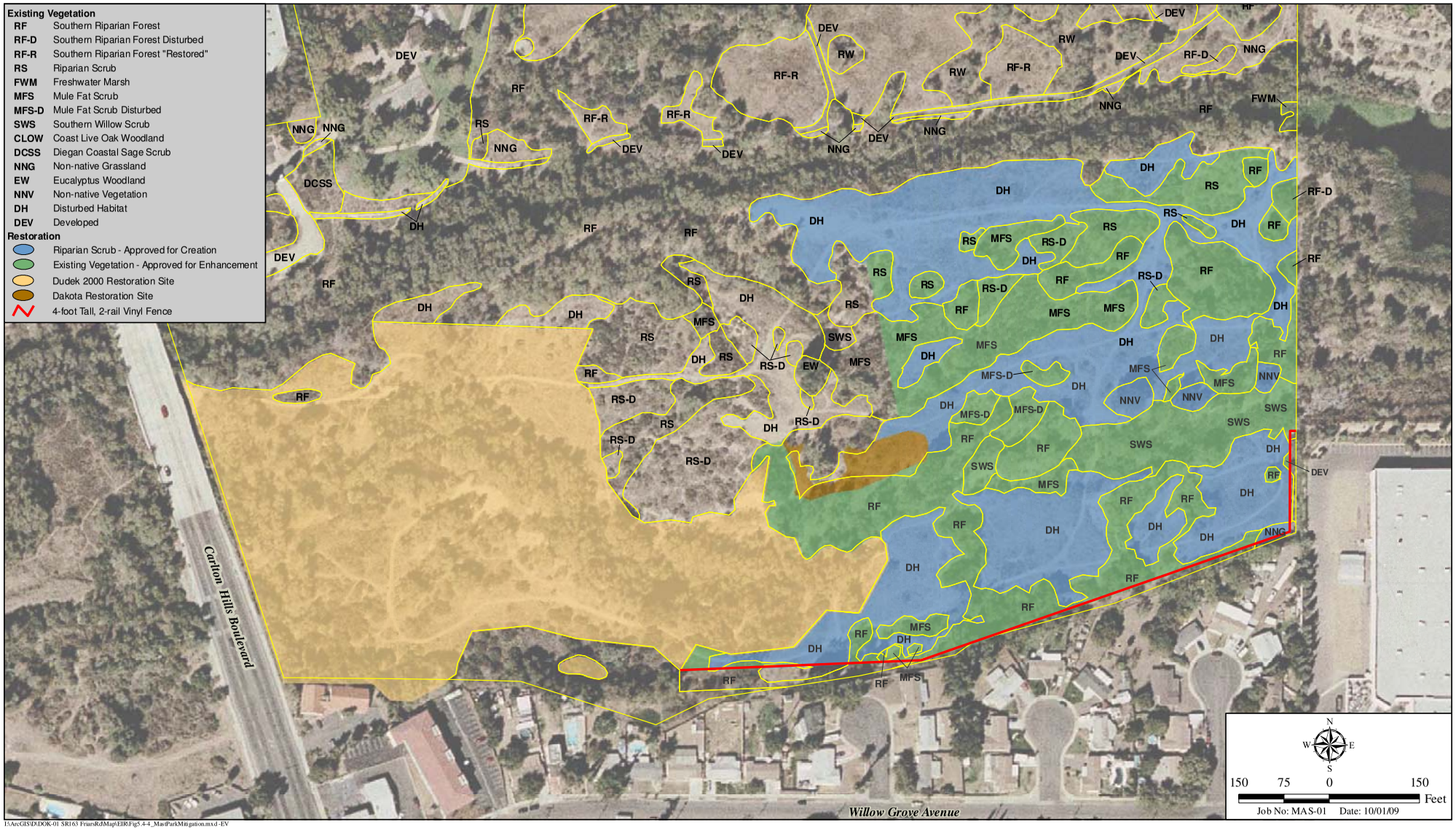
Vegetation and Sensitive Resources/Impacts

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.4-3b



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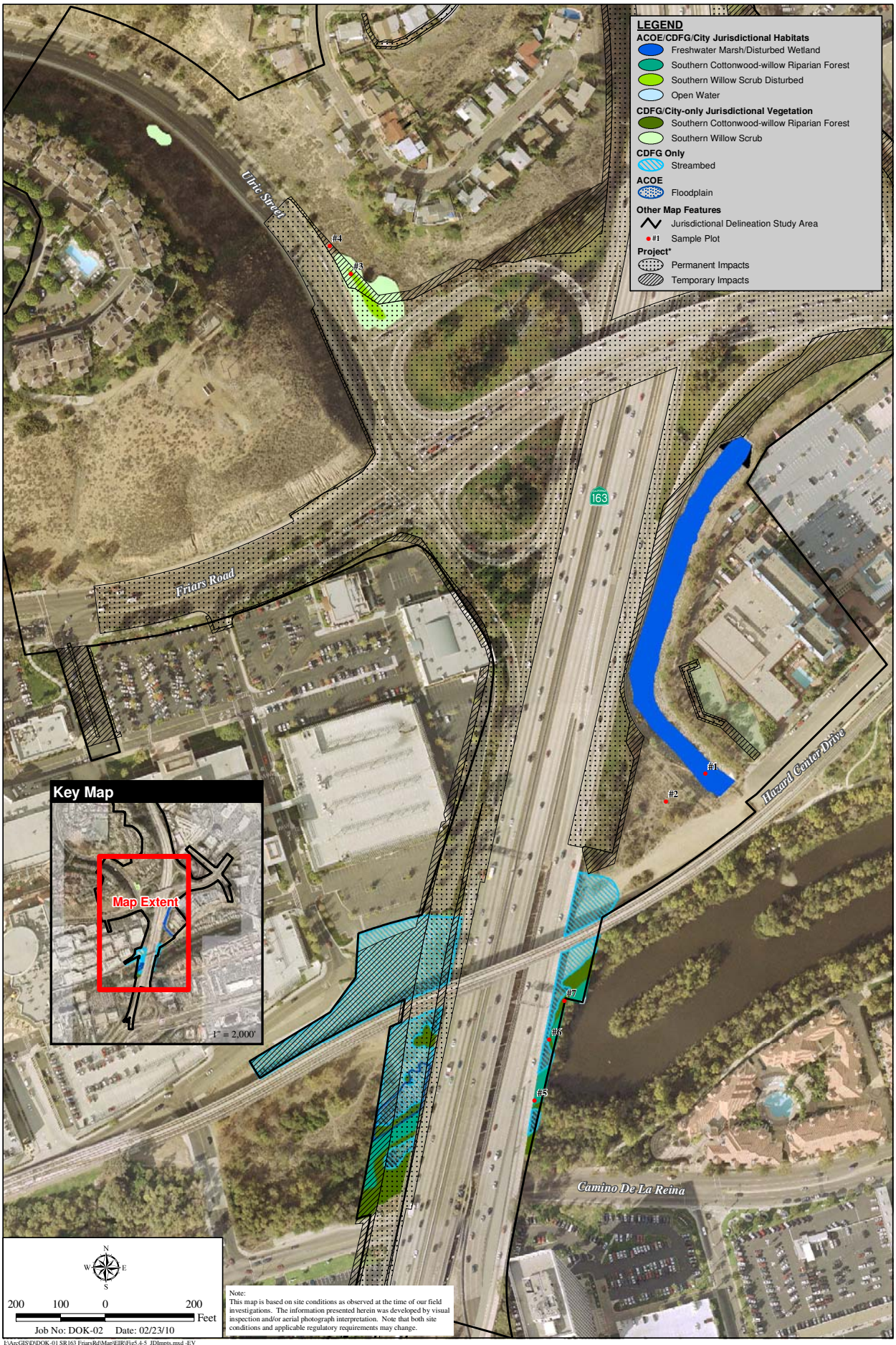
Proposed Mast Park Wetland Mitigation Site

SR-163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.4-4



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Jurisdictional Delineation/Impacts

SR-163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.4-5

5.5 HISTORICAL RESOURCES

This section summarizes information associated with cultural resources studies prepared by Affinis for the SR 163/Friars Road Interchange Project. The reports, including the Archaeological Resources Inventory Report, Historical Resource Research Report and Archaeological Survey Report (2008a, 2008b and 2010, respectively), are included in their entirety as Appendix E to this EIR.

5.5.1 Existing Conditions

5.5.1.1 Affected Environment

This section provides context for both known and unknown but potentially present resources in the study area. It consists of two discussions: a culture history of the Project vicinity, followed by information related to research/identification of known resources specific to this Project based on records searches and field checks completed for the Project by Affinis.

Culture History

Prehistoric Period

The earliest accepted presence of Native Americans in the San Diego area is the San Dieguito complex, dating to approximately 10,000 years ago. The group is defined by their material culture (artifacts or structural material left behind). It consists primarily of scrapers, scraper planes, choppers, large blades and large projectile points. Heavily patinated (weathered) tools made of fine-grained green metavolcanic material, locally known as felsite, have been found at many sites identified as San Dieguito. Sleeping circles, trail shrines and rock alignments have also been associated with these early sites.

The traditional view of San Diego prehistory has the San Dieguito complex followed by the La Jolla complex--at least 7000 years ago, and possibly as long ago as 9000 years. The La Jolla complex is defined as part of an “Encinitas” tradition which is generally characterized by assemblages in shell middens, sited near lagoons. "Crude" cobble tools, especially choppers and scrapers, also characterize the La Jolla complex. Basin metates and manos (groundstone tools used for processing foods through grinding), other groundstone and a small number of chipped projectile points, as well as flexed burials, also are characteristic.

Some have proposed that the La Jolla complex developed with the arrival of a desert people on the coast who quickly adapted to their new environment. Others suggest an in situ development of the La Jolla people from the San Dieguito or a Pleistocene migration of an ancestral stage of the La Jolla people to the San Diego coast.

In recent years, archaeologists in the region have begun to question the traditional definition of San Dieguito people simply as makers of finely crafted felsite projectile

points, domed scrapers and cores, who lacked milling technology. The traditional defining criteria for La Jolla sites (manos, metates, "crude" cobble tools and reliance on lagoonal resources) also have been questioned. There is speculation that differences between artifact assemblages of "San Dieguito" and "La Jolla" sites reflect functional differences (i.e., site location and tool use focused on specific tasks such as plant harvest or fishing) rather than resulting from a passage of time or product of different cultures.

Still others feel that an apparent overlap among assemblages identified as La Jolla or San Dieguito does not preclude the existence of a culturally separate Early Milling period culture in the San Diego region, whatever name is used to identify it. One problem these archaeologists perceive is that many site reports in the San Diego region present conclusions based on interpretations of stratigraphic profiles from sites at which stratigraphy (layering within soils resulting from the deposits from one period laying consistently upon an earlier deposit below) cannot validly be used to identify chronology, or changes through time. This is because many sites have experienced rodent burrowing and insect activity, which may artificially affect subsurface deposits. In other words, because different classes of artifacts move through the soil in different ways, vertical patterning may be created that is not culturally relevant.

Regardless of specifics related to these earlier complexes, local archaeologists generally agree that the Late Prehistoric period is represented by the San Luis Rey complex in northern San Diego County and the Cuyamaca complex in the southern portion of the county, which includes the study area. The Cuyamaca complex represents the Yuman forebears of the Kumeyaay (Diegueño, named for the San Diego Mission). It includes projectile points, scrapers, milling implements including mortars and pestles, Olivella shell beads, an emphasis on ceramics, and pictographs. Of these elements, mortars and pestles, ceramics and pictographs are not associated with earlier sites. In addition, the complex is characterized by clay-lined hearths, defined cemeteries away from living areas, use of grave markers, cremations placed in urns and use of specially made mortuary offerings. The Kumeyaay were residents of the study area and region at the time of first European contact in the vicinity.

Historic Period

The Spanish Mexican Period (1769 to 1848) in the study area began in 1769 when Spanish military forces and Catholic priests founded the mission and presidio of San Diego on present day Presidio Hill. The new settlement overlooked the valley and the Kumeyaay village of Cosoy, which was located less than one mile east of the Presidio on the south bank of the San Diego River. In 1774, the Catholic priests moved the mission to its current location at the east end of the valley. Following completion of a dam and aqueduct system in the early 1800s, the mission's vineyards, orchards and other crops flourished. The missionaries also introduced herds of livestock, especially horses and cattle, onto unirrigated lands. In the 1820s, a small settlement grew up at the foot of Presidio Hill.

The American Frontier Period (1850 to 1870) saw an expansion of unirrigated dry farming in Mission Valley although prolonged litigation over land titles within the boundaries of former Mission lands slowed development in the east end of the valley. Beginning in 1869, the current downtown area of San Diego experienced substantial growth, the effect of which was the gradual creation of a market for agricultural products and the expansion of more intensive agriculture in Mission Valley. This was also made possible by improvement of pumping equipment, allowing the irrigation of valley bottomlands. Intensive agriculture included small-scale orchards, vines and poultry ranches (some of which were practiced on an even smaller scale by many valley residents). Dairies were a second aspect of the trend toward intensive agriculture. Between 1884 and 1934 approximately 20 dairies were established in Mission Valley, developing in response to the nearby urban market and increasing in number as that market expanded. The Challenge Cream and Butter Association was located at the southeast corner of the study area and went through a transition over the years from a dairy to a retail distributor of dairy products (and, finally by 1960, to a dairy products wholesaler).

Specifically with regard to area roadways, by the early 1900s a road crossed the valley at the location of the current study area. This road extended from 6th Street on the mesa, down a canyon now divided by SR 163, and across the valley to join roads entering from Linda Vista Mesa and Murray Canyon. This road would later be designated the 6th Street Extension (and even later would be part of the Cabrillo Freeway and Ulric Street, see below). The 6th Street Extension Bridge was constructed in approximately 1912 across the San Diego River in the approximate location of present-day SR 163 and was washed out by floods in 1916. A replacement bridge was constructed around 1925. Two other roads ran the length of the valley on the north and south sides. These would later become Friars Road and Camino Del Rio.

By 1930, urban uses had expanded to the mesa top south of Mission Valley, presenting a clear division between the urbanized mesa above and the rural valley below. By this time, small-scale non-agricultural commercial activities also had begun to encroach on the valley. By 1940, sand and gravel businesses had operated in the valley for a number of years, including the R.E. Hazard Company, purchased from prior owners in 1927 (and extending east of the 6th Street extension, see below). Horse farms and riding stables were numerous and a polo club was popular.

A series of road improvements during the 1930s rendered the valley more accessible to the urbanized area to the south. Beginning in 1930, roads were aligned, paved and relocated further up on the valley slopes to reduce the possibility of flooding. Roadway development generally was piecemeal, however, and was accomplished along different stretches at different times.

Starting in the 1950s, unprecedented growth brought almost complete commercialization of the valley by the end of the twentieth century. Three major factors made this possible: flood control (El Capitan Dam and San Vicente Dam), commercial pressure from population growth (increased land value resulting in commercial speculation) and road

construction. This was spurred by the Second World War, which brought a phenomenal influx of population to San Diego and to the entire west coast. Locally, one effect of this growth was to create a need for additional east-west as well as north-south connections across the valley.

To relieve localized traffic problems resulting from this development, Mission Valley saw a second phase of road development during the late 1940s and early 1950s that included the construction of three major roads: the Cabrillo, Mission Valley/80 and Alvarado "freeways." The Cabrillo Freeway, the former 6th Street Extension (and later part of Highway 395), was started in 1946 and completed in 1948. It extended from downtown San Diego, across Mission Valley, to a point on Kearny Mesa. Also at this time, the 1925 bridge was demolished, and a new bridge was built across the river in this location. The Mission Valley and Alvarado routes traversed the valley from east to west with a single interchange within the study area at the junction of the Mission Valley (current I-8) and Cabrillo (current SR 163) freeways.

Highways completed by 1951, however, were quickly rendered obsolete by increased urban growth. The Korean War brought renewed activity to the national defense industries and military in San Diego, and a substantial amount of construction began to occur north of the valley in Clairemont and Linda Vista. Suburbs constructed along the western edge of Linda Vista at that time that are partially within the current study area included Mission Heights (1954), Judson Park (1958) and Lynda Heights (1959) (Subdivision Maps 3142, 3961, 4281).

In 1958, construction started on a new principal interchange for Highways 395 and 80 (currently I-8). By 1960, contracts had been let to convert the Mission Valley and Alvarado routes to full freeways. To accomplish this, all intersections were converted into interchanges, and lane capacity was increased from four to eight.

The amount of valley land converted to transportation use by 1960 was substantial. In 1930 the valley had about 98 acres of land in principal roads – by 1960 the total amount of land in roads stood at 360 acres, or nearly one-tenth of the land surface. This transformation of Mission Valley into a major hub of principal traffic arteries had a major effect on land use. In 1930, 1,453 acres of land in Mission Valley were in agricultural use, whereas 80 acres were associated with commercial, residential, recreational and/or miscellaneous urban land uses. By 1960 this ratio had flipped: agricultural land uses had diminished to 347 acres, while urban land uses had increased to 1,457 acres. Commercial ventures moved onto lands near the principal intersections and interchange.

Mission Valley became a prime target for commercial speculation. In 1956, the City Council responded to the desire for development, allowing, for the first time, rezoning of a Mission Valley parcel from residential to commercial use, and thus supporting development of a ball park. Similar rezoning in 1958 for the Mission Valley Shopping Center was decisive. By 1960 a major commercial area was under development around the interchange, rapidly replacing previous land uses. This commercial zone expanded both east and west along Highway 80, and along Highway 395. Mission Valley

Shopping Center was opened in February 1961. A number of other businesses, from luxury apartments and movie theaters to car dealerships, continued to fill in the spaces between major developments. In 1969, the valley's second major regional shopping center (Fashion Valley Center) opened. This major commercial facility is located in the southwest quadrant of the SR 163/Friars Road study area.

The majority of the valley is now filled with commercial or multi-dwelling residential buildings. Immediately adjacent to the Project roadways, areas not consisting of hillsides or river bottom generally have been developed with single- or multi-dwelling housing, shopping centers, motels and office buildings.

Records Searches and Field Reconnaissance

Existing databases were searched to identify known information regarding prehistoric and historic sites in the study area. This was then supplemented by field checks of the study area, as described below.

Records Searches

The National Register of Historic Places' database, California Register of Historic Resources, California Inventory of Historic Resources and California Historical Landmarks were reviewed through a record search obtained from the South Coastal Information Center in 2003 and updated in May 2008 to determine the presence of previously identified resources within the study area. The South Coastal Information Center was contacted again in November 2009 for a record search of the proposed Mast Park mitigation parcel and vicinity. The City of San Diego Historical Resources Register was similarly consulted in 2003 and May 2008. In addition, the San Diego County 1928 Tax Factor Aerial Photograph and early United States Geological Survey (USGS) quadrangle maps were examined to determine if older buildings had been present in the study area. Research at the San Diego Historical Society archives was conducted, and the index to the San Diego Union was reviewed.

As part of the efforts to identify and evaluate cultural resources, information also was solicited from the SHPO, San Diego Museum of Man, San Diego Historical Society, and each of the Kumeyaay/Diegueño bands in the county and Kumeyaay cultural committees that are not associated with a specific tribal group (refer to Chapter 13.0 of this EIR for information on individuals contacted). The Native American Heritage Commission conducted a search of their Sacred Lands files and found nothing recorded in the Project study area or Mast Park mitigation parcel.

A single archaeological site was previously recorded in the existing cloverleaf at SR 163 and Friars Road. The site, which no longer exists, was recorded in 1955 as "Carter's Old Mission Site" and is described as an Early Man deposit. In addition to this site, three other Early Man sites were recorded in the vicinity, at Texas Street, Buchanan Canyon and "Cactus Hill." All of these sites have been destroyed by development. A large habitation site, shell midden and shell scatter have been recorded in the alluvial setting

along the river within the current-day golf course to the west of the study area. Two previously recorded habitation sites (east and northwest of the study area), were identified as destroyed by development.

Evaluated bridge structures identified during research for the Project include the Friars Road overcrossing of SR 163 and the SR 163 Bridge over the San Diego River. Both of these structures were evaluated as part of the statewide inventory (#57-0595 and #57-126, respectively). Neither of the structures was found eligible for the National Register. They were also found not to be historical resources under CEQA, in accordance with Caltrans' statewide historic bridge inventory. Information regarding subsurface remains of prior bridges also was available. Remnants (pilings) of the Cabrillo Bridge crossing the San Diego River, and used between about 1925 and 1948, were encountered during boring of an east-west tunneling for the North Mission Valley Interceptor Sewer beneath SR 163.

No archaeological resources have been recorded within approximately 2,000 feet of the proposed Mast Park mitigation parcel.

Field Review

The area of potential effect (APE) for the Project was defined based on identification of all areas in which the Project potentially could have either direct or indirect effects on an historic resource. (Historic resource is used here to indicate either archaeological or structural remains, as well as those associated with pre-historic and historic time periods and cultures.)

The APE, therefore, incorporated areas where Project-related demolition, grading, road construction, staging or soil stock piling could occur, as well as freeway-facing portions of residential lots lining the mesa (see also the discussion of potentially historic structures, following). The APE is depicted on Figure 5.5-1, Area of Potential Effect.

Most of the APE consists of cut and/or fill slopes or areas that have otherwise been graded for construction of the existing SR 163, Friars Road, and/or surrounding residential and commercial development. The area is also largely landscaped or consists of dense riparian vegetation (along the river), minimizing ground visibility.

Excluding the San Diego River channel, APE areas currently covered by dense vegetation or on slopes and which could not be directly visually inspected, are not anticipated to contain resources. This is because the locales have either been subject to previous intense disturbance associated with grading for structure pads or prior road facilities (including scraping, excavation and areas of cut) or because they consist of steep slopes. Human beings are fairly consistent about the types of areas exploited first. Absent a specific rare resource, people tend to generally use geography similarly—mesa tops provide good views; rivers provide rich hunting and farming areas; and steep slopes are avoided in favor of passes/canyons where trails and roads can follow terrain. The study area slopes do not contain special stone tool resources or rare resources that would

support special use areas and are steep enough that they would not have provided appropriate locales for areas of intensive Native American habitation when the river valley is immediately adjacent.

The APE was surveyed for archaeological resources on April 26, 2004 by Mary Robbins-Wade and Matt Murray, as well as during several windshield surveys of the study area. Although the archaeologists drove the study area several times, for the most part the APE was not walked, due to steep slopes and inaccessibility as well as lack of ground visibility. An area on the west side of SR 163 was accessible and was surveyed, but a thick cover of iceplant obscured the ground surface. One proposed staging area, immediately north of the San Diego River and adjacent to the Fashion Valley parking lot, had excellent ground visibility. That area had been subject to a great deal of previous disturbance and the survey was negative. The locations for potential sound walls are at the top of slope in areas of fill/previous disturbance associated with development of the residential tracts and were not surveyed due to the fact that the lots are privately owned as well as lack of likelihood for resources to be present in these previously disturbed/fill areas.

All of the structures within the APE (buildings and extant bridges) were reviewed by the Project historian, Steven Van Wormer in August 2004 and February 2005. Although footprint impacts to the structures would not occur, as noted in Chapter 3.0 and Section 5.9 of this EIR, sound walls are expected to be required as mitigation for existing and increased noise. Because these sound walls could affect "setting" of an historic structure if setting was an integral part of the structure's historic nature, in order to understand whether any historic structures existed (and if so, whether their setting comprised an integral part of their value), Building, Structure and Object (BSO) forms were filled out for tracts rimming the mesa and built prior to 1960, as well as the bridge dating from 1948. The reader is referred to Subsection 5.5.2, below, for further discussion.

The proposed Mast Park mitigation site was surveyed on November 17, 2009 by archaeologist Andrew Giletti and Native American monitor Lael Hoff. Ground visibility during this survey was quite good, due to sparse vegetation.

5.5.1.2 Regulatory Setting

As described in the City's Significance Determination Thresholds (2007a), federal, state and local criteria have been established for the determination of historical resource significance. The criteria for determining a resource's significance generally focus on a resource's integrity and uniqueness, its relationship to similar resources and its potential to contribute important information to scholarly research. Some resources that do not meet federal significance criteria may be considered significant under state or local criteria.

Federal

National Historic Preservation Act of 1966 and National Register of Historic Places

The National Historic Preservation Act of 1966 established the National Register of Historic Places (NRHP) as the official federal list of cultural resources that have been nominated by state offices for their significance at the local, state or national level. Listing on the NRHP provides recognition that a property is historically significant to the nation, the state or the community. Properties listed (or potentially eligible for listing) on the NRHP must meet certain significance criteria and possess integrity of form, location and setting. Barring exceptional circumstances, resources generally must be at least 50 years old to be considered for listing on the NRHP.

Criteria for listing on the NRHP are stated in Title 36, Part 60 of the Code of Federal Regulations (36 CFR 60). A resource may qualify for listing if there is quality of significance in American history, architecture, archaeology, engineering and culture present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association; and where such resources:

- Are associated with events that have made a significant contribution to the broad patterns of our history.
- Are associated with the lives of persons significant in our past.
- Embody the distinctive characteristics of a type, period or method of construction; represent the work of a master; possess high artistic values; or represent a significant and distinguishable entity whose components may lack individual distinction.
- Have yielded, or may be likely to yield, information important in prehistory or history.

Eligible properties must meet at least one of the NRHP criteria and exhibit integrity, measured by the degree to which the resource retains its historical properties and conveys its historical character, the degree to which the original historic fabric has been retained, and the reversibility of changes to the property. The fourth criterion is typically reserved for archaeological and paleontological resources. These criteria have largely been incorporated into the State CEQA Guidelines (Section 15064.5) as well.

State

California Environmental Quality Act

For the purposes of CEQA, a significant historic resource is one that qualifies for the California Register of Historic Resources (CRHR) or is listed in a local historic register or deemed significant in an historical resource survey, as provided under Section 5024.1(g) of the Public Resource Code. A resource that is not listed in or is not determined to be eligible for listing in the CRHR, is not included in a local register of historic resources or is not deemed significant in an historical resource survey may nonetheless be deemed significant by a CEQA lead agency.

As indicated above, the California criteria (State CEQA Guidelines Section 15064.5) for the registration of significant architectural, archaeological and historical resources on the CRHR are nearly identical to those for the NRHP. Furthermore, CEQA Sections 21083.2(g) define the criteria for determining the significance of archaeological resources. These criteria include definitions for a "unique" resource, based on its:

- Containing information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Having a special and particular quality such as being the oldest or best available example of its type.
- Being directly associated with a scientifically recognized important prehistoric or historic event or person.

Public Resources Code Section 5020 et seq.

Properties listed, or formally designated eligible for listing**,** on the NRHP are automatically listed on the CRHR, as are State Historical Landmarks and Points of Interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

Public Resources Code Section 5097 et seq.

State law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and designates the NAHC to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to a year in jail to deface or destroy an Indian historic or cultural site that is listed or may be eligible for listing in the CRHR.

Public Resources Code Section 65560 and 65562 et seq.

This regulation is relevant because it is anticipated that mitigation for impacts to riparian habitat associated with the Project (see Section 5.4) may require open space set aside in perpetuity. State law mandates actions required for land designated or proposed to be designated as open space with cultural resources concerns. It requires that a cultural place must be protected; establishes a contact list of California Native American Tribes created by the NAHC specifically for this purpose; and establishes a protocol for the initiation of consultation by the City in which the cultural place is located with the appropriate Native American tribe(s), for the purposes of: (1) determining the level of confidentiality required to protect the cultural place and (2) developing treatment with appropriate dignity of the cultural place in any corresponding open space management plan (if such one exists).[1]

[1] An appropriate tribe is one that has been identified on the NAHC contact list and that has, pursuant to Government Code Section 65092, requested notice of public hearing from the local government in advance of that jurisdiction's initiation of consultation.

Local

Historical Resources Register

As compared to CEQA, the City provides a broader set of criteria for eligibility for the City's Historical Resources Register. As stated in the City's Historical Resources Guidelines, "Any improvement, building, structure, sign, interior element and fixture, feature, site, place, district, area or object may be designated as historic by the City of San Diego Historical Resources Board if it meets any of the following criteria:

- Exemplifies or reflects special elements of the City's, a community's or a neighborhood's historical, archaeological, cultural, social, economic, political, aesthetic, engineering, landscaping or architectural development;
- Is identified with persons or events significant in local, state or national history;
- Embodies distinctive characteristics of a style, type, period or method of construction or is a valuable example of the use of indigenous materials or craftsmanship;
- Is representative of the notable work of a master builder, designer, architect, engineer, landscape architect, interior designer, artist or craftsman;
- Is listed or has been determined eligible by National Park Service for listing on the National Register of Historic Places or is listed or has been determined eligible by the SHPO for listing on the State Register of Historical Resources; or
- Is a finite group of resources related to one another in a clearly distinguishable way or is a geographically definable area or neighborhood containing improvements which have a special character, historical interest or aesthetic value or which represent one or more architectural periods or styles in the history and development of the City."

City of San Diego Municipal Code: Historical Resources Regulations and Historical Resources Guidelines

The City's Historical Resources Regulations (SDMC 143.0201 et seq.), determine the procedures for processing proposed development plans, among other things, if designated historical resources are present on a site. If a substantial alteration to a site's historic resources is proposed, mitigation must be provided in accordance with the Historical Resources Guidelines.[2]

[2] Municipal Code Section 143.0201 et seq. allow up to 25 percent encroachment into archaeological sites. This encroachment may be exceeded only if the decision-maker makes findings that no feasible measures can further minimize the potential adverse effects; the proposed deviation is the minimum necessary to afford relief and accommodate development; all feasible measures to mitigate the loss have been provided; and there are special circumstances or conditions apart from the existence of historical resources whereby the strict application of the provisions of the regulations would deprive the property owner of reasonable use of the land.

The City's Historical Resources Guidelines serve to implement the Historical Resources Regulations in compliance with applicable local, state and federal policies and mandates. When avoidance of a significant resource is not possible, the City's Guidelines require preparation and implementation of a research design and data recovery program. The guidelines are intended to maintain consistency in the identification, evaluation, preservation/mitigation and development (i.e., management) of the City's historical resources.

5.5.2 Analysis of Issue 1: Historic and Prehistoric Resources

Issue 1: ***How would the proposed Project affect historic and prehistoric resources in the Area of Potential Effect?***

5.5.2.1 Impact Threshold

A significant impact will be found to an historic resource if the Project would result in:

1. An alteration, including the adverse physical or aesthetic effects and/or the destruction of, a prehistoric or historic building (including an architecturally significant building), structure, object or site.[3] (Initial Study Checklist Question 1)
2. The disturbance of human remains, including those interred outside of formal cemeteries. (Initial Study Checklist Question 3)

5.5.2.2 Impact Analysis

Archaeological Resources

No archaeological material was found during Project-related survey of the APE.

The southernmost portion of the APE, however, is in the floodplain of the San Diego River. Given this alluvial setting, it is possible that any cultural material related to human habitation (Native American or European) may have been destroyed due to flushing during flood events or during earlier agricultural or mining activities in the area. Alternatively, however, there is a potential for alluvial cover as a result of river silt/deposition. If this has occurred, there may be buried cultural resources without visible surface elements.

Portions of bridges constructed in 1912 and 1925 over the San Diego River and in the vicinity of the current bridge may be encountered within the riverbed. Pilings from a pre-freeway bridge were located during boring of an east-west tunnel under the current bridge. Although the location, indeed the existence, of any remaining subsurface

[3] An archaeological site must contain at least three associated artifacts/ecofacts or a single feature within a 40 sq. meter (131-square-foot) area.

elements of these earlier structures is unknown within the Project footprint, there is a potential for proposed construction to impact a subsurface element.

Project construction does not propose grading or trenching in these areas. It currently is anticipated that pilings for the bridge across the San Diego River would be constructed using driven pile techniques, which would not provide an opportunity for removal of cultural material. It is possible, however, that CIDH concrete piles and pile caps may instead be selected for implementation during final Project design. As described in Subsection 3.2.2 of this EIR, this construction technique includes drilling holes from which spoil would be returned to the surface. It would minimize potential effects to unidentified/unanticipated resources (if any), as well as largely negate the efficacy of monitoring.

Similar to the situation described above for the Project APE, no archaeological sites have been identified on the proposed Mast Park mitigation parcel. Due to the alluvial setting of the site, however, there is potential for subsurface cultural deposits that are not visible on the surface.

In summary, no extant cultural resources were identified during survey within or adjacent to the Project study area or proposed Mast Park mitigation parcel. Generally therefore, no impacts to such resources are anticipated. However, because there is potential for buried resources to exist, a potentially significant impact is identified in accordance with standard City procedures.

Structural Resources

The APE for historic structures was defined as those parcels that touch the existing roadway within the study area or the setting that potentially could be affected by noise attenuation barriers. Per the City Significance Guidelines (2007a: 43), buildings, structures, objects, etc. generally are not significant if they are less than 45 years old. Structures 45 years or older at issuance of the Project NOP in 2005 were evaluated for potential historic significance. Since the NOP was issued (and the Project scoping meeting was held) in 2005, structures built in or before 1960 were flagged for evaluation.

Overall, a total of 258 buildings were examined. Eighty-six buildings were constructed between 1961 and 1993, with tract homes being constructed in 1961 for 13 homes along Whinchat Street, in 1969 for 7 homes along Gateshead Street or Judson Street, and the remainder of the structures postdating 1970. The earliest residential structures within the APE were built in 1954, with a total of 172 homes being built between 1954 and 1959. BSO forms were filled out for each of the tracts containing homes within this timeframe.

All of the pre-1960 residential development consists of post-World War II modest tract homes with no distinguishing features. Some of the houses have been modified, and none is historically distinctive.

The Mission Heights Tract, Judson Park Tract and Lynda Heights Tract subdivisions were laid out and built in 1954, 1958 and 1959, respectively. These are single-story rectangular California Ranch style homes. Garages are attached at one end, either parallel with the home or at a 90 degree angle (forming an "L" shaped building). The structures are wood frame on poured concrete slab foundations, with sliding aluminum framed windows. Exteriors are covered with stucco and some have decorative wood siding trim on the front. Moderately pitched roofs are covered with asphalt shingles (and in the case of the Judson Park homes, sometimes crushed brick). Some of the homes have been altered to include second story additions, new stucco, new roofs, etc.

None of these structures meets the criteria for National Register eligibility. The evaluation of the 172 pre-1960 buildings was forwarded to the SHPO for review and concurrence. Formal concurrence that the properties were not eligible for listing on the National Register was received from the SHPO in a letter dated September 27, 2005, included in Appendix E to this EIR. Also as noted in the appendix, the Project historian determined that the properties are similarly not historic resources under CEQA, including eligibility for listing on the City Register of Historical Resources. The tracts were constructed in response to regional population growth, and their design was not associated with important persons or events; nor are they unique in nature, etc. Regardless, none of the residential structures in the APE would be impacted by the Project, and no significant impact would occur.

With regard to non-residential structures exceeding 45 years of age, the SR 163 Bridge spanning the San Diego River was built over 45 years ago and was evaluated as part of the statewide inventory (#57-126), as noted above. The structure was found not eligible for the National Register, and was also found not to be an historical resource under CEQA, in accordance with Caltrans' statewide historic bridge inventory. Review under City standards results in the same assessment. The bridge was not built in accordance with a specific important event, does not evidence a specific style, etc. but was a routine upgrade of a roadway structure built without fanfare in response to overall regional growth, has been routinely modified since construction, and currently requires additional upgrade to accommodate existing and future use rates.

No significant impact would result to any structures in the APE due to the widening/adjacent construction proposed under the Project.

5.5.2.3 Significance of Impact

No significant effects to archaeological or structural resources were identified or are anticipated. Nonetheless, in accordance with current City protocols, a significant but mitigable potential impact is identified based on the potential for unknown buried resources to exist within the alluvial portions of the APE and Mast Park mitigation parcel associated with the San Diego River.

5.5.2.4 Mitigation Measures

Implementation of the following mitigation measures would reduce any impacts related to location of previously unidentified historic resources during Project (including off-site wetland mitigation) implementation to less than significant levels.

HR-1 Prior to Permit Issuance or Bid Opening/Bid Award

A. Entitlements Plan Check
   1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring have been noted on the appropriate construction documents. The requirement for monitoring will be determined prior to the Precon Meeting, based on the construction technique to be implemented in alluvial areas along the San Diego River (i.e., whether the selected construction technique would return spoil to the surface for evaluation).

B. Letters of Qualification have been submitted to ADD
   1. Prior to Bid Award, the applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the Project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego Historical Resources Guidelines (HRG). If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training with certification documentation.
   2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the Project.
   3. Prior to the start of work, the applicant must obtain approval from MMC for any personnel changes associated with the monitoring program.

HR-2 Prior to Start of Construction

A. Verification of Records Search
   1. The PI shall provide verification to MMC that a site specific records search (1/4 mile radius) has been completed. Verification includes, but is not limited to a copy of a confirmation letter from South Coast Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
   2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.
   3. The PI may submit a detailed letter to MMC requesting a reduction to the ¼ mile radius.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring; the applicant shall arrange a Precon Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist and Native American monitor shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Construction Manager and/or Grading Contractor.
   a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.

C. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects)

The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the archaeological monitoring program.

1. Identify Areas to be Monitored
   a. Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) based on the appropriate construction documents (reduced to 11x17) to MMC for approval identifying the areas to be monitored including the delineation of grading/excavation limits.
   b. The AME shall be based on the results of a site specific records search as well as information regarding the age of existing pipelines, laterals and associated appurtenances and/or any known soil conditions (native or formation).
   c. MMC shall notify the PI that the AME has been approved.
2. When Monitoring Will Occur
   a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
   b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as age of existing pipe to be replaced, depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present.
3. Approval of AME and Construction Schedule

   After approval of the AME by MMC, the PI shall submit to MMC written authorization of the AME and Construction Schedule from the CM.

HR-3 During Construction

A. Monitor Shall be Present During Grading/Excavation/Trenching
   1. The Archaeological monitor shall be present full-time during grading/excavation/trenching activities including, but not limited to mainline, laterals, jacking and receiving pits, services and all other appurtenances associated with underground utilities as identified on the AME and as authorized by the CM. The Native American monitor shall determine the extent of their presence during construction related activities based on the AME and provide that information to the PI and MMC. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the PME.**
   2. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous trenching activities, presence of fossil formations, or when native soils are encountered may reduce or increase the potential for resources to be present.
   3. The monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVRs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process
   1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.
   2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
   3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.

C. Determination of Significance
   1. The PI and Native American monitor shall evaluate the significance of the resource. If Human Remains are involved, protocol in HR-4 below shall be followed.
      a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required.
      b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) and obtain written approval of the

program from MMC, CM and RE. ADRP and any mitigation must be approved by MMC, RE and/or CM before ground disturbing activities in the area of discovery will be allowed to resume.

c. If the resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required.

HR-4 Discovery of Human Remains

If human remains are discovered, work shall halt in that area and the following procedures as set forth in the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:

A. Notification
   1. The Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS).
   2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone.

B. Isolate discovery site
   1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenience of the remains.
   2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenience.
   3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin.

C. If Human Remains **ARE** determined to be Native American
   1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, **ONLY** the Medical Examiner can make this call.
   2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information.
   3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with the California Public Resource and Health & Safety Codes.
   4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods.

5. Disposition of Native American Human Remains shall be determined between the MLD and the PI, IF:
   a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being notified by the Commission; OR;
   b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner.
   c. To protect these sites, the landowner shall do one or more of the following:
      (1) Record the site with the NAHC;
      (2) Record an open space or conservation easement; or
      (3) Record a document with the County.
   d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to Mitigation 1-4.A.5.c., above.

D. If Human Remains are **NOT** Native American
   1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial.
   2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98).
   3. If the remains are of historic origin, they shall be appropriately removed and conveyed to the Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS, the applicant department and/or Real Estate Assets Department (READ) and the Museum of Man.

HR-5 Night and/or Weekend Work

A. If night and/or weekend work is included in the contract
   1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Precon Meeting.
   2. The following procedures shall be followed.
      a. No Discoveries
         In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVR and submit to MMC via fax by 8AM of the next business day.

b. Discoveries
All discoveries shall be processed and documented using the existing procedures detailed in Mitigation Measure HR-3 - During Construction, and Mitigation Measure HR-4 – Discovery of Human Remains.

c. Potentially Significant Discoveries
If the PI determines that a potentially significant discovery has been made, the procedures detailed under Mitigation Measure HR-3 - During Construction shall be followed.

d. The PI shall immediately contact the RE and MMC, or by 8:00 a.m. of the next business day to report and discuss the findings as indicated in Mitigation Measure HR-3.B, unless other specific arrangements have been made.

B. If night and/or weekend work becomes necessary during the course of construction
1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

HR-6 Post Construction

A. Submittal of Draft Monitoring Report
1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Historical Resources Guidelines (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC via the RE for review and approval within 90 days following the completion of monitoring,
   a. For significant archaeological resources encountered during monitoring, the Archaeological Data Recovery Program shall be included in the Draft Monitoring Report.
   b. Recording Sites with State of California Department of Parks and Recreation
   The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Monitoring Report.
2. MMC shall return the Draft Monitoring Report to the PI via the RE for revision or, for preparation of the Final Report.
3. The PI shall submit revised Draft Monitoring Report to MMC via the RE for approval.
4. MMC shall provide written verification to the PI of the approved report.
5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Artifacts
   1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued
   2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.

C. Curation of artifacts: Accession Agreement and Acceptance Verification
   1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this Project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable.
   2. The PI shall submit the Accession Agreement and catalogue record(s) to the RE or BI, as appropriate for donor signature with a copy submitted to MMC.
   3. The RE or BI, as appropriate shall obtain signature on the Accession Agreement and shall return to PI with copy submitted to MMC.
   4. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

D. Final Monitoring Report(s)
   1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC of the approved report.
   2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

5.5.3 Analysis of Issue 2: Native American Values

Issue 2: ***How would the proposed project affect resources with Native American values*****?**

5.5.3.1. Impact Threshold

A significant impact will be identified if the Project would result in:

1. Any impact to existing religious or sacred uses within the potential impact area.[4] (Initial Study Checklist Question 2)

[4] A site is considered to possess ethnic significance if it is associated with a burial or cemetery; religious, social or traditional activities of a discrete ethnic population; an important person or event as defined by a discrete ethnic population; or the belief system of a discrete ethnic population.

This criterion includes significant impacts to Native American values if the Project were to impact any Kumeyaay heritage human remains.

5.5.3.2 Impact Analysis

In the current instance, no known prehistoric or ethnohistoric sites are located within the APE. The Native American Heritage Commission conducted a search of their Sacred Lands files and found nothing recorded in the area. Independent research carried out at the South Coastal Information Center and San Diego Museum of Man also did not identify any sites that would fall into the above categories.

Letters to solicit input regarding potential cultural heritage concerns regarding the Project were individually sent to 19 groups, bands, committees and knowledgeable individuals representing the Kumeyaay/Diegueno, including the Barona Group of the Capitan Grande, Ewiiaapaayp, Campo Band, Inaja Band, Jamul Indian Village, La Posta Band, Manzanita Band, Mesa Grande Band, San Pasqual Band, Santa Ysabel Band, Sycuan Band, and Viejas Band (see Appendix E for a listing of specific groups and individuals contacted). Replies were received from a total of five individuals or tribal office representatives. While the Kumeyaay Cultural Repatriation Committee and two individuals recommended monitoring during ground disturbing activities, no specific concerns were noted.

Letters to solicit input regarding potential cultural heritage concerns regarding proposed wetland mitigation activities at the Mast Park site were individually sent to 17 groups, bands, committees and knowledegable individuals representing the Kumeyaay/Diegueno, including the Ewiiaapaayp, Campo Band, Jamul Indian Village, Kwaaymii Laguna Band, Manzanita Band, Sycuan Band, and Viejas Band (see Appendix E for a listing of specific groups and individuals contacted). Replies were received from two individuals or tribal office representatives. While one individual recommended monitoring during ground disturbing activities, no specific concerns were noted.

5.5.3.3 Significance of Impact

Given the lack of known resources with Native American values within the Project APE, no significant impact is assessed to the Project.

5.5.3.4 Mitigation Measures

As no significant impact was identified no mitigation is required. In response to requests made by representatives of local Native American bands, however, as well as due to City requirement, Native American monitors will be present during grading activities. The reader is referred to Mitigation Measures HR-2.B, HR-3.A and 3.C, above for full statement of this requirement.

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Area of Potential Effect

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.5-1

5.6 GEOLOGY/SEISMICITY/SOILS

Geotechnical investigations have been conducted for the Project (Ninyo & Moore [1997] and Southern California Soil & Testing, Inc. [SCS&T] 2008a, 2008b and 2003a). These analyses are summarized below along with other applicable data, with the complete reports included in Appendix F of this EIR.

5.6.1 Existing Conditions

5.6.1.1 Affected Environment

Geologic/Topographic Setting

The study area is located within the coastal subprovince of the Peninsular Ranges Geomorphic Province. Northwest-trending structural blocks and intervening, generally parallel, fault zones generally characterize the Peninsular Ranges Province. The coastal subprovince in San Diego County (also known as the San Diego Embayment) encompasses a thick sequence of marine and non-marine sediments deposited during numerous sea level transgression-regression cycles (advances and retreats) over approximately the last 55 million years. More recent uplift and erosion in the San Diego region has resulted in the characteristic canyon and mesa topography present today. Geologic and surficial units present within the study area include Quaternary (less than approximately 1.6 million years old) fill, topsoil, alluvial and colluvial deposits; the Quaternary Lindavista Formation; and the Tertiary (between approximately 1.6 and 65 million years old) Stadium Conglomerate and Mission Valley Formation. Additional description of study area geologic and surficial materials is provided below under Stratigraphy.

Topographically, the study area includes portions of generally level and low-lying terrain associated with the San Diego River and Mission Valley, as well as moderate to steep grades along adjacent canyon/mesa landforms and manufactured slopes. Elevations within the study area range from approximately 30 feet below mean sea level (BMSL) along the San Diego River channel, to 300 feet AMSL on mesa tops along the western boundary.

Stratigraphy

Four surficial deposits and three geologic units are present within the study area. Surficial deposits include artificial fill, native topsoils and Quaternary alluvium and colluvium, while geologic units include the Quaternary Lindavista Formation, Tertiary Stadium Conglomerate and Tertiary Mission Valley Formation. All of the noted deposits are described below in order of increasing age, with mapped locations (except topsoil) shown on Figure 5.6-1, Generalized Geology Map. Detailed mapping conducted during Project geotechnical investigation encompassed approximately the southern two-thirds of the study area, with geologic mapping in the remaining areas derived from published

literature (California Geologic Survey [CGS], formerly the California Division of Mines and Geology [CDMG] 1975).

Artificial Fill (Qaf)

Fill deposits are present within the study area in association with previous development such as roadways. Fill was encountered in exploratory borings conducted during geotechnical investigation at depths ranging from approximately 1.0 to 19.7 feet, and consisted of medium-dense silty sand with gravel, along with well-graded gravels. As shown on Figure 5.6-1, undifferentiated deposits of fill, along with alluvium or other geologic units (as described below), are mapped in much of the study area.

Topsoils (Not Shown on Figure 5.6-1)

The U.S. Natural Resources Conservation Service (NRCS, formerly the Soil Conservation Service [SCS] 1973) conducted topsoil mapping in the study area and vicinity. Seven distinct soil series represented by 10 individual soil types are mapped within the study area, with a summary description of soil characteristics provided in Table 5.6-1, Description of On-Site Soil Characteristics. Much of the study area has been previously developed or disturbed through activities such as road construction. Native soils in these areas have been largely removed or altered (e.g., by mixing with fill), although intact soils are assumed to be present in relatively undisturbed sites.

Quaternary Alluvium and Colluvium (Qal, Qcol)

Alluvial deposits observed within the study area consist of clayey sand, silty sand, poorly graded sand, silt, clay and occasional gravel lenses. As noted above, undifferentiated alluvial and fill deposits are mapped in much of the study area, with alluvium extending to depths of over 42.7 feet in the south-central area (Boring B-8; refer to Figure 5.6-1 and Appendix F).

Table 5.6-1
DESCRIPTION OF ON-SITE SOIL CHARACTERISTICS

Soil Type	Physical Description/Mapped Location	Expansion Potential	Reactivity	Erosion Potential
Altamont Clay, 9 to 15 percent slopes	Well-drained clays derived from calcareous shale. Soils occur along canyon slopes west of SR 163.	High	Neutral to Moderately Alkaline (pH 6.6 to 8.4)	Moderate
Chesterson Urban Land Complex, 2 to 9 percent slopes	Moderately well-drained fine sandy loams with a sandy clay subsoil derived from sandstone. Soils have been altered by development and occur in the northernmost portion of the study area.	Moderate	N/A	Moderate to high, depending on post-development slopes
Diablo Urban Land Complex, 5 to 15 percent slopes	Well-drained clays derived from sandstone and shale. Soils have been altered by development and occur east of SR 163 in the north-central portion of the study area.	High	N/A	Moderate to high, depending on post-development slopes
Olivenhain Cobbly Loam, 9 to 30 percent slopes	Well-drained cobbly loams with a very cobbly clay subsoil derived from alluvium. Soils occur along moderate slopes in the northern and central portions of the study area.	Moderate	Strongly to Moderately Acidic (pH 5.1 to 6.0)	Moderate to High
Olivenhain Cobbly Loam, 30 to 50 percent slopes	Well-drained cobbly loams with a very cobbly clay subsoil derived from alluvium. Soils occur along steeper slopes in the central portion of the study area.	Moderate	Strongly to Moderately Acidic (pH 5.1 to 6.0)	High

Table 5.6-1 (cont.)
DESCRIPTION OF ON-SITE SOIL CHARACTERISTICS

Soil Type	Physical Description/Mapped Location	Expansion Potential	Reactivity	Erosion Potential
Olivenhain Urban Land Complex, 2 to 9 percent slopes	Well-drained cobbly loams with a very cobbly clay subsoil derived from alluvium. Soils have been altered by development and occur on shallow to moderate slopes in the central and southern portions of the study area.	Moderate	N/A	Moderate to high, depending on post-development slopes
Olivenhain Urban Land Complex, 9 to 30 percent slopes	Well-drained cobbly loams with a very cobbly clay subsoil derived from alluvium. Soils have been altered by development and occur on moderate to steep slopes in the central and southern portions of the study area.	Moderate	N/A	Moderate to high, depending on post-development slopes
Riverwash	Alluvial material associated with stream channel deposits, occurs along the San Diego River in the southern portion of the study area.	Low	N/A	High
Terrace Escarpments	Very thin loamy or gravelly soils mapped on canyon slopes in the northeastern corner of the study area.	Variable	N/A	High
Tujunga Sand, 0 to 5 percent slopes	Excessively drained sands derived from alluvium. Soils mapped on level areas in the southern portion of the study area.	Low	Neutral (pH 6.6 to 7.3)	Low

Source: SCS 1973
N/A = No data available.

Undifferentiated colluvium and fill are mapped along the base of the slope located north of Friars Road and west of SR 163 in the west-central portion of the study area. Colluvium (or slope wash) typically consists of loose, unconsolidated materials deposited by gravity and is generally more angular and more poorly sorted than alluvial deposits.

Quaternary Lindavista Formation (Qln)

The Lindavista Formation is mapped within portions of the existing SR 163/Genesee Avenue interchange, and to the south along the east side of the freeway corridor (CDMG 1975). This formation typically consists of weakly to strongly cemented, reddish-brown sandstone, with interbeds of conglomerate (CDMG 1975).

Tertiary Mission Valley Formation (Tmv)

The Mission Valley Formation is mapped on the east side of the existing SR 163/Genesee Avenue interchange, and to the south along both sides of the freeway corridor. This formation typically consists of a light colored, fine- to coarse-grained, friable marine sandstone unit with claystone interbeds and overlies the Stadium Conglomerate described below (CDMG 1975).

Tertiary Stadium Conglomerate (Tst)

The Stadium Conglomerate is mapped in the vicinity of the SR 163/Friars Road interchange, as well as to the north along the east side of the freeway corridor. This formation consists of a coarse-grained sandstone matrix with moderately to well-sorted cobbles and boulders (up to approximately 1.64 feet in diameter), and was observed to extend to a maximum depth of approximately 60 feet at the SR 163/Friars Road interchange (Boring B-3, refer to Figure 5.6-1).

Groundwater

Groundwater was encountered in a number of exploratory borings drilled during Project geotechnical investigation, at depths ranging from approximately 15.1 to 33.5 feet. Additional discussion of observed groundwater conditions within the study area is provided in Section 5.3, Hydrology and Water Quality, with these data indicating the occurrence of relatively shallow groundwater in the central and southern portions of the study area. The Project Geotechnical Report (SCS&T 2008a; see Appendix F) also notes, "Groundwater levels can fluctuate seasonally, and can rise significantly following periods of rain."

Tectonic Setting

The study area is located in a broad, seismically active region of southern California and is subject to potentially substantial hazards associated with moderate to large earthquake events. Much of southern California, including San Diego County, is characterized by a series of Quaternary-age fault zones that typically include several en echelon (offset and generally parallel) faults trending generally north to northwest (Figure 5.6-2, Regional Fault Map). A number of these fault zones (and the individual faults therein) are designated as active or potentially active by the CGS. Active faults are defined as those exhibiting historic seismicity or displacement of Holocene (less than approximately 11,000 years old) deposits, while potentially active faults have no historic seismicity and

displace Pleistocene (between approximately 11,000 and 1.6 million years old) but not Holocene strata. No known active, potentially active, or other faults are located within or adjacent to the study area (Appendix F; City 1995, CDMG 1975). The fault most likely to generate notable seismic effects within the study area is the active Newport-Inglewood East Fault, which is located approximately 1.6 miles to the west. This fault is capable of producing a 7.0 magnitude earthquake, with a corresponding peak ground acceleration value of approximately 0.6g (where g equals the acceleration due to gravity) in the study area (Appendix F). The described section of the Newport-Inglewood East Fault is designated as an Earthquake Fault Zone by the CGS, with this designation intended to "regulate development near active faults so as to mitigate the hazard of surface fault rupture" (CGS 2003). No other designated earthquake fault or related hazard zones are mapped within the study area and vicinity (CGS 2003, City 1995).

5.6.1.2 Regulatory Setting

The Project is subject to a number of regulatory requirements and industry standards related to potential geologic hazards. These guidelines typically involve measures to evaluate risk and mitigate potential hazards through design and construction techniques. Summary descriptions of these regulatory requirements and standards are provided below, with specific applications to the Project discussed in Subsection 5.6.2.2, Impact Analysis.

<u>State</u>

Caltrans Standards

Caltrans standards related to geologic issues include the Department of Transportation Standard Specifications (1999), Standard Test Methods (1991), Highway Design Manual (2001), Caltrans Guidelines for Foundation Investigations and Reports (2002a), SWMP (2003a) and Storm Water Quality Handbooks (2003b). The Standard Specifications, Test Methods, Highway Design Manual and Foundation Investigation/Report Guidelines identify geologic requirements, including issues such as proper site preparation (e.g., clearing, grubbing and grading); use of engineered and approved fill; use of appropriate concrete materials and reinforcing; seismicity parameters; and appropriate design of structures such as utilities, retaining walls, noise barriers, footings, foundations, piles and backfill. Geologic issues addressed in the SWMP and Storm Water Quality Handbooks include measures to prevent and/or control erosion and sedimentation both during and after construction pursuant to applicable NPDES requirements (as outlined below). Additional discussion of the SWMP and Storm Water Quality Handbooks is provided in Section 5.3, Hydrology/Water Quality, of this document.

NPDES Standards

NPDES requirements related to geologic issues (i.e., erosion and sedimentation) include applicable elements of the Caltrans Statewide Storm Water Permit, General Construction Activity Permit and General Groundwater Extraction Permit, with associated legal and

regulatory parameters described in Section 5.3. Specific conformance requirements for the Caltrans Statewide Storm Water Permit and the General Construction Permit related to erosion and sedimentation include implementing appropriate BMPs as part of a project SWPPP. Conformance requirements for the Groundwater Permit related to erosion and sedimentation include implementing appropriate BMPs during discharge of groundwater extracted during construction dewatering activities.

International Building Code and Greenbook Committee Standard Specifications for Public Works Projects

The International Building Code (IBC) and Greenbook Committee of Standard Specifications for Public Works Projects (Greenbook) are produced by industry groups including the International Code Council (ICC) and the American Public Works Association. These standards encompass a variety of engineering and construction specifications, including measures to address geologic issues such as seismic loading parameters (e.g., classifying seismic zones and faults), engineered fill specifications (e.g., compaction and moisture content), expansive soil characteristics and pavement design. The referenced standards, while not comprising formal regulatory requirements per se, are widely accepted by regulatory authorities and are routinely included in associated requirements such as municipal grading codes. The IBC and Greenbook standards are regularly updated to reflect current industry guidelines and practices, including criteria generated by ASTM International (ASTM; formerly the American Society for Testing and Materials).

Local

City standards related to geologic issues include the City Grading Ordinance, Seismic Safety Study (1995) and applicable elements of the City Storm Water Standards (2003a) and SUSMP guidelines (i.e., erosion/sedimentation) as described in Section 5.3.

Potential geologic hazards identified for the study area in the City Seismic Safety Study (Map Nos. 21 and 26) include Hazard Categories 31, 32, 52 and 53. Category 31 is assigned to areas with high potential for liquefaction, based on the occurrence of shallow groundwater, major drainages and hydraulic fills. Category 32 is associated with areas exhibiting low potential for liquefaction, based on fluctuating groundwater levels and the occurrence of minor drainages. Category 52 is designated in areas that exhibit a low risk for geologic hazards based on the occurrence of gently sloping to steep terrain with favorable geologic structure, while Category 53 includes areas with low to moderate geologic hazard risk based on the occurrence of level or sloping terrain with unfavorable geologic structure (City 1995).

Construction of any project in the City is subject to applicable erosion and sedimentation controls in the City Grading Ordinance, as well as the referenced City Storm Water Standards (2003a) and SUSMP guidelines. Pursuant to the City Storm Water Management and Discharge Control Ordinance (Storm Water Standards, Code Section 43.03 et seq.), all new development in the City is required to comply with the storm water

pollution prevention measures identified in Chapter 14, Article 2, Divisions 1 (Grading) and 2 (Storm Water Runoff Control and Drainage) of the City Land Development Code. These measures include requirements related to the prevention and/or control of both short- and long-term erosion and sedimentation impacts, and typically involve the use of applicable design efforts and/or BMPs. Additional City requirements related to erosion and sedimentation are contained in Chapter 14, Article 2, Division 4 (Landscaping); Chapter 14, Article 3, Division 1 (Environmentally Sensitive lands); and Chapter 4, Article 3, Division 3 (Stormwater Management and Discharge Control) of the Land Development Code. These regulations typically require short- and/or long-term erosion and sedimentation control through efforts such as proper landscaping design and irrigation management, preservation of applicable habitats and slopes and use of appropriate BMPs.

5.6.2 Analysis of Issue 1: Geologic, Seismic and Soils Conditions

Issue 1: ***How would the proposed Project affect or be affected by geologic, seismic and soils conditions?***

5.6.2.1 Impact Thresholds

In accordance with City Significance Determination Thresholds (2007a), a significant impact to geology/seismic/soils will be found if the Project would:

1. Expose people or structures to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards. (Initial Study Checklist Question 1)
2. Result in a substantial increase in wind or water erosion of soils, either on or off the site. (Initial Study Checklist Question 2)
3. Be located on a geologic unit or soil that is unstable or would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. (Initial Study Checklist Question 3)

5.6.2.2 Impact Analysis

Potential geology, seismicity and soils impacts associated with the Project involve both short-term (construction) and long-term (operation) issues, as described below. Because a number of the identified geologic hazards may involve both short- and/or long-term issues, the following discussion is formatted by technical concerns rather than short- and long-term impact categories.

The Project geotechnical investigations (Appendix F) do not identify any conditions that would preclude development or require major design changes. A number of potential geologic hazards may occur or be encountered during Project implementation, however, and several general and issue-specific recommendations are provided to address these conditions. Specifically, these recommendations include:

- Review of development plans by the Project geotechnical engineer to ensure compatibility with geotechnical conclusions.
- Review and appropriate modification of applicable field activities by the Project geotechnical engineer (e.g., grading, manufactured slope construction, pile driving, removal of unsuitable materials/fill placement and footing excavations).
- Completion of appropriate field tests to provide quality control/assurance for structural fills and related earthwork.
- Conformance with appropriate regulatory guidelines and industry standards for Project design and construction elements, including seismic loading, excavation and grading (including removal of unsuitable materials and site preparation), fill parameters (e.g., composition, moisture content and application methodology), foundations/footings and piles, manufactured slopes, pavement, oversize materials and retaining walls.

Seismic Hazards

Ground Rupture

Ground rupture and related effects such as lurching (i.e., the rolling motion of surface materials associated with passing seismic waves) can negatively affect surface and subsurface structures. Project development is not expected to be subject to short- or long-term significant impacts related to seismic ground rupture and related effects, however, based on the fact that no known active or potentially active faults are located within or adjacent to the study area. While the potential for on-site ground rupture and lurching from earthquake events along more distant faults cannot be totally discounted, the potential for these types of effects was identified as "minimal" during geologic review of the study area (SCS&T 2003a; see Appendix F). Thus, the Project would not have significant impacts relating to ground rupture.

Ground Acceleration

The peak ground acceleration level identified for the study area is approximately 6.0 g in association with a magnitude 7.0 earthquake event along proximal segments of the Newport-Inglewood East Fault (Appendix F). This level of peak ground acceleration is generally representative of similar areas in southern California and potentially could result in long-term significant effects to proposed facilities such as foundations, structures, pavement and/or utilities.

Project design incorporates appropriate measures to accommodate projected seismic loading pursuant to recommendations in the Project geotechnical investigations and pending site-specific geotechnical analysis, as well as applicable seismic elements of the previously described Caltrans, IBC, Greenbook and City standards. Such measures would include the noted peak ground acceleration levels, as well as consideration of parameters related to subsurface profile type, acceleration and velocity coefficients, seismic zone and seismic source (including type and distance). The following types of

requirements from applicable regulatory sources would be implemented as part of Project design:

- Proper site preparation, including efforts such as clearing and grubbing, removal of unsuitable surface deposits, use of properly engineered fill and appropriate aggregate base/subbase and pavement design.
- Appropriate design and construction of structures such as bridges and retaining walls, including foundations, footings, piles and backfill.
- Use of seismic loading measures such as concrete reinforcing for applicable structures.

Site-specific geotechnical analyses also would be conducted as part of the ongoing Project design and implementation process, and would include: (1) review of foundation and earthwork plans (as well as appropriate revisions); (2) observation of activities including removal of unsuitable materials, fill placement/compaction, pile driving and footing excavations; and (3) completion of appropriate field tests to provide quality control/assurance for structural fills and related earthwork. In addition to the above standards and recommendations, the Project Structure Foundation Design Report (SCS&T 2008b; see Appendix F) identifies a number of specific seismic design criteria for proposed bridge facilities, including appropriate soil profile types and spectral coordinates (Appendix F). Implementation of, and conformance with, the described standards and geotechnical recommendations would effectively avoid or reduce potentially significant seismic ground acceleration impacts.

Liquefaction

Liquefaction is the phenomenon whereby soils lose shear strength and exhibit fluid-like flow behavior, with settlement from liquefaction potentially manifested at the ground surface when soils within the upper 30 to 33 feet liquefy. The following four conditions must be present for liquefaction to occur: (1) soils are saturated (i.e., below the groundwater table); (2) soils are composed predominantly of poorly graded sands; (3) soils are loose to medium dense; and (4) soils are subject to a sufficient magnitude and duration of ground acceleration. Effects from liquefaction such as loss of support and/or related phenomena including lateral spreading (i.e., when loose, saturated sediments flow toward a free face) and dynamic settlement, potentially can result in long-term significant impacts to surface and subsurface facilities including foundations, pavement and underground utilities. The southern portion of the study area (generally south of the SR 163/Friars Road interchange) is within Category 31, as mapped in the City Seismic Safety Study (1995). As previously noted, this designation is assigned to areas with high potential for liquefaction based on the occurrence of shallow groundwater, major drainages and hydraulic fills. The Project geotechnical investigations conclude generally that liquefaction within the study area (including the proposed flyover structure) is not anticipated due to the "[d]ense nature of materials beneath the interchange" (SCS&T 2008b, see Appendix F). Project geotechnical investigations did, however, find that "liquefaction along the southern portion of the alignment adjacent to or within the San Diego River is possible" (SCS&T 2008a, see Appendix F). In order to address this issue, the bridge would be supported on deep foundations. In addition, conditions subject to

liquefaction are observed during geotechnical observations/testing (as noted above) or Project construction, standard measures would be implemented to address potential liquefaction hazards, pursuant to the previously referenced regulatory and industry standards. In addition to the use of deep foundations, this could include efforts such as the removal and recompaction or replacement (with fill) of unsuitable materials, and/or the use of subdrains. Incorporation of, and conformance with, the described geotechnical recommendations would effectively avoid or reduce potentially significant liquefaction impacts.

Landsliding

The occurrence of landslides and other types of slope failures is influenced by a number of factors, including slope grade, geologic and soil characteristics, moisture levels and vegetation cover. Landsliding can be triggered by one or more specific or combination of events, such as seismic activity, gravity, fires and precipitation. As noted above, portions of the study area are within Category 53 of the City Seismic Safety Study, with these areas exhibiting a low to moderate geologic hazard risk based on the occurrence of level or sloping terrain with unfavorable geologic structure. The study area also includes areas designated as Landslide Hazard Categories 1, 2 and 3-1 by the CGS (CDMG 1995). Category 1 is identified as the least susceptible to landslide hazards, due primarily to the lack of steep slopes. Category 2 is defined as marginally susceptible to landslide hazards, with slope grades generally less than 15 percent. Category 3-1 is identified as generally susceptible to landslide hazards, with slopes at or near their stability limits due to a combination of weak material and steep slopes. Areas designated as Category 3-1 generally occur along steeper slopes (e.g., canyons) in the central portion of the study area, while Categories 1 and 2 are associated with more level terrain in the northern and southern portions of the study area.

The Project Geologic Review (SCS&T 2003a, see Appendix F) did not identify any indication of "[g]ross, deep-seated slope failures…" although it was noted that shallow surficial failures are common where "[s]oil, gravel, and cobble erode from the faces of steep, sparsely vegetated slopes…" The Project includes a number of design measures to address potential slope instability in applicable areas, including:

- Limitations on manufactured slope grades.
- Use of properly placed and compacted fill.
- Construction of appropriately designed retaining walls, tie-back walls and soil nail walls.
- Implementation of erosion-control efforts (as described in detail below in this section).
- Use of native or drought-tolerant landscaping varieties and irrigation management (to reduce irrigation runoff).

Based on the inclusion of applicable design measures and conformance with pertinent regulatory standards and geotechnical recommendations, no short- or long-term significant impacts related to landsliding are anticipated from Project implementation. Additional discussions of erosion and manufactured slope stability are provided below under Non-seismic Hazards.

Tsunamis and Seiches

Tsunamis (commonly referred to as tidal waves) are seismic sea waves produced by events such as submarine earthquakes or volcanic eruptions, and can generate impacts related to inundation in coastal zones. Seiches are defined as wave-like oscillatory movements in enclosed or semi-enclosed bodies of water such as lakes or reservoirs, and can result in flooding damage and related effects (e.g., erosion) in surrounding areas from spilling or sloshing water, as well as increasing pressure on containment structures. Because the study area is located approximately 5.3 miles inland and is not adjacent to or downgrade of any large water bodies, no short- or long-term significant hazards related to tsunami or seiche effects are anticipated from implementation of the Project.

Non-seismic Hazards

Erosion and Sedimentation

The study area includes a number of surficial deposits with moderate to high erosion potential (refer to Table 5.6-1 and Appendix F). Proposed grading, excavation, demolition and construction activities would increase the potential for erosion and transport of eroded material (sedimentation) both within and downstream of the study area. Specifically, the Project activities would involve: (1) removal of surface stabilizing features (e.g., vegetation); (2) creation of manufactured slopes; (3) excavation of existing compacted materials from cut areas; (4) redeposition of excavated (and/or imported) material as fill in proposed development sites; (5) potential sediment/particulate generation from paving and demolition activities; and (6) potential erosion from disposal of extracted groundwater (if required). The influx of sediment into downstream receiving waters could result in direct effects such as increased turbidity, and would provide a transport mechanism for other contaminants such as hydrocarbons that tend to adhere (adsorb) onto sediment particles. Project-related erosion and sedimentation potentially could affect downstream reaches of the San Diego River and coastal waters, as well as associated biological resources (refer to Sections 5.3 Hydrology/Water Quality, and 5.4, Biological Resources, for additional discussions on water quality and biological concerns).

Erosion and sedimentation generally are not considered to be major long-term Project concerns, as all developed areas would be stabilized through the installation of hardscape or landscaping. The Project also would incorporate long-term water quality controls to address erosion and sedimentation concerns, pursuant to the previously referenced Caltrans Statewide Storm Water Permit and SWMP, City Storm Water Standards and SUSMP guidelines and related NPDES Municipal Permit. Specifically, such measures would involve appropriate drainage facility improvements (e.g., to prevent runoff on manufactured slopes) and maintenance (e.g., cleaning inlets), use of appropriate landscaping (i.e., native and/or drought-tolerant varieties) and use of treatment control BMPs such as vegetated (biofiltration) swales, detention basins, media filters and/or multi-chamber treatment trains. All of the noted potential treatment BMPs would remove

sediment (among other contaminants) from study area runoff, with additional discussion of water quality issues and treatment options provided in Section 5.3 and Appendix F).

Short-term erosion and sedimentation impacts would be addressed through conformance with recommendations in the Project Storm Water Data Report (Dokken Engineering 2004b, Appendix C), as well as applicable regulatory requirements including the Caltrans Statewide Storm Water Permit and SWMP, the NPDES General Construction and Groundwater Extraction permits and the City Storm Water Standards and SUSMP guidelines outlined above. Specifically, the described conformance would include developing and implementing an authorized SWPPP for proposed construction, including erosion and sedimentation BMPs. While specific BMPs would be determined during the permitting process based on Project and study area characteristics (soils, slopes, etc.), they would generally include the types of standard industry measures and guidelines identified in the Project Storm Water Data Report (Appendix C), NPDES permit text(s), agency standards, Project Geotechnical Design Report and the following additional sources: National Menu of best management practices for Storm Water Phase II (USEPA 2008) and Stormwater Best Management Practices Handbooks (California Stormwater Quality Association 2003).

Based on the noted source documents and recommendations, construction-related erosion and sediment control measures likely to be implemented as part of the Project SWPPP include the following:

- Preservation of existing vegetation wherever feasible.
- Seasonal grading restrictions during the rainy season (October 1 to May 1) for applicable locations/conditions.
- Preparation and implementation of a "weather triggered" action plan for construction during the rainy season to provide enhanced erosion and sediment control measures prior to predicted storm events (i.e., 40 percent or greater chance of rain).
- Use of phased grading schedules to limit the area subject to erosion at any given time.
- Use of erosion control/stabilizing measures such as contour grading, geotextiles, mats, fiber rolls, soil binders, or temporary hydroseeding (or other plantings) installed or established prior to October 1 in appropriate areas (e.g., disturbed areas and graded slopes).
- Use of sediment controls to protect the site perimeter and prevent off-site sediment transport, including measures such as appropriate timing of BMP deployment (e.g., upon completion of grading/excavation), and the use of temporary inlet filters, silt fences, fiber rolls, gravel bags, concrete washouts, sediment basins, check dams, street sweeping, energy dissipators, stabilized construction access points and sediment stockpiles and properly fitted covers for sediment transport vehicles.
- Storage of BMP materials in applicable on-site areas to provide "standby" capacity adequate to ensure complete protection of exposed areas and prevent off-site sediment transport.

- Implementation of appropriate BMPs in graded/excavated areas not actively worked for seven or more consecutive calendar days.
- Provision of training for the personnel responsible for BMP installation and maintenance.
- Use of solid waste management efforts such as proper containment and disposal of construction debris.
- Compliance with local dust control requirements such as terminating grading/excavation operations during high winds, sealing applicable haul roads and regular application of water or chemical palliatives.
- Installation of permanent landscaping, with emphasis on native and/or drought-tolerant varieties, as soon as feasible during or after construction.
- Implementation of appropriate monitoring and maintenance efforts (e.g., prior to and after storm events) to ensure proper BMP function and efficiency.
- Implementation of sampling/analysis, monitoring/reporting and post-construction management programs per Caltrans, NPDES and/or City requirements.
- Implementation of additional BMPs as necessary to ensure adequate erosion and sediment control.

Based on implementation of appropriate erosion and sediment control BMPs as part of, and in conformance with, applicable regulatory requirements (including a Stormwater Pollution Prevention Plan [SWPPP]), potentially significant erosion and sedimentation impacts from the Project construction would be effectively avoided or addressed. As noted, erosion and sedimentation BMPs implemented for this Project would be further defined during the appropriate permit and SWPPP review process, with the resulting measures taking priority over the more general types of industry standard measures listed above.

Manufactured Slope Stability

The Project Geotechnical Design Report (Appendix F) includes slope stability analyses for proposed cut and fill slopes, based on analysis under the GSTABL7V.2 program. Proposed fill slopes associated with the two proposed interchange abutments are anticipated to extend to maximum heights of approximately 23 feet, with the Geotechnical Design Report generally recommending that fill slopes encompass maximum grades of 2:1 (horizontal to vertical). Specific evaluation of Abutment 3 also was conducted as part of the noted slope stability analyses, using data from Boring Nos. B-3 and B-10 (Figure 5.6-1).

Cut slopes associated with proposed on-and off-ramps were assumed to be located within the Stadium Conglomerate and to extend to maximum heights of approximately 56 feet. Maximum slope grades of 1.25:1 were recommended for the described cut slopes, with associated safety factors identified.

Based on the above factors, proposed manufactured slopes are within established industry safety thresholds. Accordingly, implementation of the associated recommendations in the Project Geotechnical Design Report, as well as proposed landscaping/erosion controls

and conformance with applicable regulatory requirements, would effectively avoid or address potentially significant short- and long-term impacts for the Project related to manufactured slope stability.

Expansive Soils

Expansive (or shrink-swell) behavior is attributable to the water-holding capacity of clay minerals, and can adversely affect the integrity of facilities such as pavement, footings or foundations. The study area includes a number of surficial materials with potentially moderate to high expansion potential, including several topsoils as shown in Table 5.6-1. The Project Geotechnical Design Report (Appendix F) identifies a number of recommendations regarding expansive materials, including the following:

- The upper 4 feet of material below the pavement subgrade in both cut and embankment areas should have an expansion index of 50 or less (per IBC guidelines).
- Representative samples from the noted 4-foot zone should be obtained and tested to evaluate expansion potential prior to pavement construction.
- The Project geotechnical engineer should observe excavation and fill placement within the described 4-foot zone.

In addition to the above recommendations, efforts to address expansive soils encountered during geotechnical investigation or construction would be implemented as required. Specifically, this would involve conformance with applicable industry standards from the IBC (or other appropriate guidelines), including measures such as removal of unsuitable deposits and replacement with engineered fill, or selective grading (i.e., placing a cap of low-expansive material). Implementation of design and construction recommendations provided in the Project Geotechnical Design Report and additional testing/field observations, as well as conformance with applicable IBC (or other appropriate) guidelines, would effectively avoid or address potentially significant long-term impacts related to expansive soils.

Corrosive Soils

Laboratory analyses conducted as part of the Project Geotechnical Design Report indicate that most materials underlying the study area form a generally non-corrosive environment with respect to steel and reinforced concrete. Despite this conclusion, the report recommends that: (1) Type II modified Portland cement be used for concrete in contact with the ground; (2) standard reinforced concrete pipe be used; and (3) aluminum culverts, corrugated aluminum pipe (CAP), aluminized steel culverts and corrugated aluminized steel pipe (CASP) not be used (Appendix F). Based on implementation of the noted recommendations and conformance with applicable regulatory standards/industry guidelines, potentially long-term effects related to corrosive soils would be effectively avoided or addressed.

Foundation and Footing Design

The Project Structure Foundation Design Report (SCS&T 2008b, see Appendix F) recommends that driven steel H-piles be used for the proposed bridge structure foundation, and identifies a number of associated design and construction parameters. Specifically, design elements include recommended specifications for pile diameters, anticipated settlement, design and lateral loading, resistance and tip elevations, while construction recommendations include conformance with Caltrans Standard Specifications Section 49-1.05 regarding pile driving in hard or resistant materials (e.g., the Stadium Conglomerate).

The Structure Foundation Design Report also provides recommendations and specifications for shallow foundations and footings associated with structures such as sound walls. Specifically, recommendations for shallow foundations and footings include:

- Locating bottom levels in existing or new compacted fill.
- Appropriate excavation (i.e., to a depth below the planned footing bottom grade equal to the foundation width) and scarifying (to a depth of eight inches) of existing soils in foundation locations.
- Use of approved structural fill, including parameters such as appropriate fill content, compaction, placement methodology and moisture conditioning (per applicable standards such as ASTM).
- Incorporating applicable criteria for foundation dimensions, bearing pressure, loading, settlement and sliding resistance (Appendix F).

Based on implementation of the noted recommendations and conformance with applicable regulatory standards/industry guidelines, potentially significant long-term impacts related to foundation and footing design would be effectively avoided or addressed.

Retaining Wall Design

The Project design encompasses a number of retaining wall structures, including masonry walls, soil nail walls and tieback walls. The Project Geotechnical Design Report identifies a number of recommendations related to proposed walls, including the foundation/footing criteria provided above, as well as conformance with Caltrans Standard Specifications and amendments for Project special provisions related to backfill (including the use of geotextile fabrics and proper drainage techniques to avoid migration of fine material). Based on implementation of the noted recommendations and conformance with applicable regulatory standards/industry guidelines, potentially significant long-term impacts related to retaining wall design would be effectively avoided or addressed.

Settlement

The Project geotechnical investigations identify anticipated settlement in existing materials underlying proposed fills and piles. Specifically, settlement associated with the bridge piles is anticipated to occur rapidly, and to be complete within approximately 30 days after fill loads are applied. In accordance with report recommendations, settlement would be monitored to determine when structure construction can begin. Based on this information, no significant settlement long-term effects are expected in association with the proposed bridge piles.

Settlement associated with fill deposits is anticipated to be "slight" and to be complete within approximately 30 days from placement of fill loads (SCS&T 2008a, see Appendix F). Construction generally would be delayed in these areas during the noted 30-day period to accommodate settlement, although monitoring could support a more rapid schedule as construction can begin before the 30-day settlement period if measurements indicate settlement is essentially complete (Appendix F).

Based on implementation of the noted recommendations and conformance with applicable regulatory standards/industry guidelines, potentially significant long-term impacts related to settlement would be effectively avoided or addressed.

Pavement Design

Based on field and laboratory investigations, the Geotechnical Design Report includes a number of preliminary recommendations regarding pavement and subgrade parameters for proposed freeway mainlines and ramps, as well as applicable portions of Friars Road. These recommendations include removal of unsuitable subgrade material to a depth beyond the influence of planned construction, replacement of removed deposits with suitable material as identified by the Project geotechnical engineer and use of appropriate pavement types and dimensions. As noted, the identified pavement characteristics are preliminary, with final pavement design to be determined in consultation with Project engineers and appropriate regulatory staff. Based on implementation of the described recommendations and conformance with applicable regulatory standards/industry guidelines, potentially significant long-term impacts related to pavement design would be effectively avoided or addressed.

Excavation and Generation of Oversize Materials

The Project Geotechnical Design Report includes an assessment of bedrock rippability characteristics within applicable portions of the study area, based on seismic refraction surveys. The results of this investigation indicate that all surveyed areas exhibit velocities representing materials that are rippable with standard heavy equipment, such as a Caterpillar D-11 bulldozer equipped with a single-tooth ripper. The report notes, however, that cemented rock exposed at or near finish grade is likely to be difficult to remove, and that some limitations are inherent for data acquired from seismic surveys. Specifically, the report notes that anticipated conditions may change with depth and are

not applicable to areas outside the surveyed zone, and that conditions such as the percentage of boulders cannot be predicted from seismic refraction surveys.

Based on the above information, it is anticipated that proposed excavation and grading activities may produce oversize material (i.e., more than approximately 20 cm [8 in] in maximum dimension). The generation of oversize rock fragments can pose potential development hazards if improperly handled or placed within the study area. Specifically, the presence of oversize materials in engineered fills can result in effects such as differential compaction and settlement (i.e., varying degrees of settlement over short distances), with related issues including adverse effects to overlying structures, pavement or drainage. The Geotechnical Design Report notes that oversize materials up to approximately 500 mm (20 in) in diameter would be encountered during Project construction. The report goes on to recommend that oversize materials should not be used in fill, but should be either exported from the study area for disposal or used in Project landscaping.

Implementation of the described recommendations and conformance with applicable regulatory standards/industry guidelines would effectively avoid or address potentially significant long-term impacts related to oversize materials.

Shallow Groundwater

As described under Subsection 5.6.1.1, Affected Environment, relatively shallow groundwater was encountered in the central and southern portions of the study area during geotechnical investigation (Appendix F). Observed groundwater depths ranged from approximately 15.1 to 33.5 feet below the surface, although it was observed that that "Groundwater levels can fluctuate seasonally, and can rise significantly following periods of rain" (SCS&T 2008a). The potential occurrence of shallow groundwater within the study area could affect construction activities such as excavation and grading. Specifically, the presence of shallow groundwater in proposed cuts or excavations, while not representing a geotechnical constraint per se, could require temporary dewatering to allow access by construction equipment and/or personnel. Such dewatering activities would require conformance with applicable NPDES permit requirements as previously discussed under Regulatory Setting (Subsection 5.6.1.2). While the majority of these requirements are associated with water quality concerns (refer to Section 5.3), BMPs related to potential erosion and sedimentation effects may also be appropriate (e.g., if extracted groundwater is discharged onto graded or unstabilized areas). Under such conditions, erosion control measures similar to those described above in this section are likely to be required, and would effectively avoid or address associated potentially significant short-term erosion and sedimentation impacts.

The presence of shallow groundwater could also potentially affect the stability of proposed excavations (e.g., trench walls), resulting in safety or damage impacts to construction workers and equipment from caving. Applicable excavation activities would be designed in accordance with pertinent OSHA and CAL/OSHA standards, including 29 CFR Part 1926, Occupational Health Standards-Excavations. Conformance

with these (and other appropriate) requirements would effectively avoid or address potentially significant short-term impacts related to the stability of open excavations.

Unique Geologic Features

The study area is located in an urban setting and consists primarily of areas that have been previously developed or disturbed. The study area is also not within or adjacent to any areas designated as natural landmarks on the National Registry of Natural Landmarks (2004). Based on these conditions, no significant short- or long-term impacts related to unique geologic features would result from the Project.

5.6.2.3 Significance of Impact

Implementation of the above described geotechnical recommendations and conformance with applicable Caltrans, City and NPDES regulatory standards, as well as IBC, Greenbook and ASTM industry standards would effectively avoid or address potentially significant short- and long-term impacts related to geology/seismicity/soils.

5.6.2.4 Mitigation Measures

Because no significant geology/seismicity/soils impacts would result from the Project, no mitigation measures are required.

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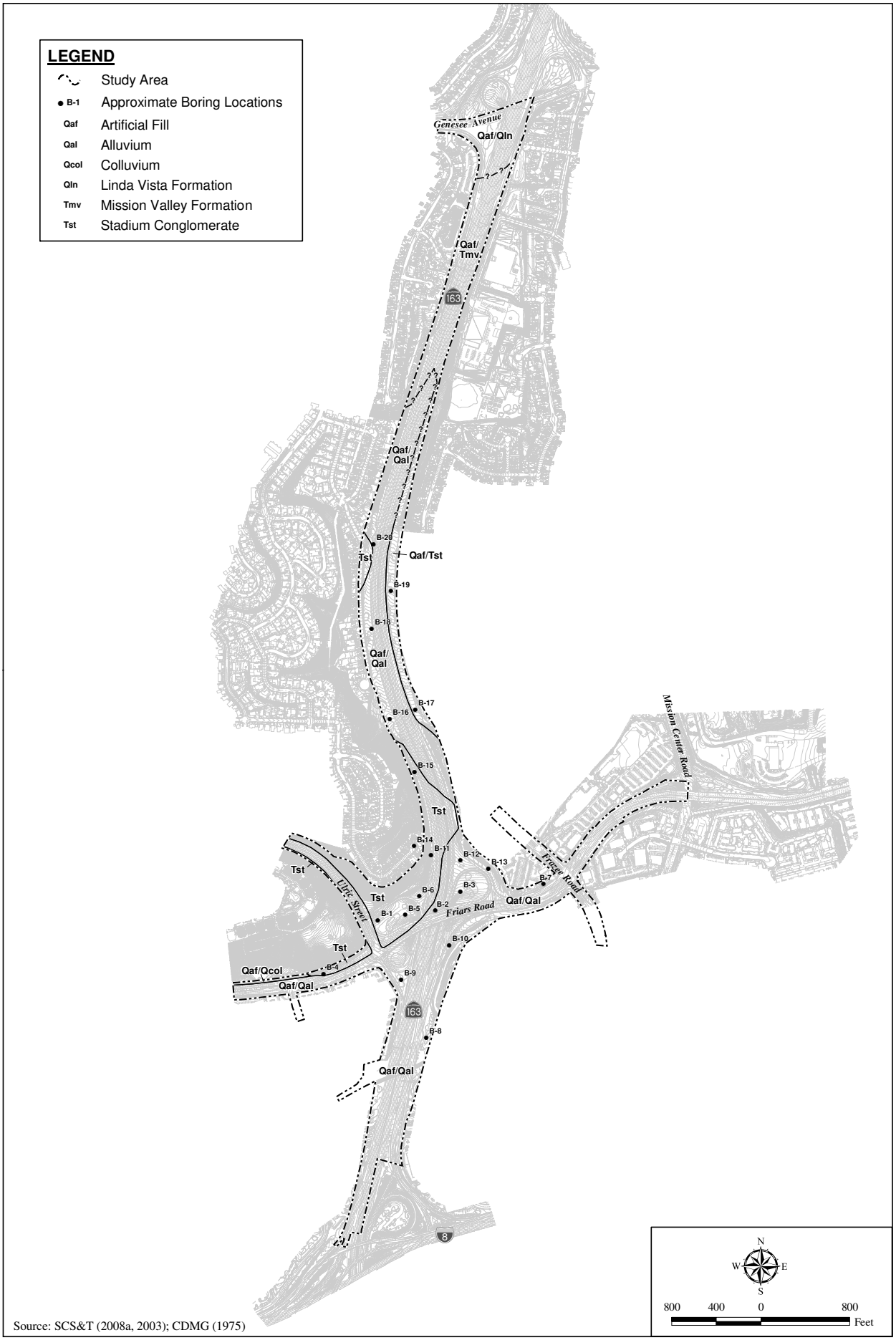

Source: SCS&T (2008a, 2003); CDMG (1975)

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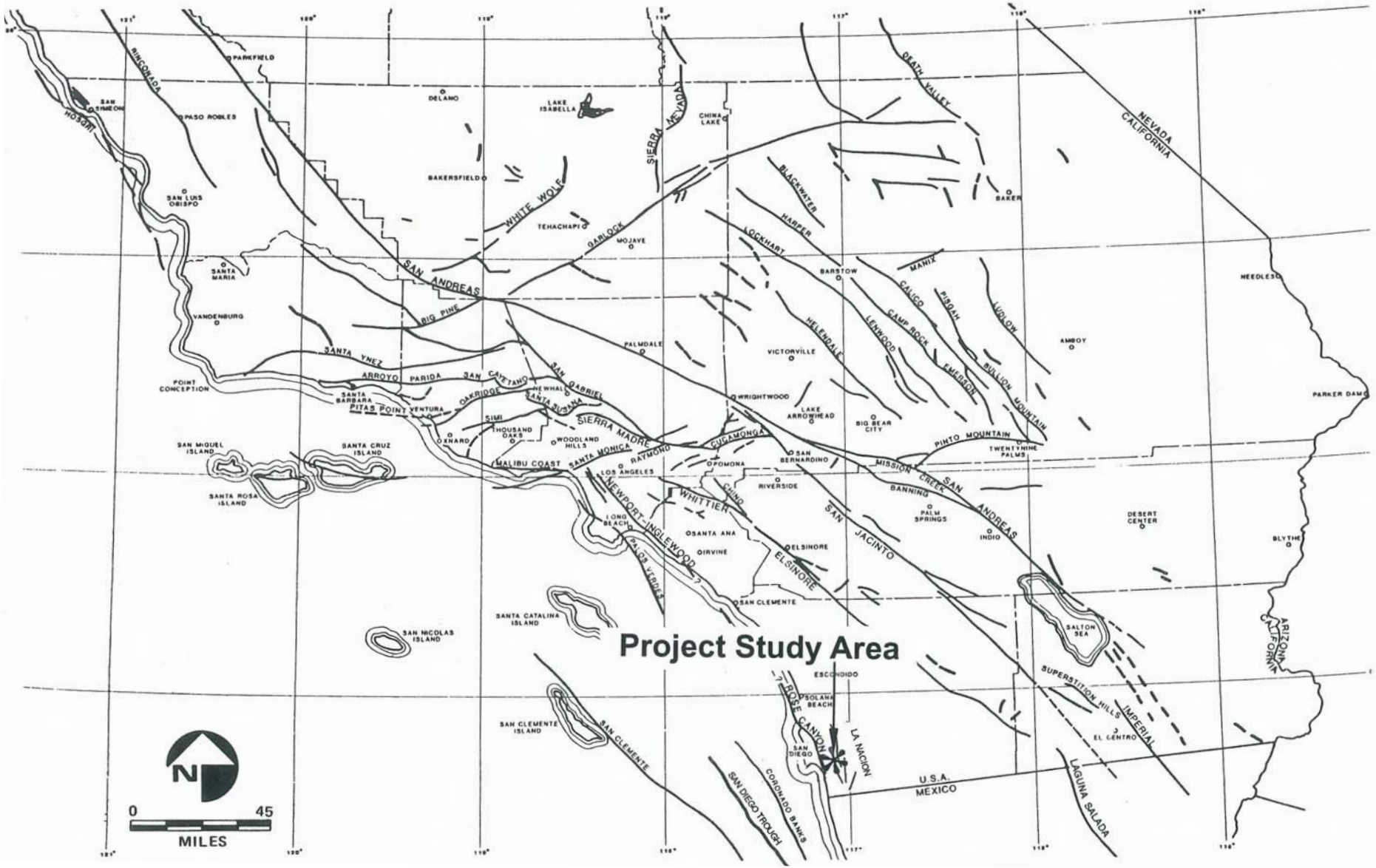
Generalized Geology Map

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.6-1



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Regional Fault Map

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.6-2

5.7 PALEONTOLOGICAL RESOURCES

5.7.1 Existing Conditions

5.7.1.1 Affected Environment

Paleontology is the science dealing with prehistoric plant and non-human animal life. Paleontological resources (or fossils) typically encompass the remains or traces of hard and resistant materials such as bones, teeth or shells, although plant materials and occasionally less resistant remains (e.g., tissue or feathers) can also be preserved. The formation of fossils typically involves the rapid burial of plant or animal remains and the formation of casts, molds or impressions in the associated sediment (which subsequently becomes sedimentary rock). Because of this, the potential for fossil remains in a given geologic formation can be predicted based on known fossil occurrences from similar (or correlated) geologic formations in other locations.

Based on the geologic information provided in Section 5.6, Geology/Seismicity/Soils, surficial materials and geologic units observed or expected to occur within the study area include artificial fill, native topsoils, Quaternary alluvium and colluvium, the Quaternary Lindavista Formation, the Tertiary Mission Valley Formation and the Tertiary Stadium Conglomerate (refer to Figure 5.6-1). The paleontological resource sensitivity of all these units is summarized below, with sensitivity categories generally defined as follows:

- High Sensitivity - These formations contain a large number of known fossil localities. Generally speaking, highly sensitive formations produce vertebrate fossil remains or are considered to have the potential to produce such remains.
- Moderate Sensitivity - These formations have a moderate number of known fossil localities. Generally speaking, moderately sensitive formations produce invertebrate fossil remains in high abundance or vertebrate fossil remains in low abundance.
- Low Sensitivity - Low sensitivity is assigned to those formations that contain only a small number of known fossil localities and typically produce invertebrate fossil remains in low abundance.
- Unknown Sensitivity - Unknown sensitivity is assigned to formations from which there are presently no known paleontological resources, but which have the potential for producing such remains based on their sedimentary origin.
- Very Low Sensitivity - Very low sensitivity is assigned to geologic formations that, based on their relatively young age or high-energy depositional history, are judged unlikely to produce any fossil remains.

Artificial fill deposits exhibit no potential for the occurrence of important paleontological resources due to their recent age and the destructive nature of their origin (i.e., mechanically processed through methods such as crushing and screening). Similarly, native topsoil deposits do not exhibit any potential for important paleontological resource values due to their relatively recent age and methods of

formation and deposition (i.e., physical and chemical weathering producing soil that is transported and deposited by methods such as water, wind and gravity).

Alluvial and colluvial materials are assigned a very low paleontological resource sensitivity due to their relatively recent age, high-energy formation/deposition environments, and the fact that, with rare exceptions, important fossil occurrences are unknown from such deposits in San Diego County (Deméré and Walsh 1993).

The Lindavista Formation is assigned a moderate paleontological resource sensitivity in the study area vicinity, and has locally produced fossil remains of near-shore marine invertebrates including clams, scallops, snails, barnacles and sand dollars, as well as infrequent vertebrates such as sharks and whales.

The Mission Valley Formation is assigned a high paleontological resource sensitivity, based on the abundant occurrence of marine micro-fossils, macro-invertebrates and vertebrates, as well as petrified wood. Specific vertebrate remains recovered from this formation include land mammals such as opossums, insectivores, rodents, bats and primates. The concurrent presence of land mammal and marine fossil assemblages is extremely rare and important, as it provides the opportunity for direct correlation of terrestrial and marine fauna time scales.

The Stadium Conglomerate includes three distinct units, two of which (the upper and lower units) are present in the Mission Valley area. The upper unit of this formation has produced foraminifera (single-celled organisms) and marine mollusks in the study area vicinity (Murray Canyon) and is assigned a high sensitivity level; the lower unit is also assigned a high resource sensitivity due to the occurrence of well-preserved mammals such as rodents, opossums, primates and carnivores (Deméré and Walsh 1993; City 2007b).

5.7.1.2 Regulatory Setting

The Project is subject to a number of regulatory requirements related to paleontology. These guidelines typically involve measures to ensure the protection of paleontological resources through methods such as development (e.g., grading and excavation) monitoring and resource recovery efforts. Specific statutes encompassing measures to protect paleontological resources include: (1) (1) CEQA (Public Resources Code, Division 13, Chapter 1, Section 21000, et seq.); (2) the CEQA Guidelines (California Code of Regulations [CCR], Title 14, Chapter 3, Section 15000 et seq.); (3) CCR Title 14, Division 3, Chapter 1, Section 4306; (4) California Public Resources Code, Division 5, Article 6, Chapter 1.7, Section 5097.5; and (5) the City's Paleontological Guidelines (2007b). All of these statutes and guidelines include similar provisions to preclude the unauthorized excavation disturbance, collection, excavation or destruction of paleontological resources. The City's Paleontological Guidelines also provide measures related to the authorized collection, preparation and curation of paleontological resources in association with development activities.

5.7.2 Analysis of Issue 1: Paleontological Resources

Issue 1: How would the Project affect paleontological resources?

5.7.2.1 Impact Thresholds

In accordance with City Significance Determination Thresholds (2007a) a significant impact will be identified if the Project would:

- Require over 1,000 cubic yards (yd^3) of excavation to a depth of 10 feet or more in a high resource potential formation. (Initial Study Checklist Question 1)
- Require over 2,000 yd^3 of excavation to a depth of 10 feet or more in a moderate resource potential formation. (Initial Study Checklist Question 2)

5.7.2.2 Impact Analysis

Potential paleontological resource impacts associated with the Project are associated with short-term (construction) activities such as excavation and grading; however, such impacts are considered long-term because the associated loss of resource values would be permanent.

The study area includes three geologic formations with either moderate (the Lindavista Formation) or high (the Stadium Conglomerate and Mission Valley Formation) paleontological resource potential. Grading for the Project would entail approximately 130,000 yd^3 of cut and 39,000 yd^3 of fill with substantial portions of the cut to occur in previously undisturbed areas of the Lindavista Formation, Stadium Conglomerate and Mission Valley Formation. Freeway widening would require maximum cut slopes of approximately 31 feet. Based on the described conditions, implementation of the Project could result in excavation that would exceed the City thresholds in moderate and high sensitivity paleontological resources, resulting in potentially significant direct, long-term impacts.

5.7.2.3 Significance of Impact

The Project could affect sensitive paleontological resources due to excavation. This potential impact would be significant, but mitigable to below a level of significance.

5.7.2.4 Mitigation Measures

The City shall implement the following measures to mitigate impacts to paleontological resources to a less than significant level:

PR-1 Prior to Permit Issuance or Bid Opening/Bid Award

A. Entitlements Plan Check
   1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate construction documents.

B. Letters of Qualification have been submitted to ADD
   1. Prior to Bid Award, the applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the Project and the names of all persons involved in the paleontological monitoring program, as defined in the City of San Diego Paleontology Guidelines.
   2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the Project.
   3. Prior to the start of work, the applicant shall obtain approval from MMC for any personnel changes associated with the monitoring program.

PR-2 Prior to Start of Construction

A. Verification of Records Search
   1. The PI shall provide verification to MMC that a site specific records search has been completed. Verification includes, but is not limited to a copy of a confirmation letter from San Diego Natural History Museum, other institution or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
   2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.

B. PI Shall Attend Precon Meetings
   1. Prior to beginning any work that requires monitoring, the Applicant shall arrange a Precon Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified paleontologist shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the Construction Manager and/or Grading Contractor.
      a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.
   2. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects)
      The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the paleontological monitoring program.
   3. Identify Areas to be Monitored
      a. Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate construction documents (reduced to 11x17) to MMC for approval identifying the areas to be monitored including the delineation of grading/excavation limits. Monitoring shall begin at depths below 10 feet from existing grade or as determined by the PI in

consultation with City staff. The determination shall be based on site specific records search data which supports monitoring at depths less than 10 feet.

b. The PME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).
c. MMC shall notify the PI that the PME has been approved.

4. When Monitoring Will Occur
   a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
   b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as depth of excavation and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present.
5. Approval of PME and Construction Schedule
   After approval of the PME by MMC, the PI shall submit to MMC written authorization of the PME and Construction Schedule from the CM.

PR-3 During Construction

A. Monitor Shall be Present During Grading/Excavation/Trenching
   1. The monitor shall be present full-time during grading/excavation/trenching activities including, but not limited to mainline, laterals, jacking and receiving pits, services and all other appurtenances associated with underground utilities as identified on the PME and as authorized by the CM that could result in impacts to formations with high and/or moderate resource sensitivity. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances, OSHA safety requirements may necessitate modification of the PME.**
   2. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as trenching activities that do not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.
   3. The monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVRs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process
   1. In the event of a discovery, the Paleontological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.
   2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
   3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.

C. Determination of Significance
   1. The PI shall evaluate the significance of the resource.
      a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI.
      b. If the resource is significant, the PI shall submit a Paleontological Recovery Program (PRP) and obtain written approval of the program from MMC, MC and/or RE. PRP and any mitigation must be approved by MMC, RE and/or CM before ground disturbing activities in the area of discovery will be allowed to resume.
      c. If the resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils) the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The Paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered.
      d. The PI shall submit a letter to MMC indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.

PR-4 Night and/or Weekend Work

A. If night and/or weekend work is included in the contract
   1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Precon Meeting.
   2. The following procedures shall be followed.
      a. No Discoveries
         In the event that no discoveries were encountered during night and/or weekend work, The PI shall record the information on the CSVR and submit to MMC via the RE via fax by 8:00 a.m. on the next business day.
      b. Discoveries
         All discoveries shall be processed and documented using the existing procedures detailed in Mitigation Measure PR-3 - During Construction.

c. Potentially Significant Discoveries
If the PI determines that a potentially significant discovery has been made, the procedures detailed under Mitigation Measure PR-3 - During Construction shall be followed.
d. The PI shall immediately contact the RE and MMC, or by 8:00 a.m. on the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.

B. If night and/or weekend work becomes necessary during the course of construction
1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

PR-5 Post Construction

A. Preparation and Submittal of Draft Monitoring Report
1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Paleontological Guidelines which describes the results, analysis, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to MMC via the RE for review and approval within 90 days following the completion of monitoring,
a. For significant paleontological resources encountered during monitoring, the Paleontological Recovery Program shall be included in the Draft Monitoring Report.
b. Recording Sites with the San Diego Natural History Museum
The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report.
2. MMC shall return the Draft Monitoring Report to the PI via the RE for revision or, for preparation of the Final Report.
3. The PI shall submit revised Draft Monitoring Report to MMC via the RE for approval.
4. MMC shall provide written verification to the PI of the approved report.
5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Fossil Remains
1. The PI shall be responsible for ensuring that all fossil remains collected are cleaned and catalogued.

C. Curation of artifacts: Deed of Gift and Acceptance Verification
   1. The PI shall be responsible for ensuring that all fossil remains associated with the monitoring for this Project are permanently curated with an appropriate institution.
   2. The PI shall submit the Deed of Gift and catalogue record(s) to the RE or BI, as appropriate for donor signature with a copy submitted to MMC.
   3. The RE or BI, as appropriate shall obtain signature on the Deed of Gift and shall return to PI with copy submitted to MMC.
   4. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

D. Final Monitoring Report(s)
   1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC of the approved report.
   2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

5.8 AESTHETICS/NEIGHBORHOOD CHARACTER/VISUAL QUALITY

A Visual Impact Assessment (VIA) was prepared for the Project by Estrada Land Planning (2009) and is summarized below. The report in its entirety is contained in Appendix G.

5.8.1 Existing Conditions

As a roadway, the potential visual effects of the Project differ somewhat from the development projects that are the focus of the City's guidelines. As a result of this consideration and the need for the VIA to also support the separate NEPA analysis, the VIA was prepared in the format developed by the FHWA for state routes (here SR 163). The following discussion addresses elements required as part of VIA analysis, as well as specific aesthetic elements required by the City. For the convenience of readers referring to both the EIR and technical document, the following existing conditions discussion follows the format of Appendix G. The VIA provides a detailed guide for understanding and evaluating visual resources in their existing condition, as well as determining the amount of visual change that would result from the proposed improvements in an effort to help objectify the inherently subjective field of visual analysis. These methods are not only used nationally for roadway projects analysis, but also are being increasingly incorporated into visual analysis standards by land use agencies. Additional information is provided to clarify some of the VIA terminology or provide necessary information regarding City standards and requirements.

5.8.1.1 Affected Environment

The following discussion provides an overview of the Project setting and key visual elements and themes.

Visual Environment

The intersection of SR 163 and Friars Road is located in Mission Valley, a key geologic and topographical feature in the San Diego regional landscape. The study area is surrounded by mesas, through which the northern portion of the Project cuts, and on which some of San Diego's older neighborhoods, constructed from the 1950s through 1970s, are located. The San Diego River flows through Mission Valley in the southern portion of the study area. The river is regionally known and contains tall riparian woodlands of California sycamore, willow and cottonwood trees. Other

Coastal sage scrub on the slopes above Ulric Street.

natural visual details unique to Mission Valley include rounded cobblestones in multiple red oxide, brown and tan colors, cemented in layers of soil on nearby natural and cut slopes.

Predominant built visual elements in the valley consist of shopping centers, a network of roadways (including four interstate highways, major roads and local collector streets), an elevated trolley line that crosses the site within the southern area and utility towers. Modern architecture includes glass and steel office buildings, large commercial malls, and stucco and terra cotta multi-family residential buildings.

The San Diego River, transecting the southern portion of the study area, includes several natural and disturbed vegetation communities, and is visually identified by tall riparian trees (cottonwoods, sycamores and willows), cattails and other riparian plants, as well as areas of open water. The study area has experienced major landform alteration due to past quarrying on the north side of the valley and subsequent development.

Eucalyptus and iceplant (*Carpobrotus edulis*) lining the slopes next to SR 163

An overview of Mission Valley from a mesa-top neighborhood southeast of the study area

North of the river, the visual environment in the immediate Project vicinity is dominated by developed (commercial and residential) uses and non-native vegetation. Widely spaced eucalyptus woodland and ice plant ground cover line existing SR 163. Some other vegetation communities are also present, including small patches of disturbed Diegan coastal sage scrub, non-native grassland and disturbed habitat generally set farther back from the roadway. These areas of natural vegetation are visible as brown, tan or gray-green patches of color, in contrast with the brighter greens provided by the ice plant and eucalyptus. Clean lines of concrete freeway bridges; concrete and steel railings; and tall, steel lighting standards are the primary visual elements of the interchange.

Although the San Diego River and the slopes of Mission Valley have been identified as sensitive visual areas in the *Mission Valley Community Plan*, it is relevant to note that some portions of SR 163 are so designated. Two miles south of the Project area, SR 163 passes through San Diego's Balboa Park in the form of a four-lane, tree-lined landscaped

View northward toward the SR 163 and Friars Road interchange

"parkway" with a wide planted median. The 1.3-mile area within the park boundary is officially recognized as a Scenic Freeway. The 1.6-mile area leading to the park is a broad area of undistinguished freeway paving, and does not exhibit the same visual quality as the park segment. (It has been listed as eligible for Scenic Highway status, but is not officially designated.) In addition, the section of SR 163 from just south of the Cabrillo Bridge (Laurel Street) in Balboa Park to the San Diego River (the "Cabrillo Highway," see Section 5.5 of this EIR) was designated an historic landmark by the City of San Diego Historic Resources Board in 2000. Built in 1948, it is recognized as one of the earliest freeways in California and was associated with several famous San Diegans, including Arthur Marston and John D. Spreckles. It was designated under the criteria for cultural landscapes, historical events and architecture, and has been listed by the Board as eligible for the National and State Historic Register.

Slopes above Ulric Street

The visual experience for motorists traveling south on SR 163 from Genesee Avenue from the mesa top of Kearny Mesa includes a descent to the valley floor past graded slopes vegetated with iceplant and tall individual eucalyptus. Tall riparian vegetation associated with the river is visible from SR 163 south of the Friars Road intersection. Southbound travelers on SR 163 can see Mission Valley from approximately midway between Genesee Avenue and Friars Road (although, given the bend in SR 163 and edging topography, the portion of the valley seen is not that of the SR 163 crossing), and to east-west travelers along Friars Road where intervening land uses do not block views (i.e., generally at Friars Road intersections with transecting roadways).

Moving southerly, motorists see the dense mid-rise commercial developments, office complexes, hotels and parking areas of the valley just before they pass numerous transmission lines and roadways, under two bridges, the dense vegetation of the river, and reach the next intersection at I-8 looking toward slopes rising to the mesa to the south. Views to the riparian vegetation of the river from southbound vehicles are not obtained until right on Friars Road or under the Friars Road Bridge for vehicles on SR 163, and then are more focused to the east as views to the west are shielded by the Container Store at Fashion Valley. The crossing of the riparian zone is just notable (consisting of the tops of trees) and extremely brief, after which, views move immediately to the freeway merge ahead and adjacent developed uses.

Traveling north on SR 163, and leaving the four-lane, designated scenic section of freeway within Balboa Park, the motorist emerges into the Mission Valley area, descending rapidly on a 10-lane freeway through a graded and disturbed canyon between the mesa tops of Hillcrest and Uptown. Passing beyond the massive cut slope on the sides of the canyon, an open view of the valley with its mix of commercial mid- and high-rise development and freeway interchanges is seen. After passing under the freeway interchange complex at I-8, the traveler catches a glimpse of the tops of riparian trees of the San Diego River along with the trolley bridge, hotels, retail and commercial buildings beyond. These structures and adjacent travel lanes generally shield peripheral views to the riparian zone until it is being crossed, and attention is almost immediately captured by the roadway directional signs before the Friars Road off-ramp. After passing under the Friars Road interchange and bridge, the viewer sees the massive cut slopes to the west, and mesa top homes on the ridge line. The 12-lane freeway ascends the canyon between the mesa-top homes and residential landscapes of Linda Vista and Serra Mesa. The freeway narrows to 10 lanes as it passes through cut slopes revegetated with iceplant, myoporum and eucalyptus. After passing under the Fulton Street pedestrian bridge and over Genesee Avenue, the expanse of Kearny Mesa with its mix of commercial, health industry and residential structures and landscapes is visible.

Several existing sound walls are located adjacent to SR 163. Wall E1 is approximately 8 to 11 feet in height, located between the east side of SR 163 and Teal Place.

Existing Wall E2

Existing Wall E2

Wall E2 is located on the west side of SR 163 near Fulton Street and is 11 to 15.7 feet in height. This wall is a multicolored arrangement of gray, white and pink split-face block with wide columns with peaked roofs and pink accent squares as shown in the photos. This wall is thought to be uniquely graphic and attractive, but is visually dominant and out of character with SR 163 canyon themes.

Existing Wall E3

Wall E3 is a 5-foot-high sound wall between SR 163 and Hanford Street. This is a slump block wall with very little visual interest. The wall is not covered with vines and its relatively smooth surface is a frequent target of large graffiti.

In order to evaluate the significance associated with visual changes resulting from proposed Project implementation, it is necessary to clearly understand baseline visual conditions. Unlike discussion topics such as biological resources, where impact significance is tied to numbers of individuals or acres of habitat affected (regardless of whether those impacts are perceived by humans), visual impacts relate wholly to how viewers value existing conditions as compared to potential future conditions.

Existing Wall E3

Landscape Unit

A "landscape unit" can be thought of as an outdoor room that exhibits a distinct visual character. The study area is contained within a landscape unit defined by the slopes and mesa tops that create Mission Valley. The landscape unit is perceived as a broad river valley bounded on the north and south by steep slopes surmounted by residential neighborhoods with mature trees that appear on the skyline as an irregular dark green mass. The eastern and western edges of the landscape unit continue into the distance,

with mountains to the east and the river valley broadening to its ocean outflow on the west, allowing more distant views. Northbound SR 163 ascends out of Mission Valley through side canyons on the north and south. The Mission Valley landscape unit is easily perceived by casual observers due to its distinct contrast to the surrounding mesas.

Project Viewshed

A viewshed is comprised of all the surface areas visible from or to a specific viewpoint, or locale. This includes: (1) areas from which the study area can be seen, as well as (2) off-site areas that can be seen from the study area. The Project has a dynamic viewshed that varies in response to varied topography and the built environment. It is generally defined by the edge of the surrounding mesa tops along the SR 163 and Friars Road corridor, and along the north-facing rim of Hillcrest and University Heights, and is illustrated in Figure 5.8-1, Project Viewshed. Depending on the location of the observer, the specific viewshed at any given point will vary as it is defined by surrounding slopes, bridges, buildings and other features that obscure views.

Existing Visual Resources and Viewer Response

While acknowledging that what is visually pleasing, or "attractive," is subjective and varies by individual, it is possible to assess the presence or absence of specific design elements or qualities in a landscape. Whether or not these qualities would exist in the same proportion following Project implementation provides a more objective method of assessment than identification by the reviewer of whether he or she finds the Project attractive. Existing conditions are described below based on identification of visual character and the assessment of visual quality in terms of "vividness," "intactness" and "unity." Each of these categories is further described below.

Existing Visual Character

Overall, the existing visual character consists of markedly urban elements in a river valley setting. The valley formation itself, with its surrounding slopes and side canyons, provides a strong topographical and vegetative backdrop. The Project scene is an active and complex mix of natural features, development and transportation facilities.

Existing Visual Quality

The presence within the viewshed of the identifiable attributes of vividness, intactness and unity present was ranked by the technical specialist as being low, moderately low, moderate, moderately high or high within the existing setting.

Vividness. "Vividness" is the visual power or memorability of landscape components as they combine in distinctive visual patterns. Although there is no dominant key feature of the landscape, the viewer is able to obtain a broad and distant view of Mission Valley. The views leading into and out of the valley along SR 163, and the sense of arriving in a

definable region, does much to establish the scene in the viewer's mind. Existing vividness is assessed as moderate.

Intactness. "Intactness" is the visual integrity of a landscape and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes (e.g., the above described passage of the scenic highway section of SR 163 through Balboa Park), as well as natural settings. Conflicting elements in the study area include freeway signs, bridges, light posts, speeding traffic, large office buildings and other structures in a wide variety of architectural styles that interrupt views of the more visually intact surrounding hillsides. The viewshed is essentially an urban scene full of movement and variety, overlaid on a natural background. The visual integrity of the study area is considered low due to the large number of visually conflicting elements.

Unity. Unity is the visual coherence and compositional harmony of the landscape considered as a whole. It can be considered more of an artistic approach to the overall composition of the view with consideration of the balance of elements to create a pleasing scene. The evaluation of unity assesses whether the eye moves over the view consistently and comfortably or whether one element is so dominant or imposing that it stops the flow or continuity. A scene with weak composition that allows the eye to wander with no elements to focus the view also would be considered low in unity.

While the strong topographical elements of the valley slopes and vegetated mesa edges provide a visually unifying background, the compositional harmony of the landscape is disrupted by the diverse and conflicting man-made elements of the middle ground. These elements include signs; commercial and residential buildings in a variety of architectural styles; a wide variety of trees and landscape elements with no prevailing theme; eroding slopes; expanses of concrete; and a variety of fences, sound walls and retaining structures. The lines and curves of the roadways, bridges and concrete rails provide a unifying element to the scene, connecting the area to the regional context of transportation corridors running through Mission Valley.

Overall, a moderate level of unity is identified for this area, based on the combination of (unified) steep slopes, vegetation types that define Mission Valley, and concrete structures of the transportation facilities, as diminished by the conflicting variety of urban and suburban structures of the built environment.

Viewer Response

Viewer response is composed of two elements: viewer sensitivity and viewer exposure. These elements combine to form a method for prediction of how the public might react to visual changes resulting from a proposed action.

Viewer sensitivity is defined both as the viewers' concern for scenic quality and the viewers' response to visual change in areas that would otherwise appear unexceptional. Even when the existing appearance of a project site is uninspiring, a community may still object to projects that fall short of its visual goals. Local planning documents are good

sources of information regarding special resources and community aspirations (as noted in discussion above and specified in Subsections 5.8.1.2 and 5.8.2, below).

Viewer exposure is typically assessed by measuring the number of viewers exposed to the resource change as well as the type of activity the viewer is engaged in when they see the Project element, the duration of their view, the position from which they see the view and the speed at which the is viewer moving.

The sensitivity and exposure of viewers within the study area are described below.

SR 163. Travelers on SR 163 include a high proportion of commuters and shoppers generally traveling at high speed in the through lanes. Their concern for scenic quality might be considered moderate, since their awareness of the scene is heightened by the interesting visual experience of entering Mission Valley and there may be some anticipation of arrival. High travel speeds and traffic distractions, however, diminish an ability to focus on individual elements—and the peripheral view in particular consists of fleeting glimpses of landscapes, neighborhoods and commercial buildings. At typical freeway speeds, drivers and passengers are likely to have a broad, rather than detailed, awareness of the scene. When traffic is congested and speeds are slow, sensitivity may be increased, but the large proportion of drivers' views will be obstructed by surrounding vehicles, and their attention focused on irregular traffic, brake lights, merging vehicles, lane changes and other traffic distractions. Given all of these considerations, the overall sensitivity rating is considered low.

Drivers and passengers in vehicles traveling on SR 163 comprise the largest group of viewers, and therefore typically would be expected to have a high exposure rate. Per Section 5.2, Traffic/Circulation, up to 221,000 ADT is expected for SR 163 mainlines in 2030. As noted in the paragraph above, however, both drivers and passengers generally would be expected to focus on vehicular activity in the immediate foreground surrounding their vehicle. In addition, on busy multi-lane roadways, generally only the far right lane has a clear view of road edge. (This was demonstrated during technical efforts to obtain a photograph of existing conditions for Project work—analysts made over 20 passes through the area in order to obtain a clear base photograph.) Exposure generally would be considered to be low.

Friars Road. Viewers traveling on Friars Road at a slower speed, with relatively long waits at traffic signals, have opportunities to view the scene longer and in more detail than those on SR 163. There is a corresponding anticipated increased awareness of surroundings and consequently greater sensitivity. Many are arriving at and leaving shopping centers and are involved in a leisure activity, which may increase the viewer's sensitivity to their surroundings. Some traveling along the road are going to or from their Mission Valley residence. This would increase sensitivity as it would be a familiar location with which they would feel some sense of "ownership." The sensitivity rating for these viewers is considered moderate overall.

Similar to SR 163, although far fewer than along SR 163, the number of viewers along Friars Road is substantial. Depending upon the precise segment, approximately 34,000 to 71,000 ADT is projected for 2030. Nonetheless, the surrounding vehicles typically provide a distracting foreground that constrains exposure to the surrounding views. Similar to sensitivity, exposure is also considered moderate for Friars Road viewers.

Surrounding Neighborhoods. Viewers from the surrounding neighborhoods and workers in area high-rise buildings may observe the landscape from a stationary point. This, combined with the fact that residential viewers are generally very familiar with their views, and interested in their continuity, increases awareness of detail. These viewers see the area with more intensity and concentration than individuals simply "passing through." Views to the Project site, however, are typically fairly distant for most viewers from canyon top homes and high-rise buildings. Given interest in the view seen, combined with distance, the sensitivity rating for this group of viewers is considered moderately high.

The number of these viewers (in the first row of homes adjacent to the state route) is relatively low. A total of approximately 100 homes edge SR 163. Their exposure is also considered moderately high.

San Diego Trolley. Viewers also ride the San Diego Trolley. Riders are frequently routine commuters involved in conversation with other commuters, reading, talking on the phone or working. Other users (vacationing individuals, or individuals traveling to shop or visit in Mission Valley or at destinations beyond the valley), however, spend time looking out the window at the passing view. The sensitivity rating of these viewers is considered moderately high.

These viewers take in the scene from an elevated, moving position with good views to the SR 163/Friars Road interchange and San Diego River Bridge. Duration of the view, or exposure, is generally low due to the speed of the trolley, but users have an ability to observe the area in more detail than those actively engaged in negotiating traffic. There also are few distractions from viewing the scene. Exposure rating for these viewers is moderate.

Pedestrians. Although few pedestrians use Friars Road, they are one of the viewer groups likely to be most sensitive to the visual effects of the Project. Pedestrians' slow speed of travel, and exposure to traffic/roadway conditions, support a high level of comprehension of both existing visual character and changes to it. Pedestrians on the Friars Road bridge view the scene from an elevated position and can see up into the canyon to the north and to the riparian vegetation of the river. Some sidewalks and walking paths provide pedestrian access near the San Diego River, east and west of SR 163. A walking path trends east and west north of the river near Hazard Center Drive, east of SR 163, and ends at approximately the same point as Hazard Center Drive's terminus. Walkways and sidewalks are also present south of the river, paralleling Camino de la Reina and Avenida del Rio. Pedestrians in these areas have views of the dense vegetation within the San

Diego River, which restricts views toward SR 163. The sensitivity rating of these pedestrians is assessed as being moderately high.

The proximity to high traffic loads and the need to pay attention (in particular next to Friars Road) can be distracting. Nonetheless, the slow speed and proximity of these viewers would allow substantial attention to Project changes. Exposure of these viewers is also considered moderately high.

Cyclists. Cyclists using the Friars Road Bridge, the path north of the river, Camino de la Reina and Avenida del Rio also are sensitive viewers. Similar to pedestrians, they have an open view from the elevated Friars Road Bridge. While recreation is an element of bike use in this area, many bike riders use the noted facilities for commuting. The challenges of negotiating the traffic safely also diminish the ability for detailed observation of the scene, and the overall sensitivity rating for this group is moderate.

As noted above for pedestrians, the slow speed and proximity of these viewers would allow substantial attention to Project changes, and exposure of these viewers is considered moderately high.

5.8.1.2 Regulatory Setting

State and City regulations and standards apply to the Project.

State

CEQA (PRC Section 21001[b]), notes 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 historical environmental qualities."

A State Scenic Highway is any *designated* freeway, highway, road or other public right-of-way that traverses an area of exceptional scenic quality. There are no roads within the study area so designated, and scenic highways are not discussed further within this section.

Local/City of San Diego

As noted in Subsection 5.8.11, the Project viewshed includes the northern portion of the historic Cabrillo Highway. Although the old highway retains significance as the location of one of the first freeways in southern California (see Section 5.5), the area north of Washington Street has been highly developed with 6 to 10 lanes of modern freeway, eliminating the historic character in this area. This is not additionally addressed below in terms of visual effect.

A number of plans promulgated by the City include baseline standards (e.g., ESL regulations) or specific area mandates (e.g., the Mission Valley, Linda Vista and Serra Mesa community plans). These documents provide insight into elements regarding

which the local population is most sensitive; focusing on retention of valuable visual elements, elimination of disruptive elements and maintenance/improvement of existing conditions—providing community goals that any new project should strive to attain. Landscaping requirements (an integral part of this Project) are detailed in the Conceptual Landscape Plan, as discussed in Subsection 5.8.2.2, under Development Features. Overall consistency with the noted plans and ordinances is discussed in Section 5.1, Land Use.

5.8.2 Analysis of Issue 1: Visual Quality

Issue 1: ***How would the Project affect the visual quality of the area, especially with regard to views from public roadways and public open space?***

5.8.2.1 Impact Threshold

In accordance with City Significance Determination Thresholds (2007a), significant impacts will be assessed if Project implementation would result in:

Views

1. Blockage of public views from designated open space areas, roads or parks, or to scenic vistas such as waterways, skyline or canyons, and requiring:
    - Substantial view blockage of a designated public view corridor as shown in an adopted community plan or General Plan, or
    - Substantial view blockage from a public viewing area of a public resource that is considered significant by the applicable community plan (e.g., the San Diego River, canyons, and hillsides)
    - View blockage resulting in a cumulative effect: View blockage would be considered extensive when the overall scenic quality of a visual resource is changed; for example, from an essentially natural view to a largely manufactured appearance (see Chapter 9.0 of this EIR for discussion of this issue). (City Significance Determination Threshold 1)

Neighborhood Character/Architecture

2. Severe contrast with the surrounding neighborhood character through:
    -Location in a highly visible area and strong contrast with the surrounding development or topography through excessive height, bulk, signage or architectural projections. (City Significance Determination Threshold 2)

Grading

3. Significant alteration of the natural landform through alteration of more than 2,000 yd^3 of earth per graded acre and:
    - Disturbance of steep hillside slopes in excess of the encroachment allowances of Land Development Code 143.01 (ESL Ordinance), or

- Creation of manufactured slopes over 10 feet in height or steeper than 2:1.[1] (City Significance Determination Threshold 3)

Development Features

4. Creation of a disorganized appearance and substantial conflict with City codes. (City Significance Determination Threshold 4a)
5. Inclusion of crib, retaining or noise walls greater than 6 feet in height and 50 feet in length with minimal landscape screening or berming where the walls would be visible to the public. (City Significance Determination Threshold 4c)
6. Creation of an exceedingly monotonous visual environment. (City Significance Determination Threshold 4d)
7. Increase in significance of the above conditions due to visibility from open spaces, roads, parks or visual landmarks. (City Significance Determination Threshold 4)

Light and Glare

9. Emission or reflection of a significant amount of light and glare. (City Significance Determination Threshold 5a)
10. Light shed onto adjacent light sensitive property such as residential, commercial, industrial and natural areas, or emission of substantial light into the nighttime sky. (City Significance Determination Threshold 5b)

5.8.2.2 Analysis of Impact 1

This discussion focuses on long-term effects following Project implementation but also addresses Project-related effects occurring during the construction period under Development Features.

Key Views/Simulations

In order to provide objective checks for the analysis presented below, several simulations depicting post-Project implementation were prepared.

Key views were selected based on the types of Project-related features that would be visible, the number of viewers, the frequency with which key view would be seen and the potential sensitivity of the viewers. Key views illustrate both the most substantial visual changes that would affect the largest number of viewers as well as represent the viewpoints of viewers (motorists, pedestrians and bicyclists) traveling in all four directions on Friars Road and SR 163.

[1] Manufactured slopes exceeding these thresholds still may not constitute significant visual effects if proposed landforms would very closely approximate existing landforms.

Each key view is presented in its existing and projected (i.e., following Project implementation) conditions. The simulations illustrate the "typical" anticipated post-Project visual character (approximately five years after Project completion), including established plant material.

The location and direction of the key views are shown in Figure 5.8-2, Key View/Simulation Location Map. They include:

- *Key View 1*: View from northbound SR 163 looking north from under the trolley crossing.
- *Key View 2*: View from eastbound Friars Road looking east from the traffic signal for the SR 163 southbound on-ramp.
- *Key View 3*: View from westbound Friars Road looking west from the traffic signal at the SR 163 northbound on-ramp.
- *Key View 4*: View from southbound SR 163 looking south toward the proposed soil nail wall at its maximum height.
- *Key View 7*: View from the Genesee Avenue eastbound on-ramp to SR 163 southbound.
- *Key View 8*: View from SR 163 northbound to Sound Wall B2 just south of the pedestrian bridge.
- *Key View 9*: View from SR 163 northbound to Sound Wall B6.

The Project changes represented in the simulations include the following elements:

- Flyover ramp from Ulric Street to southbound SR 163
- Soil nail wall on the west side of SR 163 north of Friars Road
- Widened SR 163 roadway
- Widened Friars Road Bridge
- Reconfigured interchange ramps and associated retaining walls
- Flyover approach and intersection reconfiguration
- Retaining walls along SR 163
- Sound walls along SR 163
- Narrowed planting areas along SR 163
- Widened paved roadway surfaces beyond the intersection
- Removal of some existing mature eucalyptus trees
- Mature vegetation and wall textures based on this landscape concept plan

<u>View Blockage</u>

No officially designated view corridors exist along SR 163 in the Project area, so no impact related to blockage of a designated corridor would occur. Views toward the San Diego River, however, are available from both south- and northbound SR 163.

View blockage would not result from retaining wall construction as proposed retaining walls generally would parallel the road (as opposed to crossing it), and such retaining walls would be constructed in areas where existing slopes already block views to either

side of the roadway (see, however, discussion of retaining walls under "Development Features," below). This discussion focuses on potential view blockage that could occur from Project flyover and bridge structures, as well as sound walls.

The Flyover

View blockage occurs when structural mass intrudes into a previously open view. The flyover bridge would intrude into interchange views from all directions as a viewer approaches, and would become the focal element of the intersection, rising higher than many buildings and features in the area and approximately 20 feet above the Friars Road Bridge. A number of existing mature eucalyptus trees that could rival the height of the flyover bridge would be removed during construction. The existing towers and conductors of the utility corridor would continue to be visible and distracting elements. Unique topographical formations of the mesa tops and steep slopes would become somewhat less visible. The visual experience associated with the flyover would vary by whether the viewer is south- or northbound on SR 163.

<u>From Southbound SR 163</u>. The flyover structure would be located in the peripheral view of most motorists on southbound SR 163, and mainly would block views toward the shopping center west of SR 163. The view of the Container Store and several other businesses would be partially blocked, and a less than five-second peripheral view of the tops of riparian trees in the (otherwise unseen) river also would be partially obscured. Since the river cannot be seen from a standard car, and indications of the river's presence are limited to a peripheral view of some tree tops, view obstruction for southbound viewers is not assessed as significant. In fact, slopes edging the west side of SR 163 would be cut back to accommodate additional lanes, widening the area from which (the currently very constrained southbound) views toward the San Diego River from SR 163 would be available. Broader views toward the south and southwest, including toward the river, might be available from the more elevated position of the flyover structure, particularly as the motorist descends the ramp. As a result, views to the river for southbound travelers along SR 163 may be somewhat expanded as a result of Project implementation rather than views being substantially blocked.

<u>From Northbound SR 163</u>. Figure 5.8-3, Key View 1 – Northbound SR 163 from South of Friars Road, depicts a worst-case (longest extent) view of the flyover. As is depicted in Figure 5.8-3, highway lanes would continue to be primary elements in the seen view from SR 163 and would primarily affect the view for northbound travelers south of the Friars Road Bridge. The flyover would elevate two lanes over existing Friars Road and freeway ramps for a short distance, partially obscuring the back wall of the Container Store at Fashion Valley. Several mature trees would be removed from the southwest quadrant of the interchange, although they would be replaced with other trees resulting in substantial landscape effect at five years after planting. The retaining wall under the Friars Road Bridge does not draw the eye, and the removal of the existing Friars Road northbound off-ramp on the far right of the simulation and replacement with streetscape would be beneficial, as it would allow for a larger and more continuous landscaped area.

The flyover bridge would place a clearly visible, elevated element across the left side of the view. The descending ramp would obscure portions of the shopping center and vegetation. The flyover bridge would break the horizon line and obscure a portion of the hillside behind the bridge but would not obscure the distant view of SR 163 as it climbs out of Mission Valley. The flyover is not, however, considered to constitute "substantial" blockage as called for in the significance threshold. As is clear from Figure 5.8-3, the mesa top would be still highly visible, and hillside view obstruction would be minimal given the location where the flyover begins and ends. Changes due to grading would be subordinate to the flyover bridge and primarily would be obscured by the structure.

Also of note is that the Friars Road Bridge would be expanded to 10 lanes, resulting in a similar but slightly closer visible edge to the bridge in the middle ground for SR 163 northbound travelers. No increase in view obstruction related to Friars Road Bridge widening would occur from this vantage point as the new lanes would be in line with the existing bridge.

The flyover bridge would be more visible to viewers from the trolley; however, the highest part of the flyover bridge would appear below the line of the background hills, reducing the visual impact of this Project-related change.

The resulting change to visual quality is considered to be moderate, but less than significant for the City issue of view blockage from this vantage point.

<u>From Eastbound Friars Road</u>. The view from eastbound Friars Road, west of Ulric Street/southbound SR 163 on-ramp, shown in Key View 2 – Eastbound Friars Road (Figure 5.8-4), would be altered as a result of the roadway widening, removal of some mature eucalyptus trees and construction of the new flyover bridge. The view from the motorist's perspective would be partially obstructed by the flyover bridge, which would impose a dominant linear feature crossing the view. The wider bridge and roadway would diminish the planting areas and would add to the perception of an increased built environment, although minimization of the median also would result in elimination of a ground-based signal. This center signal post would be replaced by large signal extensions from the edge of the right-of-way. The signal would be moved out of the direct line-of-sight and would be sited peripheral to the view.

As noted elsewhere in this EIR, Friars Road is designated as a Class III bike lane. The existence of the bikeway is periodically identified with curbside bike route signs. View blockage resulting from the flyover experienced by cyclists on Friars Road would be similar to that experienced by motorists.

It is anticipated that the viewer response would be moderately high due to the interruption of the view to the skyline, background slopes, and the landscaping and urban development in the middle ground. Viewer sensitivity for most Friars Road users, however, was identified as generally moderate at this location due to the speed of travel and the traffic congestion, which dominates the viewer's attention.

The proposed changes would impose a clearly visible and partially obstructive horizontal element across the view at Key View 2. No designated view corridor or view identified for protection in community plans would be obstructed, however, and the blockage would not be substantial. The impact of the structure is therefore considered less than significant for this issue.

From Westbound Friars Road. As shown in Key View 3 – Westbound Friars Road (Figure 5.8-5), the visual appearance of westbound Friars Road at the northbound SR 163 on-ramp would be altered by the widening of the Friars Road Bridge, removal of some mature eucalyptus trees and the addition of the flyover structure. The view from the motorists' perspective would be partially obstructed by the flyover bridge, which would impose a dominant linear feature crossing the view. The wider bridge and roadway would reduce the planting areas and add to the perception of the built environment. Due to the moderately low amount of vividness, unity and intactness of the existing visual environment, the change to visual quality is considered to be neutral.

It is anticipated that the viewer response to the changes in this view would be moderately negative due to the imposition of the new flyover bridge in front of the views to the vegetated middle ground ridge and across the distant views to the west end of Mission Valley. Viewers in this location would largely be distracted by traffic congestion, traffic movement in the foreground, the speed of travel, and need for care and attention to the roadway and actions of other motorists. Motorists stopped at the traffic signal would have time to observe the scene due to the duration of the view; however, the movement of cross traffic from the turn lane and the off-ramp from northbound SR 163 would distract attention from other features. It should also be noted that the photos were taken with a minimum volume of traffic to avoid obstructions to the key view. Most viewers would observe the scene under conditions of high traffic volume. The combined viewer sensitivity and exposure would result in a moderate viewer response.

Similar to Key View 2, the addition of the highly visible flyover bridge would create a dominant new element in Key View 3. Widening the Friars Road Bridge also would add to the expanse of concrete and the perception of the area as a transportation corridor. Nonetheless, there would be no blockage of an identified view corridor and any blockage to community-appreciated hills/canyons would be less than substantial due to the elevated nature of the flyover and the rapidity with which the flyover is both approached and crossed under. View blockage impacts are, therefore, considered less than significant.

San Diego River Bridge

No Project-related change would occur on the east side of the existing bridge. Some sidewalks and walking paths, as well as public streets, provide access to the open space in the river area for residents and visitors. A walking path parallels and north side of the river near Hazard Center Drive east of SR 163 and ends at approximately the same point as Hazard Center Drive's terminus. Dense vegetation within the San Diego River corridor currently blocks views to SR 163 from this walkway (and would be expected to

do the same under future conditions), although views are available westward toward SR 163 from the end of Hazard Center Drive. Some portions of the Project, particularly the southern extent of the realigned/expanded Friars Road exit lanes for northbound SR 163, would be visible from this location. Existing SR 163 is elevated at this point; the edge of the bridge and some vehicles on the freeway are visible. The expanded lanes would be approximately three to six feet higher but similar in appearance to existing SR 163. The trees between the viewer and the structure would continue to be visibly higher than the structure. Additionally, the structure supporting the elevated trolley tracks would remain higher than the freeway structure. The elevated freeway bridge would not increase view blockage over existing conditions.

Walkways and sidewalks south of the river and east of SR 163 provide views of the eastern edge of SR 163 to pedestrians and motorists traveling westward along Camino de la Reina. Improvements on the west side of SR 163 would not be visible to viewers from the east side of SR 163. Motorists and pedestrians on Camino de la Reina west of SR 163 traveling eastward would have views of the proposed bridge over the San Diego River and Camino de la Reina. The new structure would be three to six feet higher than the existing bridge and would have support structures in line with existing piers. The small change in elevation would block views of some treetops that may be visible beyond the existing bridge; however, existing trees next to Camino de la Reina in the foreground would continue to be visibly taller than the proposed bridge. Additionally, the bridge would not block river views from this area, and vegetation within the San Diego River corridor would continue to block views to the north and subsequently toward other elements of the Project from motorists and pedestrians on Camino de la Reina in this area. Views toward SR 163 from Avenida del Rio are similarly blocked by riparian vegetation.

Picnic tables are located next to the river area in the southeast corner of the intersection of Avenida del Rio and the southern Fashion Valley Center exterior access road. These tables are surrounded by vegetation and are not easily accessed from the nearby road and parking lot. Motorists and pedestrians traveling this road, just north of the San Diego River, would have views toward an expanded SR 163; although vegetation within the river generally blocks views over the river from this area. The portions of the Project that may be visible include the expanded western edge of the roadway. As discussed for Camino de la Reina, however, the new lanes, which would be three to six feet higher than the existing highway, would be visually similar to existing conditions. The structure would continue to be visibly lower than the vegetation between the viewer and the bridge, and the elevated trolley tracks, which are and would remain taller than the freeway bridge, would continue to be dominant view elements. The elevated freeway structure would not cause increased view blockage. Additional views toward the Project elements generally are already blocked by buildings and parking structures. Although portions of the flyover structure may be visible where gaps between buildings allow views, the flyover would not be visually dominant within views from this area. The heights and volumes of buildings in Mission Valley and the existing freeway structures are so visually dominant, and so effective in blocking views, that the new flyover structure would not significantly increase view blockage to or from the river.

Taking into account the limited views from SR 163, Camino de la Reina, the paths within the river, etc. the Project would not result in significant visual impacts to views to users of or near the San Diego River west of SR 163 due to view blockage.

Sound Walls

A total of 10 sound walls are evaluated as Project features. Two would be located east of SR 163, with the remainder to be located on the west side of SR 163. All but a small sound wall proposed to shield tennis courts at the Doubletree Hotel would be sited north of Friars Road. Specifics of these walls are discussed under Development Features, below. This discussion focuses on the more general issue of whether Project sound walls would result in view blockage, as discussed above for Project flyover and bridge features.

The sound walls proposed generally shield church and residential uses close to SR 163 or single-family residential uses on streets up on the mesa west of SR 163 (e.g., Judson, Regulus, etc.). These include sound walls B1 through B8. Sound wall B9 (next to the hotel) also is proposed. All of these walls would extend roughly parallel to SR 163, and as such, would not block any views southerly or northerly through the canyon to travelers on SR 163. As noted above for retaining wall features, no designated or protected views would be affected.

With regard to simple shielding of slopes within the canyon, each of the walls would be located either immediately abutting (Walls B1, B2,, B4, B5a, B5b, B6, B7, B8 and B9) developed rather than open space uses SR 163, or between (Wall B3) developed uses. Excluding the developed location of Wall B3, remaining open space/slope would be visible in front of the proposed walls, with the currently developed uses sited immediately behind the walls. Although close to the SR 163 viewers, placing walls where other structures/chain link fencing, etc. is currently visible would not substantially block current views. The longest walls (B6 and B7) would be located closer to the mesa top. These walls would constitute eight-foot high linear features extending across the highest portions of the slopes. Given the scale of the topography, however, views to these hills would not be substantially blocked. No conflict with the City Significance Determination Thresholds is identified.

<u>Strong Contrast with Neighborhood Character/Architecture</u>

Mission Valley is characterized by traffic interchanges, roadways and bridges. Adjacent freeway interchanges, such as I-805/I-8, I-8/SR 163, I-8/I-5, and I-8/I-15 include similar stacking of elevated roadways, elevated ramps and flyover bridges. All of these interchanges present the viewer with bands of elevated concrete roadways curving across the field of view and skyline. More specific to the Project, the existing interchange and bridge structure have comprised elements of this "neighborhood" view since 1948 (see Culture History discussion in Section 5.5 of this EIR). The interchange with Friars Road has been in its current condition since 1970 (and was present before that).

The Project would expand hardscape and support structures during improvement of existing facilities. Some of these—in particular retaining walls and the flyover—would introduce substantial new industrial elements to the interchange.

Excepting the flyover, and the major retaining wall depicted in Figure 5.8-6, new elements (including other, less intrusive retaining walls), would join similar existing elements in this setting. Existing elevated or bridging roadway structures, some of the sound walls, retaining walls, etc., are directly responsive to location of the highway at a canyon bottom surrounded by steep slopes, and needing to cross the San Diego River. These elements are visible from Project road segments, but as routine (and generally current) elements of SR 163, they do not provide discordant elements to the setting.

Due to the heavily industrial nature of the interchange itself, the urbanized character of the larger study area, the presence of large commercial and residential buildings, and already existing landform modification, levels of contrast within the "neighborhood" would not be considered significant. This pattern is consistent with the other portions of the Mission Valley viewshed and visual context.

A different conclusion could have been reached if the proposed improvements were sited in the residential neighborhoods up on the mesa. This significance conclusion is based on the setting of the Project, which is already focused on transportation engineering. Since the setting forms the basis for whether or not the Project would strongly contrast with the neighborhood, it is necessary to review the sound walls. This is because unlike the other Project features, which focus on roadway elements, the sound walls would be located adjacent to homes making up the area neighborhoods.

Sound walls located within City and Caltrans right-of-way are anticipated to be substantially screened by planting within five years. In some cases (such as Wall B2), where a tall sound wall would be located on top of a retaining wall, the time needed to screen the wall would be increased. Due to the height of Wall B2, the immediate area would be subject to an obvious visual change, but the vine planting, and screen planting, between the viewer and the wall ultimately should result in a more attractive appearance than the existing disturbed condition. Given the existing sound walls north of Wall B2 (closer to Genesee Avenue), and the disturbed nature of the current views in this area, no substantial contrast with neighborhood character is identified.

The more elevated sound walls south of Tait Street, however, would put uniform linear features at the level of the residential pads. These would partially replace views of house backs/yards or individually constructed fences/barriers, which is a much more idiosyncratic, or random, look. Large portions of the homes still would be visible, however, thereby minimizing the uniformity brought to the neighborhood. This would be due to the lower four feet of sound barrier being solid wall and upper four feet being transparent, thereby allowing views to (and from) the homes to continue. With the solid portion of the wall reduced to four feet, the visual effect of the wall overall also would be reduced. It can also be expected that 6 to 12 inches of the wall base would be covered by groundcover, while other shrubs or trees would additionally help screen portions of the

wall from view. With the existing vegetation on the private slopes restored as part of Project design, and the wall partially obscured, it would present a broken line at the top of the plateau. This wall also would be in shadow after noon since it is on a generally east-facing slope, and would be less noticeable. Specifically with regard to Walls B7 and B8, sunlight reflecting from glass portions of the wall could reflect across the canyons (to the east in the morning for B7 and south in the afternoon for B8), attracting the viewer's attention. This glare is not anticipated to be significantly different from reflections from large picture windows or sliding glass doors, and, given proposed sound wall locations at top of slope/edge of pad, would be similar to existing residential reflection.

In sum, although these sound barriers would be different from existing conditions, and some viewers may perceive it negatively, the contrast with the neighborhood is not so strong as to constitute a significant impact under City thresholds.

The reader also is referred to the discussion below on "Development Features" which evaluates these issues using different threshold criteria.

Grading

The Project would encroach on existing slopes within the SR 163 right-of-way. Slopes that would be affected during Project implementation are manufactured slopes modified during prior construction of SR 163 or creation of house pads on the mesa top. These slopes are not natural landforms and do not meet the municipal code definition of "steep hillsides." No significant alteration of natural landform would occur.

Substantial grading into these modified slopes generally would be restricted to areas immediately abutting SR 163. Other areas subject to grading would include existing open space areas within the interchange, and along Friars Road between SR 163 and Ulric Street. Some focused grading along the mesa top also may be required to support proposed sound walls.

Preliminary earthwork volumes assume 130,000 yd^3 of cut and 39,000 yd^3 of fill. Grading for the Project would permanently affect 21.3 acres (i.e., acres under pavement or streetscape) and would temporarily affect (e.g., for remedial grading) 18.1 acres. Dividing the total number of acres into landform altered results in alteration of more than 2,000 yd^3 per graded area and requires review of whether the grading would conflict with standards set in LDC 143.0142 or result in slopes greater than 2:1 or exceeding 10 feet in height.

LDC Section 143.0142 relates to disturbance of natural steep hillsides, which do not occur within areas that would be subject to Project improvements. No impact is identified related to that criterion. The maximum manufactured slope height would be 35 feet, however, thereby exceeding the City's height criterion.

Although these slopes are fairly limited in length, they are typically in the range of 10 to 20 feet in height. One fill slope at the north side of the on-ramp from Ulric Street would

be 35 feet high and approximately 262 feet long. An additional fill slope to the east side of SR 163 (approximately 1,640 feet north of Friars Road) would be a maximum of 26 feet high and extend approximately 492 feet facing the roadway. Along the west side of SR 163 between Genesee Avenue and Friars Road there are several, almost continuous slopes with a maximum height of 12 feet rising from SR 163. These slopes result from cut of the existing modified slopes between proposed SR 163 roadbed and the base of the proposed retaining walls. (The reader is referred to typical drawings of these areas provided in descriptions for walls 86 and 91 in Appendix G, VI. E.)

As noted in Subsection 5.8.1.2, a potentially significant effect could result if Project-manufactured slopes would be higher than 10 feet, or steeper than 2:1 (50 percent grade). Each of the afore-mentioned City modified slopes would be 2:1, and therefore comply with that standard. The Project would conflict, however, with the height standard of 10 feet. Nonetheless, for a visual effect to comprise a significant impact, it must be discernable. In other words, a viewer must be able to see it and be adversely affected. In this case, each of the noted slopes would be revegetated. Trees, shrubs and groundcover would blend the Project with natural slopes in the vicinity, as well as obscuring the Project-modified slope.

In addition, City thresholds note that slopes in excess of 10 feet may not constitute significant impacts if the proposed landform would closely "imitate" the existing on-site landform. Since adjacent on-site slopes consist of existing, revegetated, graded cut slopes transitioning to natural canyons, and the proposed 2:1 slope would very closely imitate the existing on-site landform, no significant impact is identified for this issue.

<u>Development Features</u>

Disorganized Appearance

The Project would be developed within an urbanized setting that currently is not highly visually "intact." Following buildout, Project features would not create a more "disorganized" appearance; rather, the Project would contribute to less disorganization. Overhead lines and areas of dirt and intermittent vegetation would be removed and uniformly designed/industrial elements (pavement, retaining walls, flyover structure) would replace them. This would occur in association with a planting scheme that would unify segments of Friars Road east and west of SR 163 as well as the segment of SR 163 between the river and Genesee Avenue. "Cobble" texturing treatments on the walls also would unify Project features.

As noted in Chapter 3.0 of this EIR, a number of staging areas are being evaluated for use during construction if the Project is approved. Although all areas would not be expected to be in use during Project build out (the most advantageous area(s) would be selected by the construction contractor), these facilities would be noticeable due to their location immediately abutting travel lanes. Any parcel used for a staging area would be surrounded by a chain-link fence, with construction materials and vehicles stored within the designated staging area. Similarly, the entire study area would not be subject to

impact at one time. Improvements would be implemented in sections so that overall function along these heavily traveled roadways would not be compromised during construction.

Nonetheless, during the six-year construction period, demolition, grading, bridge falsework, cranes, heavy machinery and other vehicles associated with construction would be highly visible. The storage of construction equipment, fences, orange safety markings, barricades, temporary warning lights, signs and other construction-related items would create a disturbed and degraded view.

These are "temporary" visual impacts associated with the requirements of construction—temporary in that all of these activities would cease and materials be removed following completion of construction and therefore are not considered significant impacts under federal criteria. The City acknowledges, however, that the six-year construction period is lengthy and that viewers who see it day after day may consider it a negative effect. As a result, significant impacts are assessed to construction-period visual effects.

Monotonous Appearance

Similarly, due to the variety of visual elements within the study area, the Project would not create a monotonous visual environment. Although many of the walls noted above would be uniform in design, their varied location, height and length, combined with screening vegetation and all of the other visual elements of the interchange (residential and commercial uses, vehicular activity and the strong topographic influence of the valley mesas) all contribute to keep this setting from being monotonous.

Visibility from Open Space

As discussed above, the Project elements would not be highly visible from open space areas. The Project, therefore, would be in conformance with thresholds relating to these issues and associated impacts would not be significant.

Retaining Walls

The Project would include a number of retaining walls, as detailed in Section 1.3, Figures 3-1a and b, and Table 3-2. Each of these proposed retaining or soil nail walls has one or more dimensions exceeding the City's baseline Significance Determination Thresholds. Additional criteria of the threshold, however, are that walls exceeding the length or height must also be visible to the public and have minimal landscape screening in order for a significant impact to be identified.[2] The horizontal footprint of Project walls has been minimized in an effort to reduce need for new right-of-way from private property, provide adequate distance from adjacent buildings and provide planting between the

[2] A natural landform berm is not possible for the sound walls along the mesa tops due to topographical constraints in relation to the private homes.

walls and adjacent roadways. The Landscape Plan, a critical element of Project design, identifies opportunities for planting, and establishes planting themes, as well as surface architectural treatments for both retaining and sound walls.

The landscape concept plan prepared for the Project (Estrada Land Planning 2008a; see also Subsection 3.2.5 of this EIR) complies with City requirements. Proposed planting would provide a visual transition between the riparian areas near the San Diego River at the southern extent of the study area and the existing vegetation (mainly consisting of iceplant and eucalyptus), at the northernmost slopes bordering SR 163 near Genesee Avenue. The landscape concept plan includes areas of ornamental landscaping near the SR 163/Friars Road interchange in accordance with community plan specifications.

The *Mission Valley Community Plan* also recommends appropriate plant species to be used on slopes. This list was used as a reference for the development of the Project plan, which includes plants such as California sycamore, Catalina lacebark, Catalina cherry, bougainvillea, orchid spot rock rose and New Zealand flax directly from the *Mission Valley Community Plan* list. *Jacaranda mimosifolia* are included as street trees along Ulric Street in the Conceptual Landscaping Plan in conformance with the *Linda Vista Community Plan* (c.f., Figures 3-3a and b). Critical elements of the plan are that *Myoporum laetum* (an invasive species) would not be re-planted where removed as part of the Project. *Washingtonia robusta* and *Phoenix cenarelansis* also are invasive species that are explicitly excluded from the Project plant list. Ice plant species (as well as other shallow rooted, non-drought tolerant groundcover) would only be used on the lowest 10 feet of sloped areas—and, where used, would blend new planting forms with existing iceplant.

Landscaping would include drought-tolerant plants on the slopes within the SR 163 right-of-way, as well as native species where appropriate. Plants used for erosion control on disturbed soil and slopes would be required to achieve soil coverage within two years of installation. Wall and pavement textures would make use of colors and textures associated with local and regional materials. In order to soften and screen hardscape features such as walls and pavements, clinging vines would be planted within a two-foot-wide planting pocket in front of proposed retaining walls. Fast-growing, aggressive clinging vines, such as Boston ivy, are proposed. It is anticipated that where properly planted and maintained, the vines would provide 80 percent coverage of walls up to 6 feet high within 2 years, 80 percent of walls up to 12 feet high in 5 years, and 80 percent of walls up to 25 feet high in 10 years. The vines can be anticipated to cover most portions of walls up to 40 feet high over a period of 20 years.

Plants chosen include deep-rooting species (i.e., with rooting potential to five feet).[3] These deep-rooting plants would comprise a minimum of 50 percent of slope plantings, as well as a minimum of 50 percent of seeds for seeded plantings. The screen planting and vine plantings would require regular landscape maintenance as required in general

[3] Plants selected have the potential to root to five feet, as stated above. Actual rooting depth would depend on localized soil conditions.

standards for the entire Project. Graffiti removal may be required until the vines cover the walls. The City's Engineering and Capital Projects Department would be responsible for a five-year plant establishment period. Following this initial period, Caltrans would be responsible for all maintenance within state right-of-way and the City would be responsible for streetscape within the City public street right-of-way. Walls and planting located on private property would be maintained by the individual property owner.

The proposed landscape concept would provide screening for most of these walls sufficient to ensure that their construction generally would not create a significant visual impact. As noted above, all planted walls exceeding 6 feet in height would be 80 percent screened by planting within two years. Specifics for each wall are discussed below.

Friars Road. Seven retaining walls would be located along Friars Road. Two of these would be associated with the re-aligned on- and off-ramps.

One wall would be located within the southwest quadrant of the interchange. This wall would be approximately 227 feet long and an average of 21 feet high, with a maximum height of 25 feet. It would be visible to motorists driving on the southbound SR 163 to Friars Road off-ramp, but would not be visually dominant because it would be located peripherally to the driver's view and would be smaller than the flyover structure addressed above. Landscaping in front of and around the wall, consisting of trees, shrubs, vines and groundcover, would help to screen the wall from view from Friars Road, except directly under the overpass. With the screening required as part of Project design in place, this wall would not result in a significant visual impact.

A second 370-foot-long, maximum 23-foot-high wall (with an average height of 18 feet) would be located east of SR 163, associated with the new off-ramp to Friars Road in the northeastern quadrant of the interchange. This wall would face westward, toward SR 163 and mainly would be located underneath the Friars Road Bridge. No landscaping would be possible to soften the appearance of the wall under the bridge, but the ends would be curved into the landscape and would be partially screened by planting. Textured concrete to match Stadium Conglomerate cobble would be used to face the wall, which would be visible to motorists on SR 163 and the off-ramp, but would not be visible to westbound motorists on Friars Road. This wall would not be freestanding, but would be part of the bridge structure. The integration of the wall under the bridge would reduce its potential visual dominance (it would be shadowed by the bridge). With the planting, special aesthetic surface treatment and integration into bridge design, the wall is not anticipated to result in a significant impact related to visibility of walls without minimizing elements.

Two retaining walls would be located below the flyover for the SR 163 southbound on-ramp. On the south side of Friars Road, a 52.5-foot long retaining wall would have a maximum height of 20 feet and an average visible height of 13.1 feet. On the north side of Friars Road, a 108-foot long retaining wall would have a maximum height of 24.6 feet and an average visible height of 16.4 feet. These walls could be visible to north- and south-bound travelers, respectively, on SR 163 as they approach the interchange. They generally would not be visible to viewers from Friars Road as they would be located

generally in line with, and beneath that roadway. The wall on the south side of Friars Road would face south toward the landscape area. It should not be visible from southbound SR 163. From the northbound lanes it would be partially visible in the middle distance. It also would be peripherally visible from the southbound off-ramp to Friars Road as it curves northwest. The second wall would face north toward the landscape area under the on-ramp, and consequently would not be highly visible from the elevated ramp directly above. The wall would be obliquely visible from SR 163 southbound, but Project screening with shrubs and vines would diminish visibility. Given freeway speeds, any possible visibility to these features would be limited to seconds. They would be dwarfed by the overall size of the interchange features, including the flyover itself addressed above under "View Blockage." Visual impacts related to the location of retaining walls underpinning the flyover would be less than significant.

The fifth wall proposed along Friars Road would be located north of Friars Road, just east of the realigned SR 163 on-ramp. This wall would be approximately 157 feet long and an average of approximately 3 feet tall, with a maximum height of 5 feet. It would face northward and would not be visible to motorists on Friars Road or the on-ramp. Some of the wall may, however, be visible from the neighboring parking lot. Existing and Project-proposed vegetation, cars and other visual obstructions would limit views of this wall. Landscaping in front of the wall would include trees, shrubs, vines and ground cover. No significant impact is identified.

An approximately 183-foot-long wall with an average height of 3 feet and maximum height of 3.5 feet would be located just east of the previously described wall, north of Friars Road. The wall would face southward, and would be visible to motorists on Friars Road. Existing and Project-proposed vegetation, cars and other visual obstructions would limit views of this wall. Landscaping in front of the wall would include trees, shrubs, vines and ground cover. No significant impact is identified.

The seventh wall associated with the Friars Road improvements would be located south of Friars Road, just west of the intersection of Friars Road and Frazee Road. This wall would be the most visually accessible of the walls to be located along Friars Road. The wall would be built next to the sidewalk on the south side of the road, edging the neighboring parking lot, and facing the sidewalk and the road. With a maximum height of approximately 5 feet and an average height of 1.5 feet, the wall would be within the 6-foot height threshold. The wall would be approximately 327 feet long, however, and would require the removal of some trees and a portion of the lawn that currently separate the parking lot from the sidewalk edging Friars Road. This change would be noticeable for pedestrians using the sidewalk, particularly in the areas where the widened Friars Road would push the sidewalk closer to the parking lot. Streetscape consisting of ornamental and street tree plantings on Friars Road adjacent to the wall would be installed to the extent possible, but a consistent vegetative screen is not possible. This results in a conservative assessment that visual impacts associated with this wall would be significant due to its length.

SR 163. Eight retaining walls would be created along SR 163. These walls would be visible to varying degrees to motorists and other viewers.

The southernmost wall (568 feet long with a maximum height of 3.5 feet and an average height of 1.5 feet) would be located along the western edge of the SR 163 and would extend between the San Diego River and the I-8/SR 163 interchange. This wall would face westward, and would not be visible to motorists driving on SR 163 or I-8. This wall would be visible, however, from the neighboring commercial buildings and associated parking lots, and may be visible from Camino de la Reina/Hotel Circle. Some existing trees and vegetation may be removed during wall construction; however, some vines may be planted on the wall and removed vegetation would be replaced. This vegetation, automobiles and other visual obstructions would limit views to this wall from public areas. No significant visual impact is identified.

Another wall would be built next to the proposed realigned on-ramp from Ulric Street to southbound SR 163. It would be approximately 33 feet long and an average of approximately 3.5 feet tall, with a maximum height of approximately 5 feet. The proposed wall height falls within the City thresholds. This wall would face southward, toward the on-ramp, and would be visible to motorists approaching the ramp from the south and peripherally to motorists driving on the ramp. As part of the standard landscape proposed for the Project, vines would be planted in front of the wall, which would soften its appearance. No significant impact is identified.

A third wall is proposed on the east side of SR 163, associated with the northbound on-ramp from Friars Road. This wall would face eastward, away from SR 163 and toward the adjacent development. It would not be visible, therefore, to motorists driving on the ramp or SR 163. The wall would be approximately 171 feet long, with an average height of approximately 3 feet and a maximum height of approximately 3.5 feet. Initial height therefore falls within the City guidelines. The wall also would be screened by groundcover, resulting in a less than significant impact.

Four walls would be built that would face SR 163. These walls would be located along the western edge of SR 163, between Genesee Avenue and Friars Road. The two northernmost walls in this area would be constructed just west of and slightly above the southbound shoulder of SR 163. These two walls would be an average of approximately 8 feet high, with a maximum height of approximately 10 feet. The northernmost wall would be approximately 469 feet long and again may be combined with a recommended sound wall for an overall height of 22 feet (see additional discussion below). The next retaining wall to the south would be approximately 1,391 feet long, with an average height of 8 feet and a maximum height of 10 feet. These walls would be peripherally visible to motorists on SR 163. They also may be visible from residential and commercial areas east of SR 163 and to pedestrians using the SR 163 pedestrian overcrossing between Cardinal Lane and Fulton Street. The walls generally would be located below the line of sight for these viewers, however, and therefore would not constitute a dominant visual element in views to the west from areas east of SR 163. The walls would not be visible from neighborhoods west of SR 163 due to their physical location below the mesa top on which the residences are located. Vines would be planted along the base of the wall, which would be faced with concrete textured to appear similar

to Stadium Conglomerate cobble. The orientation of these walls and the proposed vegetation would result in a less than significant visual impact for the retaining walls.

Another wall is proposed on the east side of SR 163, associated with the northbound SR 163 on-ramp from Friars Road. This approximately 584-foot-long wall would face the freeway. It would have an average height of approximately 7 feet and a maximum height of approximately 15 feet. Vines would be planted to cover the wall and screen plantings and trees would be installed within the planting area. This screening vegetation would result in a less than significant visual impact for the retaining wall.

A seventh retaining wall is proposed below the flyover for the southbound on-ramp at Friars Road. The wall would be constructed to retain access to the adjacent SDG&E utility towers at the original grade. This wall would have a curved shape that would reduce in height at both ends where it transitions into grade. It would be approximately 155 feet in length and a maximum of 12 feet in height, with an average height of approximately 7 feet. From SR 163 the wall would be partially sited behind the retaining walls at the edge of the freeway, and the rails on the Friars Road bridge would partially obscure the wall location. Due to utility regulations, no tree planting would be allowed in front of the wall, and the wall would combine with the towers and graded slopes to contribute to the disturbed character of this area. Due to the existing and visually prominent elements of the transmission tower and the proposed wall detailing (its curving nature, as well as coloring, texturing and vines planted to blend with the surrounding vegetation, this retaining wall would result in a less than significant visual impact.

The final wall that would be constructed along SR 163 would be located on the western edge of the southbound SR 163 shoulder, just north of the Friars Road off-ramp. This wall, similar to the two discussed above, would face SR 163, but, unlike the two to the north, the base of this wall would be located at the level of the roadway. This wall would be constructed using a soil-nail technique (described in Subsection 3.2.3), and would be approximately a quarter of a mile long (1,493 feet), with an average height of 26 feet, and a maximum height of approximately 32 feet. These heights include a two-foot above grade extension at the top of the wall. A four-foot-tall railing would be placed on top of the wall. The extension above grade and the railing would be used to catch any cobble from falling from the slopes above. A five-foot-wide planting and maintenance area would be created through installation of a traffic barrier in front of the wall. Vigorous vines would be planted along the base of the wall and could eventually cover much of the wall, which would be faced with textured concrete to match Stadium Conglomerate cobble. The wall would be located below the mesa top on which the residences west of SR 163 are located, and therefore would not be visible to residents west of SR 163. Although it would be below direct line of sight, residents east of SR 163 with views to the west, could see this wall. It also would be visible to motorists on SR 163, the largest viewing group.

While it would be located peripherally to the line of traffic on SR 163, the wall's length, height and location immediately adjacent to the highway shoulder would draw attention. Key View 4 – Southbound SR 163 from north of Friars Road (Figure 5.8-6) illustrates this feature from SR 163 southbound lanes (the lanes closest to the proposed retaining wall. Widening of SR 163 would add two lanes of paving to the existing four

southbound lanes. The cutting back of the existing slope to a vertical retaining wall would expand the width of the paving and displace vegetation. The vertical wall would expose a large open expanse of wall structure immediately adjacent to the roadway.

As discussed in Appendix G, the existing slope is a 1:1 cut slope vegetated with invasive grasses and Carpobrotus ice plant. Ten lanes of freeway abut it and a standard bridge crossing the road is in the distance. While near the proposed wall, the driver is crossing under a high voltage transmission line corridor supported by large, galvanized steel utility towers. High-rise hotels and existing freeway and trolley facilities break the continuity of the river valley, so there is virtually no intactness, and there is essentially no compositional integrity in this existing view. The primary focal point is the skylined ridge across the valley to the south. The Project would add two lanes and a patterned wall, which some viewers could find more architecturally attractive than the existing weedy and eroded cut slope. Vines would be trained on the wall to add interest and vegetation and the view of the skyline across the valley would be expanded. This is a big wall, but visually, the critical impacts to the "natural" setting occurred years ago with the grading of the slope. There is no doubt, however, that the interchange is highly visible. It is located at the low point (the river valley) and is surrounded by more elevated mesas from which the Project area can be viewed, as well as from both the north and south as drivers on SR 163 approach the interchange. The length and height of this wall would not be completely obscured by the vines proposed within the two-foot planter. Under City thresholds, the magnitude of the "engineered" environment, combined with its extreme visibility, render this a significant and unmitigatible impact.

Sound Walls

As noted above, a total of 10 sound walls currently are included as Project features (see Section 3.2.4 of this EIR). Use of berms instead of sound walls (in accordance with recommendations in the *Linda Vista Community Plan*) was carefully reviewed. Due to right-of-way and existing topographical constraints in this narrow and steep canyon, however, it is not feasible to accommodate the width that would be required to construct berms of adequate height in place of Project sound walls.

Typical split-face block and trim

Typical split-face block and trim

Typical view wall

The locations of potential sound walls are depicted on Figure 3-5a through 3-5c. The sound walls generally would have a common design theme, being constructed of light brown or tan, earth-colored split-face block. This color was chosen to blend with the surrounding landscape and the predominant colors of the surrounding buildings. A contrasting accent trim of scored natural color split-face block would provide subtle visual relief to the plain face. Grout joints would match the color of the block. Walls would be treated with anti-graffiti coating, and the split-face material would provide a textured surface to encourage attachment of clinging vines.

For long and/or exposed walls such as B4, B5a and b, B6, B7 and B8 (described in more detail below) that would not be screened by vines as part of Project design, 24-inch square columns would be installed at property line intersections and 50 feet on center to provide visual relief.

Where views from private homes would be obstructed by a solid wall, such as at Walls B7 and B8 (additionally discussed below), glass view walls would be installed. View walls are suitable only where the walls can be maintained from both sides.

This type of wall has transparent upper portions to allow views to be seen while still providing an effective noise barrier. The visual impact of these walls is typically less than solid walls, although, at times during the day, reflections and sun flares can cause attention to be drawn to the wall from certain angles. The photo at left shows a typical transparent sound wall constructed of stuccoed masonry (this Project would use earth-tone split-face block instead of stucco).

Special consideration has been given to allow installation of vines to cover Project walls. A maintenance access area is provided to allow safe access to maintenance crews in heavily trafficked areas. The maintenance access would be separated from the shoulder with three-foot high concrete traffic barriers. Colors of these barriers would be selected to blend with the adjacent walls. The photo at right shows a similar barrier.

Typical traffic barrier to allow maintenance access

Sound Wall B1. Figure 5.8-7 (Key View 7 – Southbound SR 163 from Genesee Avenue) represents the motorists' view when entering SR 163 from the eastbound Genesee Avenue on-ramp. This is the view where the largest visual exposure occurs. Other viewpoints from SR 163 provide less visibility, since there are areas of groundcover and minor topography that separate the wall from the viewer.

This view can be described as a typical on-ramp at a freeway merge, and does not display a large amount of scenic quality, visual interest or memorability. The scene is relatively undisturbed by distracting elements other than the chain link fence, and the freeway itself. The trees at the right contrast with (and provide some visual relief from) the expanse of freeway paving. Combining vividness, unity and intactness, the existing visual quality is rated at moderately low.

The noise barrier would be located adjacent to SR 163 within the Caltrans right-of-way five feet beyond the edge of shoulder (paving). The wall would be approximately 745 feet in length and 8 feet high, exceeding City thresholds for both length and height. A concrete traffic barrier would be constructed along the edge of pavement to protect the wall, and to allow protected maintenance access so that vines may be planted to cover the face of the wall. It is anticipated that the majority of the eucalyptus trees will remain. For most of the wall's length, the sound wall would be constructed on top of a retaining wall, for a combined maximum height of 10 feet when measured on the high side of the wall. This wall would provide sound attenuation for a few residences and a church. In this key view, the motorist is adjacent to the wall, resulting in a direct view of the sound wall. Due to minor topographic variations, a portion of the wall is located on a retaining wall, which faces the on-ramp for a portion of the sound wall length, and then reverses to face the private side.

The eight-foot sound wall would be highly visible on the edge of the freeway. Viewer sensitivity is anticipated to be moderate based on the concern for aesthetics expressed in the Community Plan, combined with a moderately low expectation for aesthetics at the busy entrance to a major freeway. The viewer expects simplification and a clean, uncomplicated appearance free of distractions along the on-ramp.

Typical vine-covered sound wall

There are large numbers of viewers at this location, and the improvements are seen at close proximity. Since motorists would be accelerating and watching for merging traffic, however, they would not have time to carefully observe their surroundings. Viewer exposure is considered to be moderate. There would be no pedestrians or bicyclists observing from this location. Combining viewer sensitivity and viewer exposure for this viewpoint, the likely viewer response to the changes would be moderate.

Project improvements would affect the view from both northbound and southbound SR 163, although the primary view would be from the on-ramp. It is expected that the earth-tone wall would blend with the landscaping and existing development, and would be further screened by vines. The photo indicates the extent to which it may be expected that vines would cover the wall--providing both protection from graffiti, as well as a vegetated appearance.

The elimination of the chain link fence and the screening of the large parking area to the right would result in an improvement in appearance. The vine-covered wall would provide a uniformly designed appearance that could be considered preferable to the existing parking lot and scattered buildings observed through a galvanized chain link fence. Under City thresholds requiring landscaping, the wall would not constitute a significant visual impact when viewed from the freeway or ramps with the vines in place. When viewed from the church and private residences to the west, the 10-foot high wall would be partially obscured by parked cars, vegetation and the vines planted on the wall. The appearance from the private side may be considered preferable to the current view of traffic, and would not constitute a significant visual impact.

Existing berm along SR 163

Noise Barrier B2. This approximately 682 foot-long sound wall would be located on the west side of SR 163. The sound wall would have a visible height of 12 feet and would be located above a retaining wall with a maximum height of 10 feet for a total height of 22 feet. The wall would be sited within Caltrans right-of-way along the top of a 10-foot-high 2:1 cut slope with two returns onto private property. This wall would benefit five residences and a multi-family common use area with three frontage units.

Figure 5.8-8 (Key View 8 – Northbound SR 163 from south of Genesee Avenue) represents the view from SR 163 northbound, looking northwest toward the site of the proposed combination sound wall/retaining wall on the west side of the freeway. The pedestrian bridge is visible at the far right. This is the view where the largest visual exposure occurs for this area of grading and wall construction.

Currently this area is a highly visible ice plant slope notable for its lack of trees compared with the relatively forested slopes nearby. The primary components of this view are the barrier rail, the large ice plant slope and a single eucalyptus tree in front of the pedestrian bridge. The key element of the view is the edge between the sky and the top edge of the slope. The chain link and wood fences, low roofs of the homes, and miscellaneous backyard furnishings visible above the slope do not contribute to a unified view. The concrete barrier, fences and signs constitute current distractions. Combining vividness, unity and intactness, the existing visual quality is rated at low.

Viewer sensitivity for this view is anticipated to be moderately low due to the moderate expectations for aesthetics on the freeway, and the speed at which the viewers on the freeway move past the scene. Motorists are likely to be distracted from the view and concentrating on driving. Consequently there would be less sensitivity than when drivers pass through neighborhood streets. Viewer exposure at this location is very brief while driving past and consists of an oblique (rather than direct) view while ascending or descending the hill. Attention generally would focus on the lanes ahead, and the perception of the landscape would be one of overall understanding rather than detailed observation. Views from several of the lanes may be blocked by adjacent traffic. Combining viewer sensitivity and viewer exposure for this viewpoint, the likely viewer response to the changes would be moderately low.

The widening of the freeway at this location, and the addition of the sound wall/retaining wall would create a strong visual change. Under the Project, the slope in the middle ground would be cut back to a smaller 2:1 slope at the base of a 10-foot high retaining wall surmounted by a 12-foot-high sound barrier. The wall would be set back from the freeway edge to allow screen planting, including trees, shrubs and groundcover. Vines would be planted at the bottom of the wall. The two walls would be constructed together as one maximum 22-foot wall with a smooth concrete cap and a vertical surface colored and textured to appear similar to the cobblestone native to the area. The wall would be treated with an anti-graffiti coating. The vines would gradually cover the wall, approaching complete coverage over a period of 10 to 20 years, if maintained.

The changes to the view would be visible from both northbound and southbound SR 163. The large combination wall would present a substantial change from existing conditions. It is anticipated that vine planting on the wall, as well as screen planting of trees and substantial shrubs on the large slope between the wall and the freeway would greatly reduce this visual effect. The wall would provide a solid, earth-tone backdrop to the plant material, unifying the appearance along the freeway by obscuring views of the backyard structures, recreational vehicles, homes and chain-link and wood fences currently visible in this area. Overall, the proposed condition would introduce a more densely landscaped, designed and detailed appearance that may be preferable to the relatively abandoned appearance of the existing cut-slope condition. The substantial amount of vegetative screening required as part of Project design would result in impacts being less than significant.

Existing structures – sound wall would be located behind these buildings.

Sound Wall B3. This barrier would be a 1,056-foot long and 8-foot high sound wall located on the west side of SR 163. It would be sited on private property at the top of a 2:1 slope behind the buildings shown in the picture. The wall would benefit 22 residences and a multi family common use area with 3 frontage units. Due to vegetation, large trees, other buildings in the foreground and topographical obstructions, this wall would not be easily observed from SR 163, and therefore a simulation has not been prepared.

Based on the lack of visibility of this wall, and its large setback from public viewpoints, the visual impact of Wall B3 is anticipated to be minimal, and less than significant.

Sound Wall B4. This barrier would extend a distance of 1,007 feet and would be 8 feet high, thereby exceeding initial City criteria for length and height. It would be located on the east side of SR 163 on private property along the edge of pads associated with residences on the west side of Whinchat Street. The residential pads are sited at the top of an existing 2:1 slope planted with existing mature ice plant, Eucalyptus, pines and other plants. The wall would benefit 14 residences.

The barrier would be primarily visible from SR 163 southbound, and from the homes across to the west of SR 163. Eucalyptus currently screen the area, allowing only intermittent views to the proposed wall area.

It is anticipated that the barrier at this location would incorporate clear glass above a low wall to allow views through the wall. The combination of a low wall with transparent glass and the existing trees along the freeway edge and on the slope would result in a low to moderate degree of visual change, primarily visible from southbound SR 163. A less than significant impact would occur.

Sound Wall B5a. This barrier would be 200 feet long and 14 feet high and would benefit a single residence. The height and length of this wall would exceed initial City significance criteria with regard to length and height. It would be located at the southernmost home on Hanford Drive and would replace an existing wall five feet in height.

The wall would be constructed at the top of a 2:1 slope, which would emphasize the visual effect. It would have a relatively short visible length (owing to a 90 degree turn in the wall), however, and due to the long setback from the freeway, this wall would not be directly adjacent to drivers. It also would be screened to a large degree by vines on the wall, and trees in the foreground (as well as being shadowed by the trees). Based on the existing and Project required vegetative screening, less than significant visual impacts would occur.

Sound Wall B5b. This noise barrier would be located on the west side of SR 163. It would be 325 feet in length and 14 feet high and would replace a four to five foot high existing wall at this location. The height and length of this wall would exceed initial City

significance criteria with regard to length and height. Vines would be planted to help screen the wall.

Due to the unusual height of the wall relative to other existing walls that would remain, it would have a moderately negative visual effect at this location. Since it is at the periphery of view, and screened by trees, however, the change would not be particularly visible or exposed. In addition, ultimately the wall would be almost entirely covered by Project-required vines. This would result in a less than significant impact overall along this portion of SR 163.

Sound Wall B6. This barrier would be 2,047 feet long and 8 feet high, and would be located west of SR 163. The wall is proposed to be constructed on private property on the 2:1 slope at the level of the housing pads. This wall would benefit 26 residences. The wall would exceed initial City thresholds for both length and height.

The view from SR 163, looking northbound toward Hanford Drive and the mesa tops behind, provides a distant view of the B6 sound wall location. Figure 5.8-9 (Key View 9—Northbound SR 163 from North of Friars Road), depicts the location. While the foreground of this view is primarily freeway, the image of the two vegetated slopes with homes and landscape is fairly interesting. The homes in the foreground on Hanford Drive, and the existing sound wall along the edge of the freeway, contrast with more varied homes and verdant landscaping along the skyline. Falling short of true memorability, the vividness of this view can be considered moderate. The freeway in the foreground, and the barriers and sound wall reduce intactness to moderate. The unity of the view is moderately high with the two hills repeating common forms and landscape, which is reinforced by the coastal sage cover of the hillside. Overall, the existing visual quality is rated moderate.

Viewer sensitivity for this view is anticipated to be moderate due to the moderate expectations for aesthetics adjacent to the freeway. This is a key introduction to the community, however, and members of the community and visitors are likely to be fairly sensitive to the appearance of these hillsides and mesa tops. Combining the concern for community visual quality with the large exposure of these step slopes, viewer sensitivity is rated at moderate. Despite the normally fast speed of travel on the freeway, the viewer would be exposed to this view for a relatively long period of time, with the view directly in front of the viewer. Viewers located at homes on the east side of SR 163 also would look directly across to the wall. The view is elevated above the freeway, so it would be more visible than many other views. Also, the proposed walls extend across a large area of the view; viewer exposure and response can be considered moderate. Combining viewer sensitivity and viewer exposure for this viewpoint, the likely viewer response to Project changes would be moderate.

Once built, Wall B6 would be located in a continuous line at the top of the mesa located just below the skyline on both hills. Construction of the sound wall would require the demolition of a number of existing walls, fences and other garden structures in order to allow wall installation. The bottom (solid) portion of the wall would partially obscure

backyard detail, and would replace the variety of fences visible along the ridgeline. Landscaping disturbed by the construction of the wall would be replaced. Since access to these private lots is limited, additional landscaping and landscape maintenance would be at the discretion of the individual property owner. Existing down-slope vegetation would help obstruct views to the wall.

The addition of the sound wall near the top of the slopes would create a continuous line drawing attention to the skyline. In contrast to the very eclectic existing condition where each neighbor follows their own taste, the proposed wall would provide a unifying element with a common theme. As such, the wall would be more visible than the individual improvements. In some cases it may be more attractive, and in others it may be less attractive, than the private improvements or existing vegetation.

The wall is proposed to be a view wall type, with four-foot by six- or eight-foot clear panels over a four-foot high solid split-face or slump block wall. With the solid portion of the wall reduced to four feet in height, the visual impact of the wall would be reduced. It also is expected that at least the lower 6 to 12 inches of the wall would be obscured by groundcover. Existing shrubs and trees also would help screen the wall from view.

With the existing vegetation on the private slopes restored, and the wall partially obscured, the wall would present a broken line at the top of the plateau which would be visible from distant viewers on SR 163 or homes located east of the freeway. The wall would be in shadow after noon and would be less noticeable, and irregular but screening vegetation would provide more substantial shielding than would be possible with a higher solid wall.

Seen in the background of the view, the wall is anticipated to have a moderately low visibility. Vividness would be similar to the existing condition, remaining moderate. Intactness of the current view would be slightly reduced by introduction of the wall, while unity of the view would remain the same at moderately high. The resulting visual quality for the proposed wall is considered to remain moderate compared to the existing condition.

Comparing the existing to the proposed condition, the new sound wall would be visible at the sensitive top of ridge. The anticipated visual change, however, would be low. A number of items would contribute to minimization of this wall's visual effect. These include the large setback from SR 163 and other public viewpoints, partial screening by existing planting and the fact that it would be somewhat obscured due to being in shadow during most of the day. Ultimately, the screening of the lower four feet of the wall by hillside shrubs would be considered substantial enough to meet the requirements of the City threshold. Though visible, this sound wall with four feet of transparent material on top is not anticipated to result in a significant visual impact.

<u>Sound Wall B7</u>. This barrier would be 2,250 feet long and 8 feet high. It would be sited west of SR 163 at the top of a 2:1 slope and would follow the edge of the mesa on the skyline visible from SR 163.

Existing visual quality and viewer sensitivity would be similar to those described for Sound Wall B6, above. Wall B7 also would be installed in a location where existing fences, walls and other visible elements currently affect visual quality.

Existing fencing and screening vegetation of hotel tennis courts

The sound wall would replace many of these disparate elements with a more uniform appearing wall. Each of the elements discussed for wall B6 also would apply to this sound wall. With the existing vegetation on the private slopes restored, and the wall partially obscured, the wall would present a broken line at the top of the plateau which would be visible from distant viewers on SR 163 or homes located east of the freeway. The wall would be in shadow after noon and would be less noticeable, and irregular but screening vegetation would provide more substantial shielding than would be possible with a higher solid wall. Though visible, this four-foot wall with four feet of transparent material on top is not anticipated to result in a significant visual impact.

Sound Wall B8. This barrier would be 1,007 feet long and 8 feet high and sited to the west of SR 163. The wall would be located at the top of a 2:1 slope and would follow the edge of the graded residential pad visible in the middleground from SR 163 northbound and from Friars Road westbound. Similar to Sound Walls B4, B6 and B7, the wall would be a view wall type, incorporating clear panels.

Existing visual quality and viewer sensitivity would be similar to those described for Sound Wall B6, above. Wall B8 also would be installed in a location where existing vegetation would screen it from view and where existing walls and other visible elements currently affect visual quality.

The sound wall would replace many of these disparate elements with a more uniform appearing wall. Each of the elements discussed for wall B6 also would apply to this sound wall. With the wall partially obscured by existing and restored vegetation, the wall would present a broken line at the intermediate building pads of the graded slope which would be visible in the middle-ground when viewed from SR 163 or distant homes/viewers located on the south side of Mission Valley. The wall would be in shadow after noon and would be less noticeable, and irregular but screening vegetation would provide more substantial shielding than would be possible with a higher solid wall. Overall, the distance at which it would be viewed, in combination with screening offered by vegetation, would represent a relatively low degree of visual change. Though visible, this wall would not result in a significant visual impact.

Sound Wall B9. This barrier would be located on the east side of SR 163 next to the freeway-side hotel tennis courts and would be 387 feet long and 6 feet high. While the height falls within City standards, the length exceeds initial screening thresholds. Assuming granting of appropriate easements, the wall would be located on hotel grounds, curving around the eastern-most tennis court. This wall would be placed immediately adjacent to the tennis courts and screened with large shrubs similar to those currently screening the existing tennis court fence. The access gate obstructed by the wall should be installed as a solid gate to continue to allow access, while providing sound attenuation.

Assuming that the wall would be constructed at the tennis court fence, and the screen planting retained or re-established, the existing condition would be very similar to the proposed condition, and there would be no significant visual impact as a result of this sound wall construction.

Proposed Drainage Features

Several drainage/water quality features are included as part of the proposed Project earthwork. These consist of biofiltration swales on the east side of SR 163—most north of Friars Road, and one south of Friars Road—a biofiltration strip south of Friars Road and east of SR 163, and an infiltration basin in the northbound loop off-ramp.

The biofiltration swales would be shallow (0.5 feet deep) vegetated channels extending generally parallel to the freeway, from 36 to 96 feet in length. The biofiltration strip would be a vegetated area over which stormwater would flow as sheet flow, and would be approximately 65 feet by 260 feet. The infiltration basin would be a vegetated area that would slope downward from the loop off-ramp to a generally flat, depressed area. These features would catch stormwater runoff, some of which may be visible in the basin after the storm passes. Each of these drainage features would be vegetated with a mix of perennial and annual, mostly grass-like, species. They would be occasionally mowed.

These features would be most visible for motorists on Northbound SR 163 and the northbound off-ramp. They would be lower in elevation than the roadway, and viewers would look over and across them to more dominant, structural features. Additionally, due to the vegetation that would grow in them, they generally would blend with other landscaped features.

Overall, the proposed drainage features would not be highly visible. Additionally, they would not alter a natural landform, disturb a steep slope, or result in the creation of manufactured slopes over 10 feet in height. No significant impact is identified.

Light and Glare

The proposed flyover bridge for the southbound on-ramp would aim headlights up and across the freeway. This added light glare and movement at a level above existing Friars Road Bridge over SR 163 would add a new element of light and movement to the night sky. Nighttime headlights potentially also could shine toward the hotel to the south of the

highway. A solid barrier rail has been incorporated into the Project to reduce the escape of light at this location. The barrier would be three feet in height. Given the amount of light and movement in the existing interchange, any changes to existing conditions resulting from implementation of the Project are not expected to constitute a significant visual effect.

It is also possible that at certain times in the morning, sunlight reflecting from the glass portions of Sound Wall B7 could cross the canyon, attracting greater attention to the wall. This effect is anticipated to be brief and transitory, and would not occur on cloudy mornings typical of coastal San Diego. Due to the ephemeral nature of this impact, and the long distance at which it is viewed, potential glare from the glass view wall is not anticipated to result in a significant visual impact.

5.8.2.4 Significance of Impact

The Project would affect visual quality, especially with regard to views from public roadways, as a result of several Project elements. The Project would improve roads located immediately adjacent to developed uses, private property, sensitive biological habitat and steep terrain. These right-of-way constraints result in a number of retaining walls exceeding 10 feet in height or 50 feet in length in order to minimize property take or extensive encroachment into the sensitive habitat and steep slopes abutting southbound SR 163. The majority of these walls would be screened by project landscaping substantial enough to reduce visual impacts to less than significant levels. A significant impact conservatively is identified for a retaining wall on the south side of Friars Road and east of SR 163 due to both the removal of existing streetscape and an inability to install consistent Project landscape due to limited right-of-way. The 1,493-foot-long and (maximum) 34-foot-high retaining wall along SR 163 also would result in significant impacts under City criteria due to its very high visibility and the lack of complete wall screening anticipated under the Project. And, finally, construction-period effects (up to an assumed six years) would result in significant visual impacts related to the creation of a "disorganized appearance" until materials, fencing, equipment, etc., is removed and wall-screening vegetation takes hold.

5.8.2.5 Mitigation Measures

Visual effects related to Project build out would be substantially reduced through implementation of the conceptual Landscape Plan required as part of Project design. With the exception of native and slow-growing coast live oaks, it is anticipated that the landscaping would grow to meet plan goals within five years of implementation. This plan, including maps and details, is included in Appendix G and is depicted in Figures 3-3a and b. No mitigation beyond design features described above is proposed or necessary for most Project elements.

In addition to the landscape concept outlined above, the reader is also referred to review biological mitigation measures, as detailed in Section 5.4 of this EIR. Biological mitigation measures would be compatible with the proposed landscape concept, since the concept relies on regionally appropriate plant materials and blending with the vegetation of adjacent natural slopes in riparian areas.

As summarized in Subsection 5.8.2.4, however, screening vegetation would not always be possible, and/or would not provide adequate screening over the long term. For two walls, there is no feasible mitigation and they are conservatively identified as significant and unmitigable.

The construction-period effects are similarly unmitigable. Removal of construction equipment, fencing and materials at the completion of construction, however, would eliminate the impact. No mitigation measure is necessary.

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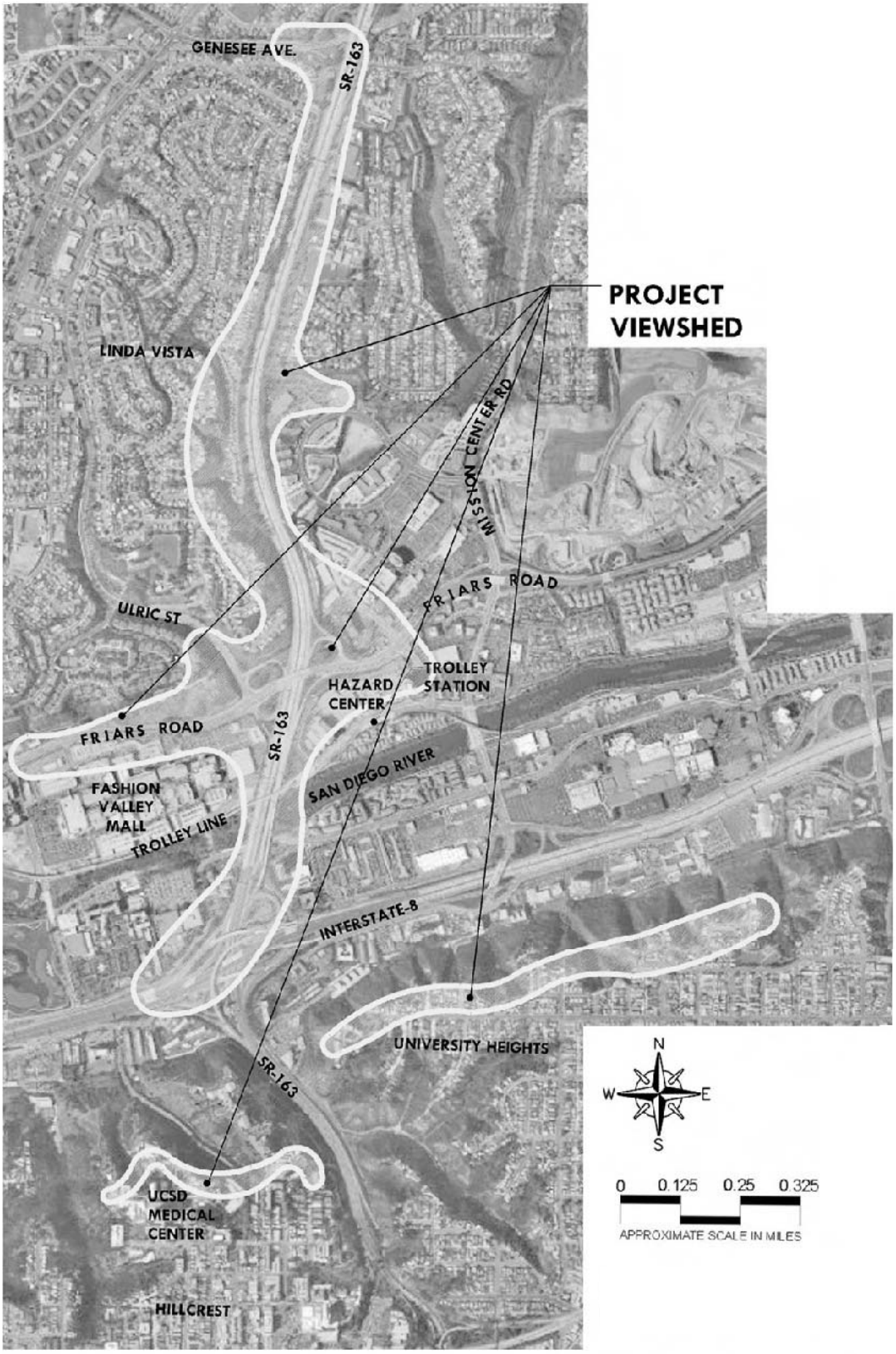

Source: Estrada Land Planning, 2008

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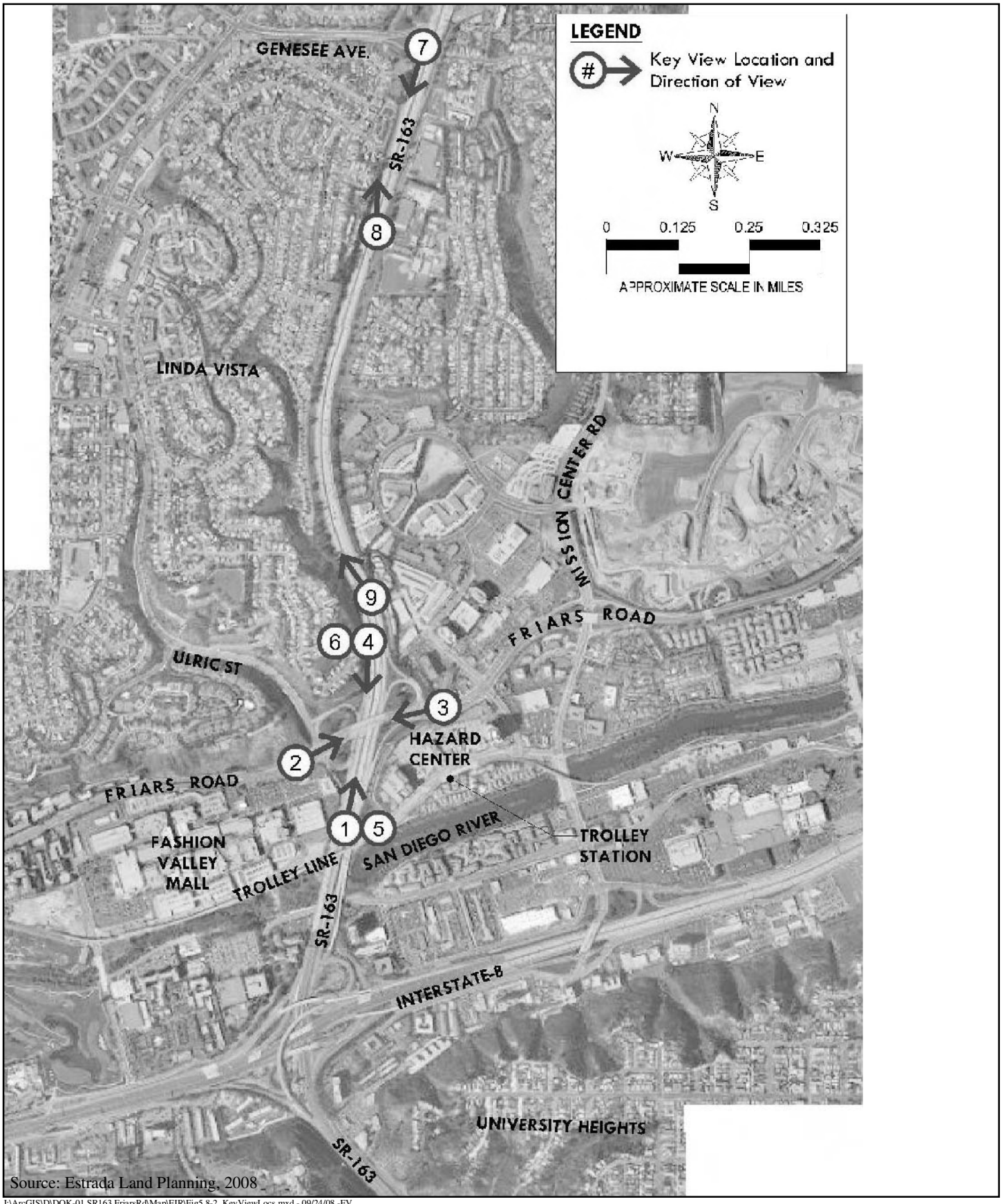
Project Viewshed

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.8-1



Source: Estrada Land Planning, 2008

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Key View/Simulation Location Map

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.8-2

Existing View

Simulation View

Source: Estrada Land Planning, 2008

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Key View 1 - Northbound SR 163 from South of Friars Road

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.8-3

Existing View

Simulation View

Source: Estrada Land Planning, 2008

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Key View 2 - Eastbound Friars Road

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.8-4

Existing View

Simulation View

Source: Estrada Land Planning, 2008

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Key View 3 - Westbound Friars Road

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.8-5

Existing View

Simulation View

Source: Estrada Land Planning, 2008

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Key View 4 - Southbound SR 163 from North of Friars Road

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.8-6

Existing View

Simulation View

Source: Estrada Land Planning, 2008

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Key View 7 - Southbound SR 163 from Genesee Avenue

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.8-7

Existing View

Simulation View

Source: Estrada Land Planning, 2008

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Key View 8 - Northbound SR 163 from South of Genesee Avenue

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.8-8

Existing View

Simulation View

Source: Estrada Land Planning, 2008

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Key View 9 - Northbound SR 163 from North of Friars Road

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.8-9

5.9 NOISE

An Acoustical Assessment Report was prepared for the Project (Pacific Noise Control 2006) and addenda to the Acoustical Assessment Report providing further analysis of nighttime construction noise (HELIX 2008b) and the Fashion Walk Apartments (2010c) are contained in Appendix H. The results and conclusions of the acoustical report and addenda are summarized herein.

5.9.1 Existing Conditions

Noise can be defined as sound that is loud, unpleasant, unexpected or undesired. Sound is mechanical energy of a vibrating object transmitted by pressure waves in a compressible medium such as air that is capable of being detected by the hearing organs. For a sound to exist, three components must be present: the sound source, the sound path (e.g., air) and the sound receiver (e.g., the human ear). Sound is characterized by various parameters that describe aspects of the sound wave, such as its frequency (pitch) or sound pressure amplitude (loudness).

Sound levels are usually measured and expressed in units called decibels (dB). Since the human ear is not equally sensitive to all sound frequencies, noise levels are factored more toward human sensitivity using the "A" weighing scale, written as dBA. All sound levels discussed in the acoustical report and in this EIR are A-weighted. The decibel scale is logarithmic, so sound pressure levels cannot be added or subtracted by ordinary arithmetic means. When two equal sound levels are added together, the resultant decibel level is not doubled, but rather increases by 3 dBA. Thus, twice the traffic on a road would cause a 3 dBA sound increase. Furthermore, when two sound levels that differ by more than 10 dBA are combined, the sound measurement is the same as the higher decibel sound alone.

It is widely accepted that the average healthy ear can barely perceive noise level changes of 3 dBA, while changes of 5 dBA are readily perceptible and 10 dBA changes are perceived as twice or half as loud. Thus, the 3 dBA sound level increase caused by a doubling of traffic on a road would constitute a barely perceptible increase.

To evaluate the long-term characteristics of sound and account for the variability in sound levels over time, a mathematical average is used to describe the noise exposure. This time-averaged sound level over a specific period of time is defined as the noise equivalent level (L_{eq}). The period of time can be specified; for example, the one-hour, A-weighted equivalent sound level is expressed as $L_{eq}(h)$.

Because receptors are more sensitive to unwanted noise intrusion during the evening hours and at night, state law requires that measured noise during the evening and night be artificially increased. This noise descriptor, which is commonly used to evaluate environmental noise, is called the Community Noise Equivalent Level (CNEL). It is obtained by adding a 5 dB penalty to measured sound levels in the evening hours (7:00 p.m. to 10:00 p.m.) and a 10 dB penalty to measured sound levels at night (10:00 p.m. to 7:00 a.m.) to account for heightened noise sensitivity during the evening and nighttime hours. The City evaluates noise levels in terms of CNEL.

Sound generally propagates (spreads from the noise source to noise receptors) geometrically, with a rate reduction of approximately 3 dBA per doubling distance; that is, the noise level will be approximately 3 dBA less at 200 feet from a source than at 100 feet away. This attenuation of sound over distance can be increased by factors such as soft ground sound absorption (usually calculated as an additional attenuation value of 1.5 dBA) and atmospheric affects such as wind, temperature gradients and humidity. Natural features such as hills and woods, and manmade features such as buildings, can also shield receivers from noise. A barrier that breaks the line-of-sight between a source and a receiver typically will result in at least 5 dB of noise reduction, while a taller barrier may provide as much as 20 dB of noise reduction.

Mechanical or structural vibrations are generally unwanted and, depending on their magnitude, can produce physical discomfort, misalignment of equipment and damage to structures. The peak ground velocity produced by sources such as trucks, trains, pile driving, blasting or earthquakes can range from less than 0.01 inch per second (in/sec), which would be barely perceptible to humans, to more than 10 in/sec, which would be sensed as very unpleasant to intolerable by humans.

5.9.1.1 Affected Environment

Noise-sensitive Land Uses

Noise-sensitive receptors are land uses associated with indoor and/or outdoor activities that may be subject to stress and/or substantial interference from noise. They typically include residential dwellings, dormitories, mobile homes, hotels, motels, hospitals, nursing homes, educational facilities (i.e., classrooms) and libraries. Existing land uses adjacent to the subject roadways consist of urban development, including commercial, office and industrial structures, as well as two hotels, approximately 160 single-family residences and 32 multi-family residences. Fletcher Elementary School is located along the east side of SR 163 at the top of a slope above the freeway. Fashion Valley Center is located near the southwestern quadrant of the SR 163 and Friars Road interchange, while other commercial uses – Hazard Center and Friars-Mission Center – are located to the east of the interchange. The terrain surrounding the study area ranges from level to sloping both above and below the Project roadways.

Existing sound walls adjacent to residences are found in four general locales in the study area: on the west side of SR 163 along Hanford Drive and near the southwest, southeast and northwest quadrants of SR 163 and Genesee Avenue, as shown in 5.9-1a through d, Noise Measurement Sites and Existing Noise Barriers. Specifically, these residences are located along the north side of Fulton Street (site 3), the west side of Teal Place (sites 42 and 43) and the west side of Hanford Drive (sites 17-22). In addition, an approximately 890-foot-long earthen berm provides noise attenuation for approximately 12 residences along a portion of Judson Street (sites 12-15). Several homes adjacent to the roadways have wooden fences along the backyards. Integral to the construction of the Fashion Walk Apartments, located immediately northwest of the Friars Road/ Avenida de las Tiendas intersection, are noise barriers along the outer edge of the between-building opening and noise barriers bordering the balconies.

Noise Sources

The primary noise source in the study area is traffic along SR 163 and Friars Road. Background noise sources include traffic along Ulric Street, Frazee Road, Genesee Avenue and other local roads. The noise effects from these other background noises are generally slight and are localized in the areas immediately adjacent to these roads. Background noise levels commonly range from approximately 45 to 50 dBA within residential areas located approximately 0.25 mile from the Project roadways.

Ambient Noise Measurements

To quantify the noise environment in the study area, noise measurements were made in July 2003 at various locations identified in coordination with City and Caltrans staff. The noise measurement locations are shown on Figures 5.9-1 a through d. Noise levels were measured continuously for a one-day period at two locations (sites A and B). In addition, noise measurements were conducted for short time periods (10 to 20 minutes each, between 7:00 a.m. and 2:50 p.m.) at 14 locations, generally consisting of the backyards of the single-family homes, the facades or outdoor patio areas of commercial buildings, and the common areas or frequent outdoor use areas of multi-family developments. Two additional noise measurements were taken in the vicinity of the Fashion Walk Apartments (constructed subsequent to the initial noise measurements) in September 2009. Two background noise measurements (used to calibrate the noise model) were also taken outside the SR 163 corridor. The instruments and methodologies used to conduct measurements are described in detail in the acoustical report in Appendix H.

Because the Project is a roadway, sound models developed to focus on transportation corridors were used in the technical analysis. The results of the noise monitoring survey were used as input for the SOUND32 noise prediction model. The model was used to determine existing and future noise levels. The SOUND32 noise model accepts as input the number and types of vehicles on the roadway, vehicle speeds and physical characteristics of the road and topography, as well as receiver and noise barrier heights and locations. The California Vehicle Noise emission levels were used in the noise model. To verify the input used in the noise model, the same traffic volume and vehicle composition ratios counted during the noise measurements were used with a vehicle speed of 65 mph along SR 163 and 50 mph along Friars Road. These speeds correlated well with the results of the noise measurements and were used in the noise modeling for the existing conditions. The modeled values were generally within 1 to 2 dBA of the measured noise levels. However, at several sites the measured noise levels were several dBA less than the modeled noise levels. The difference most likely results from excess attenuation provided by shielding of walls or intervening topography.

The noise model was used to determine the peak noisiest hour L_{eq} using existing peak hour traffic volumes provided in the Project Traffic Evaluation Report (LLG 2008a and 2008b). The truck percentage used for vehicles along SR 163 in the noise model for the peak (noisiest) hour average sound level was 2.4 percent medium trucks and 1.3 percent heavy trucks. This mix is based on the traffic mix information for this segment of SR 163. The future truck mix is assumed to remain the same. The existing peak hour traffic volume ranges up to 14,600 vehicles per hour along SR 163. Year 2030 peak hour volume is projected to range up to 19,600 vehicles per hour along SR 163. Current traffic volumes range from approximately 147,000 to 165,000

ADT along SR 163. Future traffic volumes are projected to range from approximately 206,000 to 221,000 ADT along SR 163 by the year 2030.

The truck percentage used for vehicles along Friars Road was 0.5 percent medium trucks, based on the original Exterior Noise Technical Report for the Fashion Walk Apartments (RECON 2000) and the on-site measurement. The future truck mix is assumed to remain the same. The existing peak hour traffic volume is approximately 4,428 vehicles per hour at the Friars Road/Avenida de las Tiendas intersection. Year 2030 peak hour volume is projected to range up to 6,170 vehicles per hour at this intersection. Current traffic volumes range from approximately 34,300 to 55,100 ADT along Friars Road between Fashion Valley Road and the SR 163 southbound ramp. Future traffic volumes are projected to range from approximately 38,000 to 57,700 ADT along these segments by the year 2030.

Sites A and B (Figure 5.9-1b) were selected to provide an unobstructed view of the highway (i.e., no intervening walls, buildings, vegetation, etc.). The sites are approximately 195 feet from the centerline of SR 163. The purpose of these noise measurements was to determine the typical peak noisiest hour L_{eq} associated with traffic along SR 163 and the corresponding relationship between the noisiest hour and CNEL. Site A was monitored from 11:00 a.m. on April 27, 2004, to 2:00 p.m. on April 28, 2004. Site B was monitored from 12:00 noon on April 27, 2004, to 2:00 p.m. on April 28, 2004. The hourly L_{eq} measured at sites A and B are listed in Table 5.9-1, Existing Measured Hourly Average Noise Levels at Long-term Measurement Sites A and B. The noisiest hour L_{eq} was 80 dBA at site A and 78 dBA at site B. Based on the long-term noise measurement, the resulting calculated CNEL is equivalent to the noisiest hour L_{eq} plus 2 dBA.

Table 5.9-1
EXISTING MEASURED HOURLY AVERAGE NOISE LEVELS AT LONG-TERM MEASUREMENT SITES A AND B[1]

Date	Start Time	Site A (L_{eq})	Site B (L_{eq})
4/27/04	11:00 a.m.	79 dB	--
	12:00 noon	79 dB	75 dB
	1:00 p.m.	**80 dB**	76 dB
	2:00 p.m.	**80 dB**	76 dB
	3:00 p.m.	**80 dB**	76 dB
	4:00 p.m.	**80 dB**	77 dB
	5:00 p.m.	79 dB	76 dB
	6:00 p.m.	79 dB	77 dB
	7:00 p.m.	78 dB	76 dB
	8:00 p.m.	77 dB	74 dB
	9:00 p.m.	77 dB	74 dB
	10:00 p.m.	76 dB	72 dB
	11:00 p.m.	72 dB	70 dB
4/28/04	12:00 midnight	70 dB	67 dB
	1:00 a.m.	68 dB	66 dB

Table 5.9-1 (cont.)
EXISTING MEASURED HOURLY AVERAGE NOISE LEVELS AT LONG-TERM MEASUREMENT SITES A AND B[1]

Date	Start Time	Site A (L_{eq})	Site B (L_{eq})
	2:00 a.m.	67 dB	64 dB
	3:00 a.m.	67 dB	65 dB
	4:00 a.m.	70 dB	70 dB
	5:00 a.m.	75 dB	75 dB
	6:00 a.m.	79 dB	77 dB
	7:00 a.m.	**80 dB**	**78 dB**
	8:00 a.m.	79 dB	77 dB
	9:00 a.m.	78 dB	77 dB
	10:00 a.m.	78 dB	76 dB
	11:00 a.m.	78 dB	76 dB
	12:00 noon	78 dB	77 dB
	1:00 p.m.	79 dB	77 dB
	2:00 p.m.	--	76 dB
	CNEL	82 dB	80 dB

Source: Pacific Noise Control 2006
Bold = Noisiest L_{eq} hour
[1] Sites A and B are approximately 195 feet from the centerline of SR 163.

Each of the short-term noise measurement locations was selected to represent frequent human use areas or acoustical equivalence areas, or to calibrate the noise model (i.e., the sites were clear of major obstructions between the source and receiver as well as reflecting building/wall surfaces). The measured noise levels varied from 62 to 80 dBA L_{eq} at the short-term noise measurement sites adjacent to SR 163. Measured noise levels along Friars Road ranged from 69.3 to 73.7 dBA L_{eq}. The results of the noise level measurements and corresponding traffic counts are shown in Table 5.9-2, Measured Average Noise Level and Concurrent Traffic Volumes. Counts were made of traffic along SR 163, Friars Road and freeway ramps where they constitute substantial noise sources at the adjacent receiver site. When adjusted to the worst hourly noise level, the noise level typically ranged from approximately 63 to 80 dBA L_{eq} at the receivers.

Background noise measurements also were conducted (sites BG1 and BG2 in Table 5.9-2). The noise level was approximately 50 dBA L_{eq} along Mission Valley Road and 45 dBA L_{eq} along Crandall Drive.

Table 5.9-2
MEASURED AVERAGE NOISE LEVEL AND CONCURRENT TRAFFIC VOLUMES

Site	Description	Date/Time	L_{eq}[1] (dBA)	Cars[2]	Medium Trucks	Heavy Trucks
2	2573 N. Judson, backyard	3/9/05 7:00 to 7:10 a.m.	69	998/1371	23/20	8/16
8	2219 Judson St., patio equivalent	4/28/04 1:25 to 1:35 p.m.	80	1268/870	21/17	12/12
18	1924 Hanford Dr., front yard	4/28/04 1:55 to 2:05 p.m.	71	1132/885	20/22	15/7
26	1903 Cardigan Way, backyard	8/18/04 10:55 to 11:05 a.m.	73	884/1127	15/18	14/14
38	7163 Cm Degrazia, common area	3/9/05 7:45 -7:55 a.m.	63	863/1162	18/29	10/17
39	7067 Cm Degrazia, near patio	3/9/05 7:45 - 7:55 a.m.	62	863/1162	18/29	10/17
41	123 Cm del la Reina, near office building	5/12/04 12:55 to 1:05 p.m.	77	500/1110	7/18	6/14
43	2650 Teal Pl., edge of backyard	4/28/04 10:05 - 10:15 a.m.	67	1025/785	17/19	17/12
46	Fletcher Elementary School, edge of slope	4/28/04 2:40 to 2:50 p.m.	78	1415/917	16/18	19/3
54	7444 Mission Valley Rd., Homestead Suites Hotel, near west end unit	4/28/04 12:35 to 12:45 p.m.	62	1157/901	22/20	13/11
58	Friars Rd., near ROW	4/27/04 1:30 to 1:50 p.m.	69	1081	6	24
64	25 feet west of 7148 Friars Road	9/1/09 2:00 to 2:20 p.m.	69	887	3	0
65	110 feet west of 7148 Friars Road	9/1/09 2:30 to 2:50 p.m.	74	-	-	-
BG1	Mission Valley Road	8/18/04 10:00 to 10:15 a.m.	50	-	-	-
BG2	Crandall Drive	8/18/04 12:30 to 12:45 p.m.	45	-	-	-

Source: Pacific Noise Control 2006; HELIX 2010c
[1] Equivalent continuous A-weighted sound pressure level
[2] Lane direction (northbound or eastbound/southbound or westbound)

The existing (noisiest) one-hour average sound levels for various receiver locations are shown in Table 5.9-3, Existing Noise Levels. The table shows both the modeled noise level and the measured noise level after adjustment to the worst-hour traffic characteristics.

As shown in Table 5.9-3, receiver sites 2, 38 and 39 had measured and calculated differences ranging from 6 to 7 dBA. At each of these sites, noise measurements were taken on at least two different days, with similar results. These differences were attributed to several factors including increasing complexity such as shielding from various obstacles (i.e., walls, buildings, topography), variable ground types (i.e., hard and soft) rather than homogenous conditions assumed by the model, as well as exceeding the normal accuracy prediction distance limits for the noise model at sites 38 and 39, which are approximately 1,000 feet or more from SR 163.

In all these situations, the noise model cannot calculate traffic noise as accurately as in areas closer to the noise source or with fewer intervening structures and homogeneous ground conditions. To correct for this problem, K-constant adjustments (the difference between measured and calculated noise levels) were used for sites 2, 38 and 39.

5.9.1.2 Regulatory Setting

City General Plan

The City has established exterior noise guidelines in the Transportation Element of the General Plan (City 2008). These guidelines identify compatible exterior noise levels for various land use types. Exterior noise levels are required to not exceed a CNEL of 65 dB for single-dwelling unit residential, school and church land uses. Exterior noise levels up to 70 dB are considered compatible for multi-dwelling unit residential uses. Although not generally considered compatible, the City conditionally allows multi-dwelling unit residential uses up to 75 dBA CNEL in areas affected primarily by motor vehicle traffic noise with existing residential uses. Exterior usable areas do not include residential front yards or balconies unless these areas are part of the required usable open space calculation for multi-dwelling unit uses. Exterior noise levels for office, retail and hotel/motel uses should not exceed a CNEL of 75 dB. The City's land use compatibility chart for various land uses and noise levels is presented in Table 5.9-5, City Land Use – Noise Compatibility Guidelines.

Table 5.9-3
EXISTING NOISE LEVELS

Site	Location	Land Use[1]	Number of Units Represented		Existing Worst Hour Noise Level, $L_{eq}(h)$, dBA	
					Measured	Calculated
A	Whinchat St., near ROW	U	-		80	79
B	Hanford Dr., near ROW	U	-		78	79
1	2585 Judson St., patio	Ch	--			77
2	2573 Judson St., backyard	SF	4		69	76
3	7580 Fulton St., patio	MF	12			66
4	7547 Fulton St., backyard	SF	1			75
5	7552 Judson Ct., backyard	SF	2			73
6	7541 Judson Ct., backyard	SF	2			71
7	2219 Judson St., seating area	MF	Outdoor use		74	75
8	2219 Judson St., near building	MF	12		80	80
9	2347 Judson St., backyard	SF	4			73
9b	Judson St., backyard	SF	5			71
10	2263 Judson St., backyard	SF	8			76
11	2223 Judson St., backyard	SF	5			75
12	2129 Judson St., backyard	SF	3			65
13	2113 Judson St., backyard	SF	3			63
14	2073 Judson St., backyard	SF	2			64
15	2045 Judson St., backyard	SF	2			66
16	1975 Hanford Dr., backyard	SF	2			75
17	1949 Hanford Dr., backyard	SF	2			75
18	1924 Hanford Dr., front yard	SF	1		71	73
19	1880 Hanford Dr., backyard	SF	7			67
20	1844 Hanford Dr., backyard	SF	6			67

Table 5.9-3 (cont.)
EXISTING NOISE LEVELS

Site	Location	Land Use[1]	Number of Units Represented		Existing Worst Hour Noise Level, $L_{eq}(h)$, dBA	
					Measured	Calculated
21	1772 Hanford Dr., backyard	SF	12			66
22	1704 Hanford Dr., backyard	SF	1			74
23	7228 Tait St., backyard	SF	3			62
23b	Tait St. backyard	SF	2			67
24	7260 Tait St., backyard	SF	4			73
25	7296 Tait St., backyard	SF	4			71
26	1903 Cardigan Way, backyard	SF	5		73	74
27	7255 Courtney Dr., backyard	SF	8			72
28	7225 Courtney Dr., backyard	SF	4			62
28b	Courtney Dr., backyard	SF	3			68
29	7314 Linbrook Ct., backyard	SF	6			68
30	1747 Volta Ct., backyard	SF	6			74
31	1651 Regulus St., backyard	SF	4			70
32	1627 Regulus St., backyard	SF	5			68
33	1561 Regulus St., backyard	SF	7			68
34	Minden Dr., backyard	SF	2			71
35	1312 Minden Dr., backyard	SF	1			79
36	1332 Minden Dr., backyard	SF	2			74
37	1372 Minden Dr., backyard	SF	5			73
38	7163 Cm Degrazia, common area	MF	4		63	69
39	7067 Cm Degrazia, near patio	MF	4		62	69
41	123 Cm del la Reina, near building	O	--		77	77
42	2680 Teal Pl., backyard	SF	2			70
43	2650 Teal Pl., edge of backyard	SF	2		68	70
44	Fletcher School, classroom bldg.	S	--			63
45	Fletcher School, playground	S	--			64
46	Fletcher School, edge of slope	S	--		79	77

Table 5.9-3 (cont.)
EXISTING NOISE LEVELS

Site	Location	Land Use[1]	Number of Units Represented		Existing Worst Hour Noise Level, $L_{eq}(h)$, dBA	
					Measured	Calculated
47	2144 Whinchat St., backyard	SF	2			72
48	2128 Whinchat St., backyard	SF	2			77
49	2112 Whinchat St., backyard	SF	2			71
50	2046 Whinchat St., backyard	SF	2			74
51	2030 Whinchat St., backyard	SF	3			75
52	1982 Whinchat St., backyard	SF	3			76
53	7460 Mission Valley Rd., patio	O	--			62
54	7444 Mission Valley Rd., west end unit	H	4		63	63
55	7420 Mission Valley Rd., edge of building	O	--			74
56	1450 Frazee Rd., edge of building	O	--			70
57	5624 Friars Rd., edge of building	C	--			73
58	Friars Rd., near ROW	C	-		69	71
59	7600 Friars Rd., edge of building	C	--			74
60	7450 Hazard Center Dr., tennis court	H	Tennis Courts			70
63	591 Cm de la Reina, edge of building	O	--			77
64	25 feet west of 7148 Friars Road	MF	161		69	72
65	110 feet west of 7148 Friars Road	--	--		74	73

Source: Pacific Noise Control 2006; HELIX 2010c
[1] Land Use abbreviations: SF = Single-family home; MF = Multi-family residence; H = Hotel/motel; C = Commercial use; Ch = Church; S = School; U = Undeveloped land, O = Office

Table 5.9-4
CITY LAND USE – NOISE COMPATIBILITY GUIDELINES

Land Use Category	Exterior Noise Exposure (dBA CNEL)				
	60	65	70	75	
Open Space and Parks and Recreational					
Community & Neighborhood Parks; Passive Recreation					
Regional Parks; Outdoor Spectator Sports, Golf Courses; Athletic Fields; Outdoor Spectator Sports, Water Recreational Facilities; Horse Stables; Park Maint. Facilities					
Agricultural					
Crop Raising & Farming; Aquaculture, Dairies; Horticulture Nurseries & Greenhouses; Animal Raising, Maintain & Keeping; Commercial Stables					
Residential					
Single Units; Mobile Homes; Senior Housing		45			
Multiple Units; Mixed-Use Commercial/Residential; Live Work; Group Living Accommodations **For uses affected by aircraft noise, refer to Policies NE-D.2. & NE-D.3.*		45	45*		
Institutional					
Hospitals; Nursing Facilities; Intermediate Care Facilities; Kindergarten through Grade 12 Educational Facilities; Libraries; Museums; Places of Worship; Child Care Facilities		45			
Vocational or Professional Educational Facilities; Higher Education Institution Facilities (Community or Junior Colleges, Colleges, or Universities)		45	45		
Cemeteries					
Sales					
Building Supplies/Equipment; Food, Beverages & Groceries; Pets & Pet Supplies; Sundries, Pharmaceutical, & Convenience Sales; Wearing Apparel & Accessories			50	50	
Commercial Services					
Building Services; Business Support; Eating & Drinking; Financial Institutions; Assembly & Entertainment; Radio & Television Studios; Golf Course Support			50	50	
Visitor Accommodations		45	45	45	
Offices					
Business & Professional; Government; Medical, Dental & Health Practitioner; Regional & Corporate Headquarters			50	50	
Vehicle and Vehicular Equipment Sales and Services Use					
Commercial or Personal Vehicle Repair & Maintenance; Commercial or Personal Vehicle Sales & Rentals; Vehicle Equipment & Supplies Sales & Rentals; Vehicle Parking					
Wholesale, Distribution, Storage Use Category					
Equipment & Materials Storage Yards; Moving & Storage Facilities; Warehouse; Wholesale Distribution					
Industrial					
Heavy Manufacturing; Light Manufacturing; Marine Industry; Trucking & Transportation Terminals; Mining & Extractive Industries					
Research & Development				50	

	Compatible	Indoor Uses	Standard construction methods should attenuate exterior noise to an acceptable indoor noise level. Refer to Section I.
		Outdoor Uses	Activities associated with the land use may be carried out.
	Conditionally Compatible	Indoor Uses	Building structure must attenuate exterior noise to the indoor noise level indicated by the number for occupied areas. Refer to Section I.
		Outdoor Uses	Feasible noise mitigation techniques should be analyzed and incorporated make the outdoor activities acceptable. Refer to Section I.
	Incompatible	Indoor Uses	New construction should not be undertaken.
		Outdoor Uses	Severe noise interference makes outdoor activities unacceptable.

City Municipal Code

Construction noise is governed by the City's Municipal Code. This ordinance restricts the allowable hours of construction activities to 7:00 a.m. through 7:00 p.m., Monday through Saturday, excluding legal holidays. Further, the noise levels associated with construction activities at residential properties are not to exceed an average sound level of 75 dBA during the 12-hour period from 7:00 a.m. to 7:00 p.m. In order to deviate from these criteria, a permit from the Noise Abatement and Control Administrator would be required.

The Municipal Code further specifies that the nighttime noise impacts to single-family residences shall not exceed a property line impact of 40 dBA (hourly) between 10 p.m. and 7 a.m. and 45 dBA for the same hours for multi-family residential. No specific code requirements for non-emergency nighttime construction are provided; normal planning is based on compliance with the property line ordinance requirements.

5.9.2 Analysis of Issue 1: Noise Levels

Issue 1: ***Would the surrounding uses experience noise levels that would exceed City of San Diego standards due to implementation of the Project?***

5.9.2.1 Impact Threshold

In accordance with City Significance Determination Thresholds (2007a), a significant land use impact will be found if the Project would result in:

1. Interior and exterior noise impacts from traffic-generated noise as indicated in Table K-2 (reproduced below) which provides the general thresholds of significance for uses affected by traffic noise. (City Significance Determination Threshold 1.)

Table K-2
TRAFFIC NOISE SIGNIFICANCE THRESHOLDS
(dB[A] CNEL)

Structure or Proposed Use that would be impacted by Traffic Noise	Interior Space	Exterior Useable Space[24]	General Indication of Potential Significance
Single-family detached	45 dB	65dB	Structure or outdoor useable area[25] is <50 feet from the center of the closest (outside) lane on a street with existing or future ADTs>7500[26]
Multi-family, schools, libraries, hospitals, day care, hotels, motels, parks, convalescent homes	Development Services Department (DSD) ensures 45 dB pursuant to Title 24	65 dB	
Offices, churches, business, professional uses	n/a	70 dB	Structure or outdoor usable area is <50 feet from the center of the closest lane on a street with existing or future ADTs>20,000
Commercial, retail, industrial, outdoor spectator sports uses	n/a	75 dB	Structure or outdoor usable area is <50 feet from the center of the closest lane on a street with existing or future ADTs>40,000

Source: 1) City of San Diego Acoustical Report Guidelines (2003b) and 2) City of San Diego Progress Guide and General Plan (Transportation Element, 2008)

[24]If a project is currently at or exceeds the significance thresholds for traffic noise described above and noise levels would result in less than a 3 dB increase, then the impact is not considered significant.

[25]Exterior usable areas do not include residential front yards or balconies, unless the areas such as balconies are part of the required usable open space calculation for multi-family units.

[26]Traffic counts are available from:

San Diego Regional Association of Governments (SANDAG) Regional Economic Development Information System (REDI): http://cart.sandag.cog.ca.us/REDI/SANDAG Traffic Forecast Information Center: http://pele.sandag.org/trfic/html

n/a = Not applicable

2. Temporary construction noise which exceeds 75 dB(A) L_{eq} at a sensitive receptor. Construction noise levels measured at or beyond the property lines of any property zoned residential shall not exceed an average sound level greater than 75 dB during the 12-hour period from 7:00 a.m. to 7:00 p.m. In addition, construction activity is prohibited between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with exception of Columbus Day and Washington's Birthday, or on Sundays, that would create disturbing, excessive, or offensive noise unless a permit has been applied for and granted beforehand by the Noise Abatement and Control Administrator, in conformance with San Diego Municipal Code Section 59.5.0404. (City Significance Determination Threshold 6a.)
3. Conditions where temporary construction noise would substantially interfere with normal business communication, or affect sensitive receptors, such as day care facilities. (City Significance Determination Threshold 6b.)
4. Noise impacts to certain avian species during their breeding season, depending upon the location of the project such as in or adjacent to an MHPA, whether or not the project is occupied by the California gnatcatcher, least Bell's vireo, southern willow flycatcher, least tern, cactus wren, tricolored blackbird or western snowy plover, and whether or not noise levels from the project, including construction during the breeding season of these species would exceed 60 dB(A) or existing ambient noise level if above 60 dB(A). Significant noise impacts to the California gnatcatcher are only analyzed if the project is within an MHPA; there are no restrictions for the gnatcatcher outside the MHPA any time of year. (City Significance Determination Threshold 1 [5].)

5.9.2.2 Impact Analysis

<u>Construction Noise Impacts</u>

General Construction Activities

Noise generated by construction equipment would occur with varying intensities and durations during the different phases of construction: clear and grub, earthwork, retaining wall structures, base preparation, paving and cleanup. The Project would also include construction of two bridge structures that involve pile driving; this is analyzed separately below.

Heavy equipment for roadway preparation and improvement is expected to include up to one earthmover/dozer, two graders, one water truck, four asphalt/concrete trucks/mixers, two pavers and two roller compactors at any one time. Maximum noise levels at 50 feet would range from approximately 75 to 90 dB for the type of equipment normally used for this type of project. The heavy equipment has been estimated to be in operation eight hours per day and six days per week. As a matter of Project design, each internal combustion engine used for any purpose on the job or related to the job would be equipped with a muffler of a type recommended by the manufacturer, and would never be operated without said muffler. In addition, residents within 200 feet of proposed construction would be notified by mail prior to the start of work.

A number of staging areas have been identified within the Project construction area. It is not anticipated that all of the staging areas would be used. The contractor would determine one or more ultimate locations among evaluated alternatives following negotiations and agreement between the contractor and the City or private party. The potential staging area closest to existing residences is located in the northwest quadrant of SR 163 and Friars Road. Another potential staging area near existing residences would be located south of Genesee Avenue and west of SR 163 within the southbound on-ramp cloverleaf. Noise associated with staging areas is typically less than that associated with construction activities because staging areas generally are used for storage of materials and vehicles.

Pile Driving

Development of the Project would include caisson drilling for the collector lanes/bypass structure. This structure would extend approximately 1,805 feet in length and be supported by approximately 11 large-diameter, single columns and CIDH piles. The piles would be installed using vibratory pile methods, which generally consist of attaching a vibrating apparatus to a metal casing and vibrating the casing into the ground. After the casings are installed, a drill rig would be used with an auger bit to remove the slurry within each of the inner casings. Rebar cages would be installed in the holes and concrete poured into the holes. The displaced soil would be hauled away from the site.

The closest residences to the vibratory pile installing and drilling area would be located along Minden Drive, approximately 200 feet west of the flyover lanes (sites 35-37). Vibratory pile installation can generate maximum noise levels of 84 dBA at this distance. Assuming the upper range of noise levels, the maximum noise level at the closest residence would be approximately 84 dBA. The 12-hour average noise level would be less because vibratory pile installation can, at times, be completed in less than an hour. The time necessary to complete the installation would vary depending on factors such as the pile depth and soil conditions. Therefore, the noise associated with the vibratory pile installation could exceed the City's construction noise level criterion at receivers located near the intersection of Friars Road and SR 163, depending on both timing and noise emission of the selected equipment. This would constitute a significant, short-term, impact.

Vibration levels associated with the vibratory pile installation and drilling would vary because soil conditions and the receptor building both influence ground-borne vibration. At the closest building, vibration would be at a level considered acceptable for all building structures and, although this level is readily perceptible to people, it is below the level at which continuous vibrations begin to annoy most people (Caltrans 2002a).

The Project also would involve construction of a bridge crossing at the San Diego River; this would most likely be constructed with wooden formwork supported by temporary wooden falsework, which would likely, in turn, be supported by a wooden foundation resting directly on graded earth. The earth would be graded by earthmoving equipment in flat pad areas to construct the wooden foundation. It is possible that a temporary trestle structure, supported by steel driven piles, would be constructed within the river floodway.

Impact pile driving can generate maximum noise levels of up to approximately 98 dBA at a distance of 50 feet. The average noise level of the pile driving would depend on several factors including the maximum noise level of the impact and the time interval between impacts. Assuming pile driving occurs for an hour, with a time interval of three seconds between impacts, the sound level would be approximately 93 dBA L_{eq} at a distance of 50 feet. The closest existing residences are located approximately 1,500 feet from the San Diego River. At this distance, the sound level would be approximately 63 dBA L_{eq}. This noise level would result in a less than significant noise impact.

The vibration source levels associated with impact pile driving is typically a peak particle velocity of approximately 0.644 inch per second. The peak particle velocity would be approximately 0.2 inch per second at 55 feet and 0.08 inch per second at 100 feet. General engineering considerations indicate that care must be taken when sustained pile driving is conducted within approximately 55 feet of any building and 100 feet of a historical building or building in poor condition. As pile driving activities would not take place in the vicinity of existing buildings, vibration impacts are not considered significant.

If vibratory pile installation were used instead of impact pile driving at the San Diego River, noise and vibration levels would be lower than those generally associated with impact pile driving. Consequently, under this scenario, less-than-significant noise and vibration impacts would also be anticipated at the closest residences approximately 1,500 feet from the San Diego River.

Nighttime Construction Activities

The City has identified a need for nighttime construction activities throughout the Project area due to high daytime traffic volumes on Friars Road and SR 163. This is necessary to minimize potential traffic congestion that could result from temporary elimination of lanes during the day. It is anticipated that night work would be required where new roadway sections join into existing pavement. In addition, other specific examples of nighttime construction include areas where paving, grading, bridge demolition, bridge false work, utility relocation, signing and striping operations would occur. Nighttime construction activities would also be required when mainline and ramp traffic needs to be shifted during construction staging or for the opening of new lanes. No impact or vibratory piling placement would take place outside the daytime hours of 7:00 a.m. to 7:00 p.m.

Nighttime construction would require issuance of a noise control permit by the City Noise Abatement and Control Administrator. In determining whether to grant the permit, the Administrator is required to consider whether the construction noise in the vicinity of the proposed work site would be less objectionable at night than during the daytime because of different population densities or different neighboring activities; whether obstruction and interference with traffic particularly on streets of major importance, would be less objectionable at night than during the daytime; whether the type of work to be performed emits noises at such a low level as to not cause significant disturbances in the vicinity of the work site; the character and nature of the neighborhood of the proposed work site; whether great economic hardship would occur if the work were spread over a longer time; and whether proposed night work is in

the general public interest. If issued, the permit would prescribe the conditions, working times, types of construction equipment to be used and permissible noise levels as deemed to be required in the public interest.

The typical hourly average noise level associated with the anticipated nighttime construction activity would range from approximately 65 to 70 dBA at a distance of 50 feet, to as high as 90 dBA. Analysis of the listed equipment shows that sensitive receivers within 135 feet may be impacted by noise up to 75 dBA, 65 dBA L_{eq} at 400 feet, and up to 60 dBA L_{eq} as far as 700 feet from the construction. Given that roadway construction is linear in nature, impacts in any one area typically occur for a limited time frame, sometimes for a matter of hours sometimes for days or longer. The duration of a noise impact in any one area would be dependent on construction requirements and scheduling that are unknown at this time.

The ambient nighttime noise levels at area residences are already elevated, with hourly noise level ranging from approximately 65 to 75 dBA L_{eq} at residences without noise barriers adjacent to SR 163 and a normal lowest level nighttime impact of from 64 to 66 dBA L_{eq} (see Table 5.9-6). Although the existing elevated noise levels may somewhat diminish the relative impact of construction period noise, it is acknowledged that the nighttime construction would not comply with the City's allowable hours for construction activities and that some people may experience irritation or annoyance during the nighttime construction. Nighttime construction noise impacts are therefore considered significant.

As noted above, the Municipal Code specifies that the nighttime noise impacts to single-family residences shall not exceed a property line impact of 40 dBA (hourly) between 10:00 p.m. and 7:00 a.m. and 45 dBA for the same hours for multi-family residential. A barrier would need to be constructed of very thick material to reduce noise transmission through the barrier and in excess of 250 feet in height (estimated since normal barrier analysis is not applicable to this height of barrier) to reduce the noise impacts to below 40 dBA L_{eq}. Therefore, no form of reasonable mitigation is available which would reduce noise impacts to less than 40 dBA L_{eq} at the impacted residences.

Mitigation of noise impacts to the typical worst-case hourly nighttime existing conditions of 65 dBA L_{eq} is, however, feasible with barriers placed on the level portions of the residential areas facing the construction. As it would avoid exacerbation of existing noisy conditions, such mitigation would avoid creating a "disturbing, excessive, or offensive noise," in accordance with City significance thresholds. If a residence is between 100 and 125 feet of an active nighttime construction zone, a 16-foot high barrier should reduce noise impacts to 65 dBA L_{eq} or less. This noise barrier height may be reduced to 8 feet for residences located 225 feet to 400 feet from the active construction. These barrier heights are for first floor impacts only and would only reduce nighttime construction noise to the approximate level of the ambient noise. Control of noise impacts to second floor windows would typically require that the barrier be 10 feet taller than those specified above, which is not considered feasible.

Operational Noise Impacts

Predicted Noise Level Increases

The prediction of future operational noise levels and the effects of potential noise at land uses adjacent to the Project roadways were calculated using the SOUND32 noise model described in Section 5.9.1.1, Affected Environment. The noise modeling included the future year 2030 traffic information and the physical improvements and grading shown on the design plans for the Project. Due to uncertainty regarding whether the noise attenuation barriers described in Section 3.2.4 will be constructed, predicted noise levels reported on this analysis do not assume the construction of these barriers. This provides a conservative impact assessment.

As shown in Table 5.9-6, Predicted Traffic Noise Impacts, future noise levels would exceed the City's 65 dBA CNEL standard at the homes immediately adjacent to SR 163 and Friars Road. As also shown in the table, the noise increase attributable to the Project would be 2 dBA CNEL or less at all but one location (site 41, an office building west of SR 163 between I-8 and Camino de la Reina). This noise level increase would be considered less than significant because it would not exceed the City's 3 dBA CNEL significance threshold for areas that currently meet or exceed the City's noise criteria.

At site 41, the noise level increase would be 3 dBA. The outdoor usable area at this office building is, however, shielded from SR 163 traffic by intervening buildings, and would be subject to noise levels less than 70 dB CNEL. As a result, the operational noise levels at this location also would be considered less than significant under City standards.

Table 5.9-5
PREDICTED TRAFFIC NOISE IMPACTS

Site	Location	Without Project Predicted Noise Level, dBA CNEL	With Project Predicted Noise Level, dBA CNEL
A	Whinchat St., near ROW	82	82
B	Hanford Dr., near ROW	82	83
1	2585 Judson St., patio	80	80
2	2573 Judson St., backyard	72	72
3	7580 Fulton St., patio	69	70
4	7547 Fulton St., backyard	78	80
5	7552 Judson Ct., backyard	76	78
6	7541 Judson Ct., backyard	74	75
7	2219 Judson St., seating area	78	79
8	2219 Judson St., near building	83	85
9	2347 Judson St., backyard	76	76
9b	Judson St., backyard	74	74
10	2263 Judson St., backyard	79	80
11	2223 Judson St., backyard	78	79
12	2129 Judson St., backyard	68	69

Table 5.9-5 (cont.)
PREDICTED TRAFFIC NOISE IMPACTS

Site	Location	Without Project Predicted Noise Level, dBA CNEL	With Project Predicted Noise Level, dBA CNEL
13	2113 Judson St., backyard	66	67
14	2073 Judson St., backyard	67	68
15	2045 Judson St., backyard	69	70
16	1975 Hanford Dr., backyard	78	80
17	1949 Hanford Dr., backyard	78	80
18	1924 Hanford Dr., front yard	76	77
19	1880 Hanford Dr., backyard	69	71
20	1844 Hanford Dr., backyard	69	71
21	1772 Hanford Dr., backyard	68	70
22	1704 Hanford Dr., backyard	77	78
23	7228 Tait St., backyard	66	66
23b	Tait St., backyard	69	69
24	7260 Tait St., backyard	76	77
25	7296 Tait St., backyard	75	75
26	1903 Cardigan way, backyard	78	78
27	7255 Courtney Dr., backyard	76	77
28	7225 Courtney Dr., backyard	66	66
28b	Courtney Dr.	70	70
29	7314 Linbrook Ct., backyard	71	72
30	1747 Volta Ct., backyard	77	78
31	1651 Regulus St., backyard	73	74
32	1651 Regulus St., backyard	71	72
33	1561 Regulus St., backyard	71	72
34	Minden Dr., backyard	74	75
35	1312 Minden Dr., backyard	82	83
36	1332 Minden Dr., backyard	77	78
37	1372 Minden Dr., backyard	76	77
38	7163 Cm Degrazia, common area	66	67
39	7167 Cm Degrazia, near patio	65	66
41	123 Cm del la Reina, near building	82	83
42	2680 Teal Place, backyard	73	74
43	2650 Teal Pl., edge of backyard	73	74
44	Fletcher School, classroom bldg	66	67
45	Fletcher School, playground	67	67
46	Fletcher School, edge of slope	80	81
47	2144 Whinchat St., backyard	75	76
48	2128 Whinchat St., backyard	80	81
49	2112 Whinchat St., backyard	74	75
50	2046 Whinchat St., backyard	77	78
51	2030 Whinchat St., backyard	78	79
52	1982 Whinchat St., backyard	79	80

Table 5.9-5 (cont.) PREDICTED TRAFFIC NOISE IMPACTS			
Site	**Location**	**Without Project Predicted Noise Level, dBA CNEL**	**With Project Predicted Noise Level, dBA CNEL**
53	7460 Mission Valley Rd., patio	65	66
54	7444 Mission Valley Rd., west end unit	66	67
55	7420 Mission Valley Rd., edge of building	77	78
56	1450 Frazee Rd., edge of building	73	74
57	5624 Friars Rd., edge of building	76	76
58	Friars Rd., near ROW	74	74
59	7600 Friars Rd., edge of building	77	77
60	7450 Hazard Center Dr., tennis court	73	73
63	591 Camino del la Reina, edge of building	80	81
64	7148 Friars Road[1]	57	57

Source: Pacific Noise Control 2006; HELIX 2010c
[1]Noise was modeled at 15 locations along and just inside the façade of the development; reported noise is the loudest outdoor use area (balconies); refer to Appendix H for details.

5.9.2.3 Significance of Impact

Temporary, short-term impacts associated with vibratory pile installation and nighttime construction noise would be significant. Based on City standards, no significant operational noise impacts would be expected to occur with implementation of the Project.

5.9.2.4 Mitigation Measures

Mitigation Measure N-1 would reduce impacts associated with vibratory pile installation to below a level of significance. While Mitigation Measure N-2 would reduce impacts associated with nighttime construction, such impacts would remain significant. There are no feasible mitigation measures available to reduce nighttime construction noise impacts to below a level of significance, as described in Subsection 5.9.2.2.

N-1 If vibratory pile installation equipment is proposed to be used within 500 feet of a residence, the contractor shall baffle the equipment and/or reduce the number of hours per day the equipment is in operation to achieve a 12-hour noise level of 75 dBA L_{eq} or less at the closest home. Concurrent with the commencement of vibratory pile installation, noise monitoring shall be conducted at the property line of the nearest home to ensure that noise levels do not exceed 75 dBA L_{eq}. If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician, then the associated activities shall cease until such time that adequate noise attenuation is achieved.

N-2 Based on final nighttime construction specifications, a qualified acoustician shall prepare and submit to the City Manager (or designee) specifications of appropriate noise attenuation measures to reduce noise impacts at the first floor of residences in the vicinity of construction activities to 65 dBA L_{eq} or less. The submittal shall include the results of coordination with residents to determine whether they agree to having a temporary wall placed at the edge of their property. All nighttime noise attenuation measures agreed to by the residents and specified by the City Manager shall be implemented during the construction period.

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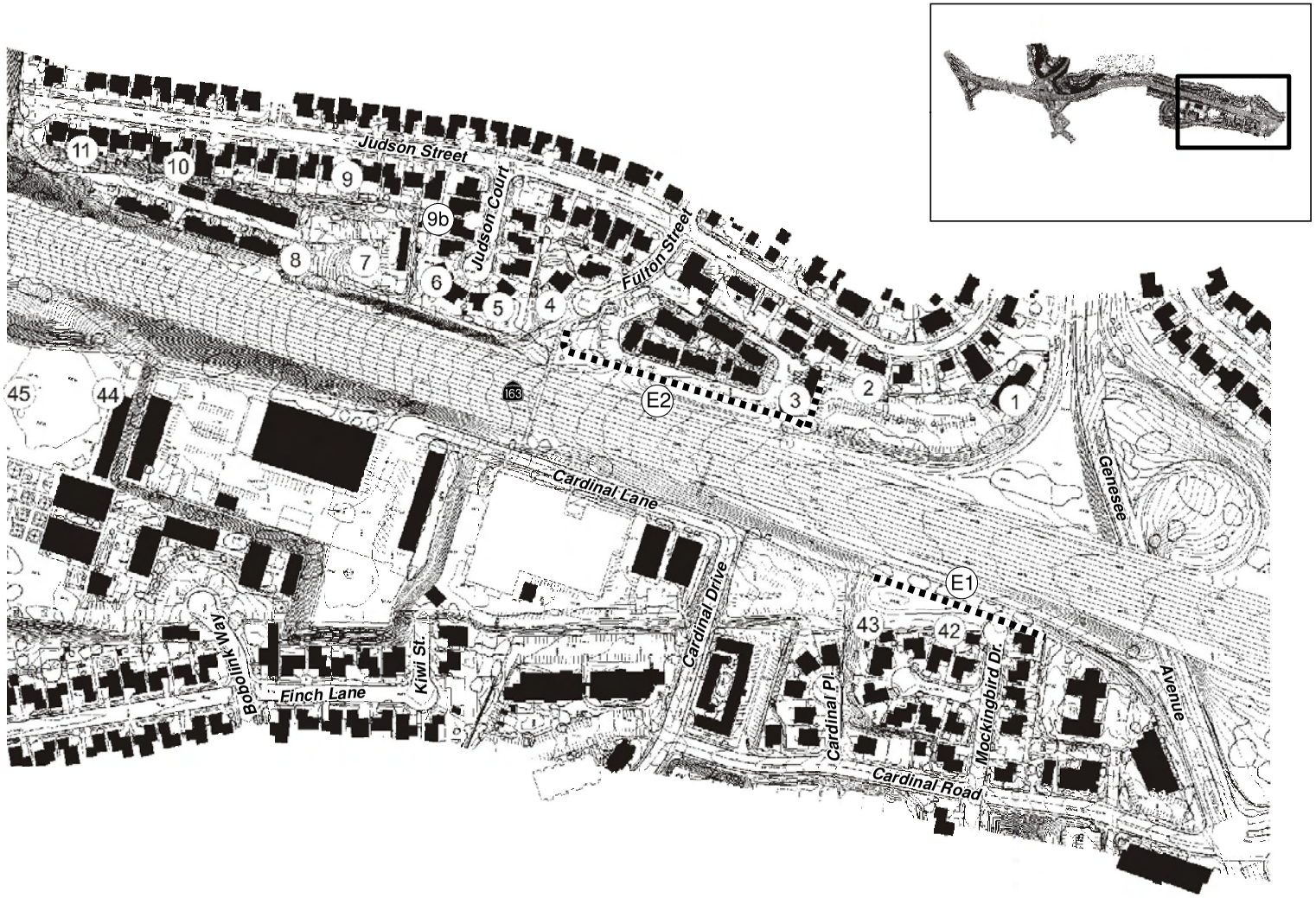
- Existing Noise Barrier
- (1) Noise Measurement/Receptor Location
- (E1) Existing Noise Barrier Location



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Base Map Source: Dokken Engineering, 2004

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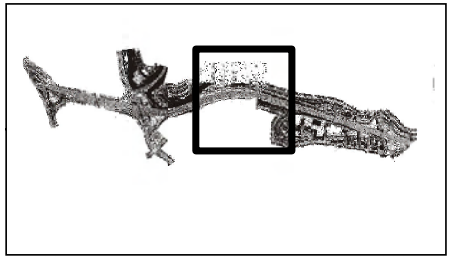
Noise Measurement Sites and Existing Noise Barriers

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.9-1a



LEGEND

- Existing Noise Barrier
- (12) Noise Measurement/Receptor Location
- (E3) Existing Noise Barrier Location

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Base Map Source: Dokken Engineering, 2004

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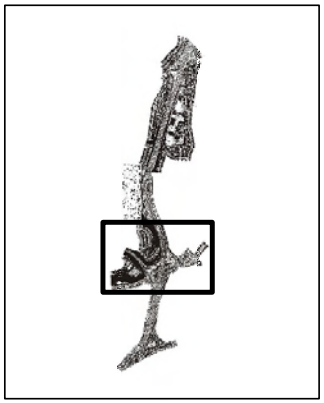
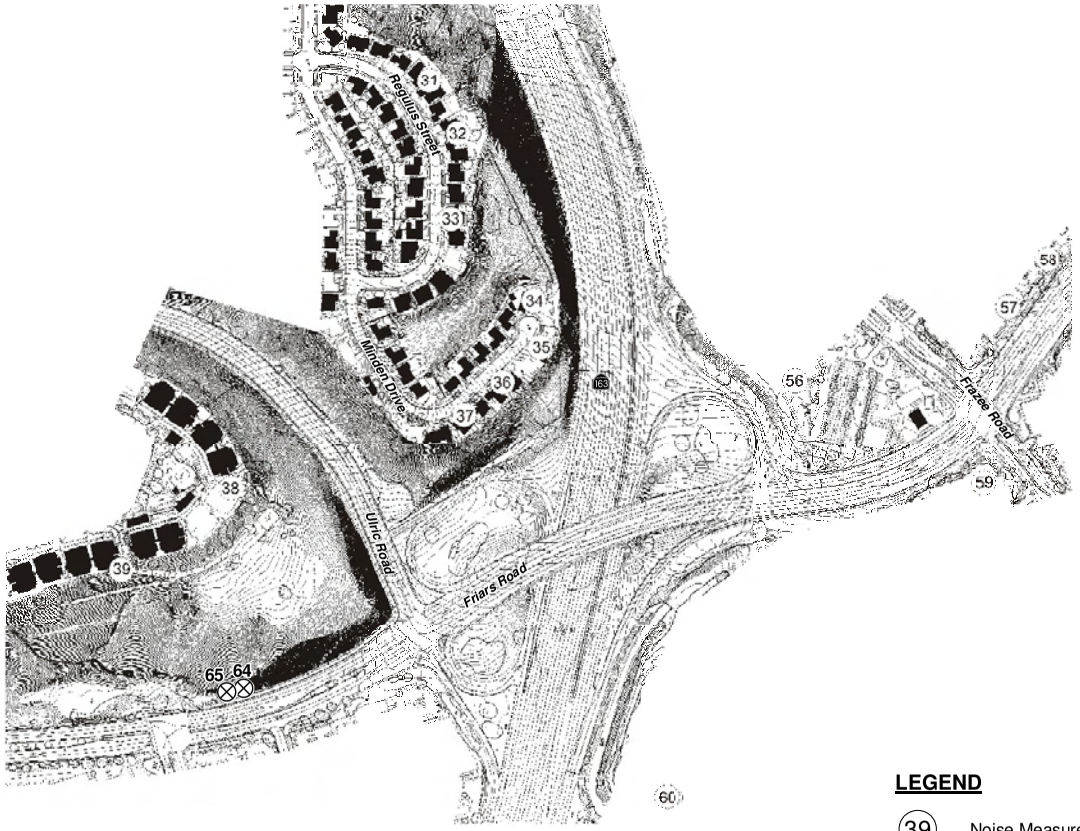
Noise Measurement Sites and Existing Noise Barriers

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.9-1b





LEGEND

39 Noise Measurement/Receptor Location

⊗ Receiver Locations

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Base Map Source: Dokken Engineering, 2004

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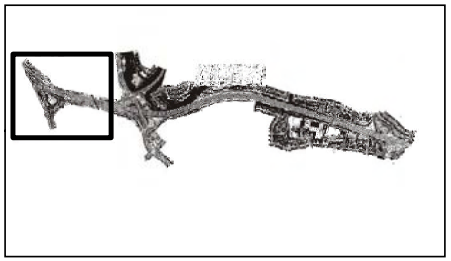
Noise Measurement Sites and Existing Noise Barriers

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.9-1c



LEGEND

41 Noise Measurement/Receptor Location

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Base Map Source: Dokken Engineering, 2004

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Noise Measurement Sites and Existing Noise Barriers

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 5.9-1d

5.10 AIR QUALITY

5.10.1 Existing Conditions

The following summary of air quality conditions and potential impacts is based on the Project's Air Quality Technical Report prepared by Scientific Resources Associated (2008), included as Appendix I to this EIR.

5.10.1.1 Affected Environment

Climate and Meteorology

A semi-permanent high-pressure cell located over the Pacific Ocean dominates the climate of San Diego County. This cell influences the direction of prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year. The high-pressure cell also creates two types of temperature inversions, subsidence and radiation, that may act to degrade local air quality.

Subsidence inversions occur during the warmer months as descending air associated with the Pacific high pressure cell comes into contact with cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. The other type of inversion, a radiation inversion, develops on winter nights when air near the ground cools by heat radiation and air aloft remains warm. The shallow inversion layer formed between these two air masses also can trap pollutants. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce ozone (O_3), commonly known as smog.

Background Air Quality

The San Diego County Air Pollution Control District (APCD) operates a network of ambient air monitoring stations throughout San Diego County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the California Ambient Air Quality Standards (CAAQS) and the National Ambient Air Quality Standards (NAAQS) (described in Section 5.10.1.2, below). Monitored pollutants include O_3, carbon monoxide (CO), nitrogen dioxide (NO_2), fine particulate matter with a diameter of 10 microns or less (PM_{10}), fine particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$), sulfur dioxide (SO_2), and lead (Pb). The potential effects of these pollutants are described below.

Ozone. O_3 is considered a photochemical oxidant, which is a chemical formed when reactive organic compounds (ROC) and nitrogen oxides (NO_X), both byproducts of combustion, react in the presence of ultraviolet light. O_3 is considered a respiratory irritant and prolonged exposure can reduce lung function, aggravate asthma and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from exposure to O_3.

Carbon Monoxide. CO is a product of combustion, and the main source of CO in the San Diego Air Basin (SDAB) is from motor vehicle exhaust. CO is an odorless, colorless gas. CO affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body's organs and tissues. CO can cause health effects to those with cardiovascular disease, and can affect mental alertness and vision.

Nitrogen Dioxide. NO_2 is a by-product of fuel combustion, and is formed both directly as a product of combustion and in the atmosphere through the reaction of nitric oxide (NO) with oxygen. NO_2 is a respiratory irritant and may affect those with existing respiratory illness, such as asthma. NO_2 can also increase the risk of contracting respiratory illness. Together, NO_2 and NO are referred to as NO_x. NO_x is a primary component of the photochemical smog reaction. It also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility and acid deposition (i.e., acid rain).

Particulate Matter. PM_{10} refers to particulate matter with an aerodynamic diameter of 10 microns or less. $PM_{2.5}$ refers to particulate matter with an aerodynamic diameter of 2.5 microns or less. Particulate matter in these size ranges has the potential to lodge in the lungs and contribute to respiratory problems. PM_{10} and $PM_{2.5}$ arise from a variety of sources, including road dust, diesel exhaust, combustion, tire and break wear, construction operations, and windblown dust. PM_{10} and $PM_{2.5}$ can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases such as asthma and chronic bronchitis. $PM_{2.5}$ is considered to have the potential to lodge deeper in the lungs.

Sulfur Dioxide. SO_2 is a colorless, reactive gas that is produced from the burning of sulfur-containing fuels such as coal and oil, and by other industrial processes. Generally, the highest concentrations of SO_2 are found near large industrial sources. Oxides of sulfur are generally referred to as SO_x. SO_2 is a respiratory irritant that can cause narrowing of the airways, leading to wheezing and shortness of breath. Long-term exposure to SO_2 can cause respiratory illness and aggravate existing cardiovascular disease.

Lead. Pb in the atmosphere occurs as particulate matter. Pb historically has been emitted from vehicles combusting leaded gasoline, as well as from industrial sources. With the phase-out of leaded gasoline, large manufacturing facilities are the sources of the largest amounts of lead emissions. Lead has the potential to cause gastrointestinal, central nervous system, kidney and blood diseases upon prolonged exposure. Lead also is classified as a probable human carcinogen.

Sulfates. Sulfates are the fully oxidized ionic form of sulfur. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in

urban areas of California due to regional meteorological features. Effects of sulfate exposure include a decrease in ventilatory function, aggravation of asthmatic symptoms and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, due to fact that they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide. Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.

Vinyl Chloride. Vinyl chloride, a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants and hazardous waste sites, due to microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air causes central nervous system effects, such as dizziness, drowsiness and headaches. Long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage. Cancer also is a major concern; inhalation of vinyl chloride has been shown to increase the risk of angiosarcoma, a rare form of liver cancer in humans.

Visibility Reducing Particles. Visibility reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust and salt. Their presence in the air can result in visibility impairment due to regional haze.

The nearest ambient monitoring stations to the Project site are the Kearny Mesa station and the downtown San Diego station, which was originally operated at 12th Avenue and is now operated on Beardsley Street. Ambient concentrations of pollutants over the last three years are presented in Table 5.10-1. Hydrogen sulfide, vinyl chloride and visibility reducing particles currently are not monitored in the SDAB because these contaminants are not assessed as posing a significant air quality problem.

Sensitive Receptors

A sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant than is the population at large. To evaluate the potential for impacts to sensitive receptors, a search of schools, hospitals, day care centers and nursing homes within 0.5 mile of the Project roadways was conducted. Sensitive receptors were identified at eight specific locales in the vicinity: Francis W. Parker School, Juarez Elementary School, Carson Preschool, Gethsemane Christian Preschool, Remington College, Keller Graduate School of Management, Chapman University College and Nightingale House Services.

Table 5.10-1
AMBIENT BACKGROUND CONCENTRATIONS
PPM (UNLESS OTHERWISE INDICATED)

Pollutant	Averaging Time	2005	2006	2007[2]	Most Stringent Ambient Air Quality Standard	Monitoring Station
O_3	8 hour	0.072	0.091	0.076	0.070 (S)	Kearny Mesa
	1 hour	0.084	0.108	0.088	0.09 (S)	Kearny Mesa
PM_{10}	Annual[1]	22.4 $\mu g/m^3$	22.6 $\mu g/m^3$	23.6 $\mu g/m^3$	20 $\mu g/m^3$ (S)	Kearny Mesa
	24 hour	44 $\mu g/m^3$	42 $\mu g/m^3$	65 $\mu g/m^3$	50 $\mu g/m^3$ (S)	Kearny Mesa
$PM_{2.5}$	Annual[1]	10.2 $\mu g/m^3$	11.1 $\mu g/m^3$	10.4 $\mu g/m^3$	12 $\mu g/m^3$ (S)	Kearny Mesa
	24 hour	29.0 $\mu g/m^3$	26.3 $\mu g/m^3$	30.6 $\mu g/m^3$	35 $\mu g/m^3$ (F)	Kearny Mesa
NO_2	Annual	0.017	0.017	0.015	0.030 (S)	Kearny Mesa
	1 hour	0.076	0.091	0.087	0.18 (S)	Kearny Mesa
CO	8 hour	3.89	3.50	5.18	9.0 (F & S)	San Diego
	1 hour	5.3	10.8	8.7	20 (S)	San Diego

F = federal standards; S = state standards; ppm= Parts per million; $\mu g/m^3$ = Micrograms per cubic meter; mg/m^3= Milligrams per cubic meter
[1] Annual value is arithmetic mean; values shown are California measurements.
[2] Highest particulate, and CO values measured during and following the San Diego County fires.
Sources: California Air Resources Board 2004 (all pollutants except 1-hour CO and annual $PM_{2.5}$)
U.S. Environmental Protection Agency (1-hour CO, annual $PM_{2.5}$, Union Street Station)

5.10.1.2 Regulatory Setting

Air quality is defined by ambient air concentrations of specific pollutants identified by the USEPA to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 amendments. The federal CAA required the USEPA to establish NAAQS, which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for several pollutants (called "criteria" pollutants). "Primary" NAAQS are set to protect public health with an adequate margin of safety, and "secondary" NAAQS protect against adverse welfare effects (e.g., effects on vegetation, ecosystems, visibility, manmade materials). The USEPA has established NAAQS for O_3, CO, NO_2, PM_{10}, $PM_{2.5}$, SO_2 and Pb, as delineated on Table 5.10-2, Ambient Air Quality Standards.

The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The California Air Resources Board (CARB) is the state regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The CARB has established and adopted the CAAQS for the criteria pollutants through the California CAA of 1988 and also has established CAAQS for additional pollutants, including sulfates, H_2S, vinyl chloride and visibility reducing particles, as delineated on Table 5.10-2.

Table 5.10-2
AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	California Standards		National Standards		
		Concentration	Measurement Method	Primary	Secondary	Measurement Method
O_3	1 hour	0.09 ppm (180 μg/m^3)	Ultraviolet Photometry	--	--	Ethylene Chemiluminescence
	8 hour	0.070ppm (137 μg/m^3)		0.075 ppm (147 μg/m^3)	0.075 ppm (147 μg/m^3)	
CO	8 hours	9.0 ppm (10 mg/m^3)	Non-Dispersive Infrared Spectroscopy	9 ppm (10 mg/m^3)	None	Non-Dispersive Infrared Spectroscopy
	1 hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
NO_2	Annual Average	0.030 ppm (56 μg/m^3)	Gas Phase Chemiluminescence	0.053 ppm (100 μg/m^3)	0.053 ppm (100 μg/m^3)	Gas Phase Chemiluminescence
	1 hour	0.18 ppm (338 μg/m^3)		--	--	
SO_2	Annual Average	--	Ultraviolet Fluorescence	0.03 ppm (80 μg/m^3)	--	Pararosaniline
	24 hours	0.04 ppm (105 μg/m^3)		0.14 ppm (365 μg/m^3)	--	
	3 hours	--		--	0.5 ppm (1300 μg/m^3)	
	1 hour	0.25 ppm (655 μg/m^3)		--	--	

Table 5.10-2 (cont.)
AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	California Standards		National Standards		
		Concentration	Measurement Method	Primary	Secondary	Measurement Method
PM_{10}	24 hours	50 μg/m^3	Gravimetric or Beta Attenuation	150 μg/m^3	150 μg/m^3	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 μg/m^3		--	--	
$PM_{2.5}$	Annual Arithmetic Mean	12 μg/m^3	Gravimetric or Beta Attenuation	15 μg/m^3	15 μg/m^3	Inertial Separation and Gravimetric Analysis
	24 hours	--		35 μg/m^3	35 μg/m^3	
Pb	30-day Average	1.5 μg/m^3	Atomic Absorption	--	--	Atomic Absorption
	Calendar Quarter	--		1.5 μg/m^3	1.5 μg/m^3	
Sulfates	24 hours	25 μg/m^3	Ion Chromatography	--	--	--
H_2S	1 hour	0.03 ppm (42 μg/m^3)	Ultraviolet Fluorescence	--	--	--
Vinyl Chloride	24 hours	0.010 ppm (26 μg/m^3)	Gas Chromatography	--	--	--
Visibility-reducing Particles	8 hours	Extinction coefficient of 0.23 per km - visibility of 10 miles or more due to particles when relative humidity is less than 70 percent	Beta Attenuation and Transmittance through Filter Tape	--	--	--

ppm= parts per million; μg/m^3 = micrograms per cubic meter; mg/m^3= milligrams per cubic meter
Source: CARB 2008

Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant. In December 2002, the San Diego County APCD submitted a maintenance plan for the 1-hour NAAQS for O_3 and requested re-designation from a serious O_3 non-attainment area to attainment. On July 28, 2003, the SDAB was reclassified as an attainment area for the 1-hour NAAQS for O_3. On April 15, 2004, the SDAB was classified as a basic nonattainment area for the 8-hour NAAQS for O_3. The SDAB is an attainment area for the NAAQS for all other

criteria pollutants. The SDAB is currently classified as a nonattainment area under the CAAQS for O_3 and PM_{10}.

Table 5.10-3, Attainment Classification and Number of Air Quality Violations at the Nearest Monitoring Station, provides a summary of the attainment status for each criteria pollutant within the SDAB and the number of air quality violations at the monitoring stations nearest to the site for the period from 2005 through 2007.

The 8-hour federal O_3 standard was exceeded once (in 2006) at the Kearny Mesa monitoring station during the time period from 2005 to 2007, and periodic exceedances of the state O_3 standards were observed. The state 24-hour PM_{10} standard was exceeded once at the Kearny Mesa monitoring station, but the exceedance occurred during the 2007 October fire events in San Diego County. The data from the monitoring station indicate that air quality at the Kearny Mesa and downtown San Diego stations are in attainment of all other federal standards.

Table 5.10-3
ATTAINMENT CLASSIFICATION AND NUMBER OF AIR QUALITY VIOLATIONS AT THE NEAREST MONITORING STATION

Pollutant	Averaging Time	Attainment Status		Number of Air Quality Violations		
		Federal	State	2005	2006	2007
O_3	8 hour	Nonattainment	Nonattainment	0 (N), 1 (C)	1 (N), 2 (C)	0 (N), 5 (C)
	1 hour	N/A	Nonattainment	0 (C)	1 (C)	0 (C)
PM_{10}	Annual Arithmetic Mean	Attainment	Nonattainment	(C)	(C)	(C)
	24 hour	Attainment	Nonattainment	0 (C)	0 (C)	1 (C)
$PM_{2.5}$	Annual Arithmetic Mean	Attainment	Nonattainment	(C)	(C)	(C)
	24 hour	Attainment	Nonattainment	0 (N)	0 (N)	0 (N)
NO_2	Annual	Attainment	Attainment	0	0	0
	1 hour	Attainment	Attainment	0	0	0
CO	8 hour	Maintenance	Attainment	0	0	0
	1 hour	Maintenance	Attainment	0	0	0
SO_2	Annual	Attainment	Attainment	0	0	0
	24 hour	Attainment	Attainment	0	0	0
	3 hour	Attainment	Attainment	0	0	0
	1 hour	Attainment	Attainment	0	0	0

Source: Scientific Resources Associated 2008
Note: (N) = NAAQS; (C) = CAAQS

The CARB also is responsible for the development, adoption and enforcement of the state's motor vehicle emissions program. The CARB also reviews operations and programs of the local air districts and requires each air district with jurisdiction over a nonattainment area to develop its own strategy for achieving the NAAQS and CAAQS.

The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources; development of air quality management plans; and adoption and enforcement of air pollution regulations. The APCD is the local agency responsible for the administration and enforcement of air quality regulations for San Diego County.

The Caltrans ITS Transportation Project-level Carbon Monoxide Protocol is applicable to this evaluation. The Protocol is designed to ensure that a transportation project action conforms to an approved or promulgated air quality implementation plan and to all applicable state and national ambient air quality standards. In accordance with the Protocol, an affirmative regional conformity determination must be made before a project may proceed. An affirmative determination can be made if the project is included in the RTP for the area and if the project has not been altered in design concept or scope from that described in the RTP.

5.10.2 Analysis of Issue 1: Air Quality

Issue 1: ***Would the Project affect the ability of the San Diego region to meet federal, state, and local air quality standards?***

5.10.2.1 Impact Thresholds

In accordance with City Significance Determination Thresholds (2007a), a significant impact will be identified if the Project would:

1. Conflict with or obstruct implementation of the applicable air quality plan. (City Significance Determination Threshold a.)
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation. (City Significance Determination Threshold b.)
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including release emissions which exceed quantitative thresholds for O_3 precursors). (City Significance Determination Threshold c.)
4. Expose sensitive receptors to substantial pollutant concentrations including air toxics such as diesel particulates. (City Significance Determination Threshold d.)
5. Create objectionable odors affecting a substantial number of people. (City Significance Determination Threshold e.)
6. Release substantial quantities of air contaminants beyond the boundaries of the premises upon which the stationary source emitting the contaminants is located. (City Significance Determination Threshold f.)

The City Significance Determination Thresholds also note that federally supported transportation projects must demonstrate conformity with the State Implementation Plan (SIP) to ensure that new transportation projects would not jeopardize air quality in nonattainment areas.

The City has adopted screening criteria for potential significance based on the APCD Rule 20.2. These criteria are shown in Table 5.10-4, Air Quality Screening Criteria.

Table 5.10-4
AIR QUALITY SCREENING CRITERIA

Pollutant	Emission Rate		
	lbs/hr	lbs/day	tons/year
CO	100	550	100
NO_x	25	250	40
PM_{10}	-	100	15
SO_x	25	250	40
Pb	-	3.2	0.6
ROC	-	137	10

Source: Scientific Resources Associated 2008

In the event that emissions exceed the screening criteria presented in Table 5.10-4, air dispersion modeling may be used to evaluate whether the emissions have the potential to violate any air quality standard or result in a cumulatively considerable net increase of any criteria pollutant for which the region is categorized as nonattainment. Pb is not emitted from any construction or operation associated with the Project; therefore, emissions of Pb were not addressed in this analysis.

5.10.2.2 Impact Analysis

The impact analysis was designed to address the potential for significant impacts to the ambient air quality due to both construction (based on use of heavy equipment and fugitive dust emissions) and operational emissions (associated with traffic).

Consistency with the Applicable Air Quality Plan

The SR 163/Friars Road Interchange Project is included in SANDAG's Final 2030 RTP under the Revenue Constrained Plan, for which the FHWA issued its finding of conformity on April 22, 2005. The RTP specifically lists the Friars Road interchange as a Regionally Funded System Interchange Project. The Project also is included in Amendment No. 10 to the 2008 RTIP, for which the FHWA issued its finding of conformity on June 9, 2009; in Amendment No. 15, for which FHWA issued its finding

of conformity on November 24, 2009; and in amendment No. 16, for which an FHWA conformity finding is pending.

The Project would:

- Not interfere with the implementation of any applicable Transportation Control Measures adopted for the air basin. *No specific Transportation Control Measures apply to the Project, nor are there any Transportation Control Measures required or adopted in the SIP.*
- Not conflict with the currently conforming transportation plan or transportation improvement plan. *The Project is included in Amendment No. 10 to the 2008 RTIP and is fully funded. It would therefore not conflict with the plans, programs and goals contained therein.*
- Not cause or contribute to any new localized CO or PM_{10} violations or increase the frequency or severity of any existing CO or PM_{10} violations in CO and PM_{10} nonattainment and maintenance areas. *The study area is not in a federal PM_{10} nonattainment area. CO and PM_{10} "hot spots" modeling was conducted to demonstrate that no impacts related to these pollutants would result from the Project (as presented below).*
- Be consistent with the current emissions budget contained in the implementation plan. *Because the Project would not generate additional traffic but would serve to reduce traffic impacts, it would be consistent with the emissions budget.*

Based on the above considerations, the Project would not conflict with or obstruct implementation of the applicable air quality plan.

Construction Impacts

Emissions of criteria pollutants associated with construction of roadway improvements would include fugitive dust generation from site grading and preparation, heavy construction equipment exhaust emissions, emissions associated with truck traffic bringing construction materials to the site, and construction worker vehicle travel. To estimate emissions associated with construction of the Project, emission factors for construction from the OFFROAD model were used. For purposes of conservative modeling, emission factors for San Diego County for 2008 were used to estimate emissions from heavy equipment.

Several assumptions were made related to construction activities for determining potential construction impacts. It was assumed that the Project would be constructed in three phases. The construction phases, which would collectively take approximately 40 months to complete, are described in Section 3.2.9.3, Construction Phases.

It was assumed that heavy construction equipment would operate at the site for a total of 10 hours per day, 6 days per week. Furthermore, it was assumed that a maximum of 1.0 acre per day would be graded during phases 1 and 2 of Project construction. The South Coast Air Quality Management District (SCAQMD) emission factor of

26.4 pounds/acre/day (SCAQMD 1993 CEQA Air Quality Handbook, Table 9-9) was used to provide an estimate of the PM_{10} emissions associated with grading during phases 1 and 2. It was further assumed that emissions would be controlled through watering and dust control measures at the site and that the control efficiency of these measures would be 51 percent.

Emissions associated with earthmoving activities were estimated using the SCAQMD's emission factor of 0.02205 pounds/ton of material moved, assuming a cubic yard of material weighs approximately 1.6 tons. It was assumed that maximum daily earthmoving activity would be approximately 818 cubic yards.

It was assumed that 45 workers would be required for phases 1 and 2; construction worker requirements for phase 3 are based on the various stages and are shown in Appendix A of the Air Quality Technical Report in Appendix I of this EIR. It was further assumed that a maximum of 15 trucks per day would be required to transport construction materials, concrete and asphalt to the site, and 30 trucks per day would be required during construction for phase 3. Because of the proximity of the construction site to sources of concrete and asphalt, it was assumed that trucks would travel a round trip distance of 1.0 mile.

Table 5.10-5, Estimated Construction Emissions, provides a summary of maximum emission estimates. For purposes of a providing a conservative assessment of potential impacts, the maximum daily emissions for each criteria pollutant occurring in any construction stage are presented in the table.

Table 5.10-5
ESTIMATED CONSTRUCTION EMISSIONS (lbs/day)

Emission Source	CO	ROC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Phase I						
Site Grading Fugitive Dust	-	-	-	-	12.94	2.72
Earthmoving Fugitive Dust	-	-	-	-	49.69	10.43
Heavy Construction Equipment	112.33	28.99	261.95	0.25	11.25	10.01
Worker Travel – Vehicle Emissions	18.27	1.36	1.85	0.02	0.14	0.14
Construction Truck Emissions	0.24	0.06	0.61	0.00	0.03	0.03
TOTAL	**130.84**	**30.41**	**264.41**	**0.27**	**74.05**	**23.33**
Significance Criteria	550	137	250	250	100	55
Significant?	*No*	*No*	*Yes*	*No*	*No*	*No*

Table 5.10-5 (cont.)
ESTIMATED CONSTRUCTION EMISSIONS (Tons/yr)

Emission Source	CO	ROC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Phase II						
Site Grading Fugitive Dust	-	-	-	-	12.94	2.72
Heavy Construction Exhaust Emissions	243.74	74.20	556.44	0.57	32.44	28.87
Worker Travel – Vehicle Emissions	18.27	1.36	1.85	0.02	0.14	0.14
Construction Truck Emissions	0.24	0.06	0.61	0.00	0.03	0.03
TOTAL	**262.25**	**75.62**	**558.90**	**0.59**	**45.55**	**31.76**
Significance Criteria	550	137	250	250	100	55
Significant?	*No*	*No*	*Yes*	*No*	*No*	*No*
Phase III						
Heavy Construction Equipment	243.74	74.20	556.44	0.57	32.44	28.87
Worker Travel – Vehicle Emissions	18.27	1.36	1.85	0.02	0.14	0.14
Construction Truck Emissions	0.49	0.11	1.22	0.00	0.06	0.06
TOTAL	**262.50**	**75.67**	**559.51**	**0.59**	**32.64**	**29.07**
Significance Criteria	550	136	250	250	100	55
Significant?	*No*	*No*	*Yes*	*No*	*No*	*No*
Phase I						
Site Grading Fugitive Dust	-	-	-	-	0.78	0.16
Earthmoving Fugitive Dust	-	-	-	-	2.98	0.63
Heavy Construction Equipment	13.63	3.97	29.06	0.03	1.59	1.41
Worker Travel – Vehicle Emissions	3.34	0.25	0.34	0.003	0.025	0.025
Construction Truck Emissions	0.04	0.01	0.10	0.00	0.01	0.01
TOTAL	**17.01**	**4.23**	**29.50**	**0.033**	**5.39**	**2.24**
Significance Criteria	100	15	40	40	15	10
Significant?	*No*	*No*	*No*	*No*	*No*	*No*

Table 5.10-5 (cont.) ESTIMATED CONSTRUCTION EMISSIONS (Tons/yr)						
Emission Source	**CO**	**ROC**	**NO_x**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Phase II						
Site Grading Fugitive Dust	-	-	-	-	0.78	0.16
Heavy Construction Exhaust Emissions	17.08	4.95	37.95	0.04	2.09	1.86
Worker Travel – Vehicle Emissions	2.82	0.21	0.29	0.003	0.021	0.021
Construction Truck Emissions	0.02	0.01	0.06	0.00	0.003	0.003
TOTAL	**19.92**	**5.17**	**38.30**	**0.043**	**2.89**	**2.04**
Significance Criteria	100	15	40	40	15	10
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Phase III						
Heavy Construction Equipment	8.51	2.54	20.44	0.02	1.03	0.92
Worker Travel – Vehicle Emissions	3.34	0.25	0.34	0.003	0.025	0.025
Construction Truck Emissions	0.005	0.001	0.012	0.00	0.001	0.001
TOTAL	**11.86**	**2.79**	**20.79**	**0.023**	**1.06**	**0.95**
Significance Criteria	100	15	40	40	15	10
Significant?	*No*	*No*	*No*	*No*	*No*	*No*

Source: Scientific Resources Associated 2008

As shown in Table 5.10-5, the emissions associated with construction, including fugitive dust, heavy construction equipment, and construction workers commuting to and from the site, would be below the stated thresholds for all pollutants except NO_X (maximum pounds/day) under all phases of construction. Air dispersion modeling is not typically conducted for construction projects because construction emissions result in a short-term temporary impact that varies daily depending on the construction activities that occur during that day. Furthermore, NO_X is a regulated pollutant because it contributes to O_3 formation in the atmosphere, which is a basin-wide rather than a localized impact. There are single- and multi-family residential areas in the vicinity of the Project that could experience temporary impacts during construction. Because construction is a temporary event, no long-term significant impacts to the ambient air quality are anticipated. The short-term NO_X impact, however, is considered significant.

Operational Impacts

Impacts associated with operation of the Project would be confined to traffic-related emissions. The Project has been designed to alleviate traffic congestion at the SR 163/Friars Road interchange and along the SR 163 corridor. Because the Project has the potential to affect traffic at intersections in the vicinity, and because the Project involves reconfiguration of segments along the SR 163 corridor and associated surface streets, however, the potential for CO and PM_{10} "hot spots" was addressed. CO "hot spots" are typically evaluated when (a) the LOS of an intersection or roadway decreases to a LOS D or worse, and (b) sensitive receptors such as residences, commercial developments, schools, hospitals, etc. are located in the vicinity of the affected intersection or roadway segment. The air quality analysis was based on the Traffic Evaluation Report (LLG 2008a and 2008b; Appendix B), which addresses intersections, roadway segments and interchanges affected by the Project. The analysis includes intersections along Friars Road. The analysis also evaluates traffic flows on SR 163 from the Genesee Avenue interchange to the westbound I-8/Hotel Circle North connection; however, a specific intersection analysis was not conducted for the Genesee Avenue interchange because the existing operations at the interchange are LOS C, and with Project improvements the interchange would operate at LOS A.

CO Impact Analysis

The City Significance Determination Thresholds (2007a) state that the air quality analyst should select the most appropriate methodology to evaluate the potential for CO "hot spots" in consultation with City staff. In this case, the procedures in the Caltrans ITS Transportation Project-level Carbon Monoxide Protocol (Caltrans 1998a) were used because it was determined to be the most appropriate protocol given the nature of the Project. Modeling was conducted to calculate maximum predicted one-hour CO concentrations, which were then scaled to evaluate maximum predicted eight-hour concentrations, based on predicted traffic for the year 2030. To provide a conservative estimate of background CO concentrations, the maximum one-hour and eight-hour CO concentrations measured at the downtown San Diego monitoring station between 2005 and 2007 were used. (There are no CO monitoring data available for the Mission Valley area; however, because the downtown monitoring station is located in a similarly congested area, it is likely to be representative of conditions in Mission Valley.) Background CO concentrations in the future may be lower as inspection and maintenance programs and more stringent emission controls are placed on vehicles.

As shown in Table 5.10-6, Maximum Predicted CO Concentrations, the predicted CO concentrations (resulting from Project impacts plus background conditions) are below the NAAQS and CAAQS one-hour (20 parts per million [ppm] and 35 ppm, respectively) and eight-hour (9 ppm) standards for CO. CO "hot spots" analyses for all affected intersections were conservatively modeled assuming that a receptor could be located 33 feet from the intersection; impacts at actual sensitive receptors would be lower than the hypothetical receptors modeled in the analysis. No actual sensitive receptor is located within 33 feet of the Project; therefore, the analysis represents a conservative

estimate of impacts. No exceedances of the CO standard are predicted, and the Project would not cause or contribute to a significant violation of the CO air quality standard. Because the Project would not be anticipated to have significant regional impacts on CO, it also would not be anticipated to have significant regional impacts on O_3.

Table 5.10-6
MAXIMUM PREDICTED CO CONCENTRATIONS

Impacts	CO Concentrations (ppm)	
	AM	PM
1-Hour	11.6	11.5
8-Hour	5.74	

Source: Scientific Resources Associated 2008

According to the Traffic Evaluation Report (LLG 2008a), freeway weave operations on SR 163 would improve under the Project, relative to conditions without the Project. The freeway weave is predicted to operate at LOS E in the a.m. peak hour and LOS F in the midday and p.m. peak hours without the Project, whereas they are expected to improve to LOS B in the a.m. and midday peak hour and LOS C in the p.m. peak hour under the Project. Thus, the Project would improve the LOS and would decrease the potential for CO "hot spots" along the freeway weave segment.

PM_{10} and $PM_{2.5}$ Impacts

As described in Section 5.10.1.2, the SDAB in not currently violation of the federal PM_{10} or $PM_{2.5}$ standard. The study area is not located in any area with unusually high levels or unusual sources of PM_{10} that would lead the cumulative effects of the Project to contribute to a violation of the PM_{10} standard. The Project would not result in increases in the number of diesel vehicles utilizing the interchange. Furthermore, the Project would not result in any increases in traffic volumes. Rather, the purpose of the Project is to improve traffic flows and thus reduce emissions associated with idling due to traffic congestion. It would, therefore, reduce the potential for significant impacts related to PM_{10} "hot spots."

Mobile Source Air Toxics

The purpose of this Project is to reduce current and future delay experienced by drivers traveling through the SR 163/Friars Road interchange. The Project would not result in any meaningful changes in traffic volumes, vehicle mix, location of the existing facility or any other factor that would cause an increase in emissions impacts relative to conditions without the Project. The Project would generate minimal air quality impacts for CAA criteria pollutants and would not be linked with any special mobile source air toxics concerns. Moreover, USEPA regulations for vehicle engines and fuels are projected to cause overall mobile source air toxics to decline significantly over the next

20 years. Even after accounting for a 64 percent increase in vehicle miles traveled, FHWA predicts mobile source air toxics emissions will decline in the range of 57 percent to 87 percent, from 2000 to 2020, based on regulations now in effect. This will both reduce the background level of mobile source air toxics, as well as the possibility of even minor mobile source air toxics emissions from the Project.

Odors

Construction equipment and trucks used to transport material and equipment to and from the Project construction area would emit exhaust that may be considered objectionable to some people. However, these odors dissipate relatively rapidly and typically remain within proximity of the equipment and vehicles. Odors associated with Project construction would be temporary and not considered substantial.

The Project facilities would convey trucks that would emit diesel exhaust during its operational life. The Project would neither increase the amount of overall traffic conveyed by the subject roadways, nor would it increase the proportion of users that are diesel trucks. As a result, the Project is not anticipated to create objectionable odors affecting a substantial number of people.

5.10.2.3 Significance of Impact

The Project would result in short-term significant impacts related to emissions of NO_X during the construction period. The remaining construction and operational impacts related to air quality and odors would be less than significant. Since the Project would improve traffic flows, emissions associated with idling due to traffic congestion ultimately would be reduced, resulting in a beneficial effect.

5.10.2.4 Mitigation Measures

The mitigation measure below would partially mitigate significant short-term emissions of NO_X during the construction period. Although it would not reduce impacts to below a level of significance, it is considered to represent the maximum feasible mitigation at this time. The requirement that 10 percent of the construction fleet be retrofit and/or repowered was determined to be a reasonable requirement based on the amount of contractors whose fleets have already been retrofit and engines repowered as a result of the local and neighboring Carl Moyer Programs. Specifically, these programs are funded by the state through the CARB and/or local air pollution/air quality districts, and involve efforts for local construction equipment fleets to reduce air quality impacts through measures such as fleet modernization, repowering existing vehicles, and idling reduction. Conformance with appropriate Carl Moyer Programs would be included as a requirement in Project construction contracts to ensure implementation, as applicable (i.e., many local construction contractors have likely already implemented such measures).

AQ-1 Ten percent of the Project construction fleet shall use any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters and/or CARB certified Tier I, II or III equipment.

5.11 PUBLIC FACILITIES AND SERVICES

5.11.1 Existing Conditions

Field investigations by Dokken, as well as review of right-of-way maps, as-built records and design drawings from recently completed road construction projects indicate the presence of water, wastewater, electrical, gas, telephone, fiber optic and cable television facilities in the area. In addition, streetlights and underground traffic signal and metering facilities are located in the study area.

5.11.1.1 Affected Environment

Utilities

Water Services

The City of San Diego Water Department (SDWD) provides water services in the study area. There are 10 identified underground water lines in the study area including the following:

- 16.0-inch-diameter asbestos-cement (AC) water pipe within Friars Road.
- 16.0-inch-diameter cement-lined ductile iron water pipe within Ulric Street.
- 12.0-inch-diameter AC water pipe entering Fashion Valley Center from Friars Road.
- 12.0-inch-diameter AC water pipe within Frazee Road.
- 12.0-inch-diameter AC water pipe within Murray Canyon Road.
- 12.0-inch-diameter polyvinyl chloride water pipe within Hazard Center from Frazee Road.
- 12.0-inch-diameter AC water pipe within Hazard Center from Hazard Center Drive.
- 8.0-inch-diameter AC water pipe within Hanford Drive.
- 12.0-inch-diameter AC water pipe within Camino de la Reina.
- 12.0-inch-diameter AC water pipe crossing SR 163 at Fulton Street.
- Various abandoned water pipes may exist underground in the study area.

Wastewater Services

The City of San Diego Metropolitan Wastewater Department (MWWD) provides wastewater treatment services in the study area. There are five identified underground wastewater lines in the study area including the following:

- 18.0-inch-diameter vitrified clay pipe (VCP) East Linda Vista Trunk Sewer underground within Ulric Street to Friars Road and south through Fashion Valley Center.
- 78-inch-diameter plastic-lining-reinforced concrete pipe North Mission Valley Interceptor Sewer underground within Hazard Center Drive, extending parallel to the Mission Valley West Trolley.
- 33-inch-diameter VCP Kearny Mesa Trunk Sewer underground in Frazee Road then runs south, crosses Friars Road, continues south parallel to SR 163 and empties into the North Mission Valley Interceptor Sewer.
- 8.0-inch-diameter VCP that flows south underground from Hanford Drive, crosses SR 163 and empties into the Kearny Mesa Trunk Sewer.
- Various abandoned wastewater pipes may exist underground in the Project area.

Streetlights

The City maintains streetlight facilities on many streets in the study area and shares responsibility with Caltrans for maintenance of streetlights on the on-/off-ramps that connect the City streets with SR 163. Caltrans maintains lights on SR 163.

Traffic Signal and Metering Facilities

Caltrans maintains underground traffic signal and metering facilities serving SR 163. The City Street Division is responsible for traffic signals at the many intersections in the study area.

Gas and Electric Services

Electricity and natural gas service in the City of San Diego are provided by San Diego Gas & Electric (SDG&E). Aerial electric transmission lines and aerial and underground electric distribution facilities are present in the study area. SDG&E has several high-voltage regional overhead electric transmission facilities in the vicinity of the SR 163/Friars Road interchange that generally cross the study area in a northeasterly direction to the north of Friars Road. These electric facilities include:

- Two 230 kilovolt (kV) overhead electric transmission line circuits (circuits TL230280 and TL23027).
- One 138 kV overhead electric transmission line circuit (circuit TL13810).
- One 69 kV overhead electric transmission line circuit (circuit TL670).

Two tall transmission line towers are located within the southbound SR 163 on-ramp loop in the northwest interchange quadrant. One overhead electric transmission line also crosses SR 163 at Fulton Street. The current vertical clearance at this point is approximately 72 feet. In addition, underground electric distribution facilities are located

within Friars Road, Fashion Valley Road, Hazard Center Drive, Camino de la Reina, Frazee Road, Murray Canyon Road and Hanford Drive.

Gas transmission and distribution facilities also exist in the Project area. An underground 20-inch diameter high-pressure natural gas transmission main is located within Friars Road; it crosses SR 163 just north of Friars Road and continues within Murray Canyon Road. Gas distribution pipes are found within Friars Road, Fashion Valley Road, Hazard Center Drive, Frazee Road, Murray Canyon Road and Hanford Drive.

Telecommunications Services

Cable Television. Cox Communications maintains cable television facilities routed under SR 163 within Camino de la Reina, and Time Warner Cable's cable television facilities are routed underground within Hanford Drive.

Telephone. Telephone facilities in the study area belong to AT&T (formerly SBC). They include underground lines within Friars Road, Ulric Street, Frazee Road, Murray Canyon Road and Hanford Drive, and lines extending parallel to southbound SR 163 south of the Trolley Bridge. Abandoned telephone facilities also may exist underground.

Fiber Optics. AT&T, Level 3 Communications, MCI WorldCom, XO Communications, GST and ICG Communications all maintain underground fiber optic cabling in the study area. AT&T's and ICG Communications' fiber optic cabling are both routed underground through SBC conduits and manholes within Ulric Street; ICG Communications also has cabling routed underground through SBC conduits and manholes that extend north within Frazee Road and turn east within Friars Road. Level 3 Communications, XO Communications, and GST all maintain fiber optic facilities within Friars Road and Ulric Street, while MCI WorldCom's fiber optic facilities are located underground within Frazee Road and Friars Road to Mission Center Road.

Storm Water Drainage

A storm water pump station is located at the north side of Camino de la Reina near the existing SR 163 Bridge to drain the sump at that locale. Please refer to Section 5.3, Hydrology/Water Quality, for further information regarding the storm water drainage system in the study area.

Solid Waste Disposal

The City's primary landfill is the Miramar Landfill. It is an environmentally secure landfill, in which the refuse is covered on a daily basis in conformance with regulatory and environmental requirements, and closed areas are revegetated with native plants. Construction-generated solid waste that cannot be recycled is transported to the Miramar Landfill. According to the Integrated Waste Management Board, as of April, 2008, the Miramar Landfill (aka West Miramar Sanitary Landfill) had a remaining capacity of

approximately 87.76 million cubic yards of solid waste. It is anticipated that the Miramar Landfill will reach its maximum capacity and is projected to close after 2017.

Public Services

Fire Protection and Emergency Medical Services

The Project site is located within the service area of the City Fire-Rescue Department. The San Diego Fire-Rescue Department uses the National Fire Protection Association 1720: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments, for the initial response of fire suppression recourse, four-person engine company within five minutes and an effective fire force, 15 firefighters within nine minutes. Additionally, the General Plan calls for a response time of five minutes 90 percent of the time for the first-in engine or emergency vehicle, and a response time of nine minutes 90 percent of the time for full alarm and advanced life-support services. The City Fire-Rescue Department's goal is one firefighter per 1,000 citizens. It is currently at 0.7 firefighter per 1,000 residents. The Fire-Rescue Department includes one paramedic on each engine or truck at all times; therefore, response times from stations for trucks and engines are the same for emergency response personnel. The City's ambulance standard is 12 minutes.

As stated in Section 2.4, Emergency Services, the two closest fire stations to the study area are Fire Stations 5 and 23; in addition, Fire Stations 8, 28 and 45 are in the vicinity of the study area. Fire Station 5 is located at 3902 9th Avenue in Hillcrest (approximately 2.0 miles south of the SR 163/Friars Road interchange) and has a battalion chief vehicle, fire engine and utility rig. Fire Station 23 is located about 1.2 miles from the Friars Road/Ulric Street intersection at 2190 Comstock Street near Linda Vista Road and Ulric Street and has a fire engine. Fire Station 8 is located at 3974 Goldfinch Street, Fire Station 28 is located at 3880 Kearny Villa Road, Fire Station 36 is located at 5855 Chateau Drive and Fire Station 45 is located at the Qualcomm Stadium parking lot. Table 5.11-1, San Diego Fire-Rescue Department Area Stations and Average Response Times, lists the three fastest expected response times (by station) to prominent, centrally located intersections within each of the three community planning areas in the Project regional study area. Each of the six stations within the Project vicinity provides engine response; however, only Station 28 provides aerial truck response and only Station 5 provides Battalion Chief response. The response times to each of the community planning areas for these two services also are listed below. A new fire station has been approved for construction at 9366 Friars Road.

Table 5.11-1
SAN DIEGO FIRE-RESCUE DEPARTMENT AREA STATIONS AND AVERAGE RESPONSE TIMES

Service Type	Station	Response Time (minutes)[1]		
		Linda Vista[2]	Mission Valley[3]	Serra Mesa[4]
Engines	5	---	4.1	---
	8	---	5.3	---
	23	1.5	4.2	6.5
	28	5.0	---	3.0
	36	6.3	---	---
	45	---	---	5.6
Aerial Trucks	28	5.0	5.8	3.0
Battalion Chief	5	6.4	7.0	8.1

Notes:
[1] Response times calculated using Emergency Response Management System (ERMS) point-to-point routing application; using the road network, a path is created from the fire station location to the address and includes turnout time.
[2] Intersection of Linda Vista Road and Ulric Street.
[3] Intersection of Friars Road and Ulric Street.
[4] Intersection of Murray Ridge Road and Sandrock Road.
Source: San Diego Fire-Rescue Department 2009

Police Protection

The SR 163/Friars Road interchange is located within the service area of the City of San Diego Police Department. The General Plan identifies the Police Facilities Plan as the resources document for Police Department Standards. The Police Facilities Plan establishes a seven-minute average response time as a department goal. The City presently maintains a City-wide ratio of 1.5 sworn personnel per 1,000 residents.

As stated in Section 2.4, Emergency Services, SR 163 is the dividing line between the Western Division and the Eastern Division of the SDPD. Study area facilities located on the west side of SR 163 in the neighborhoods of Mission Valley West and Linda Vista are served by the Western Division, located at 5215 Gaines Street (near Friars Road) approximately 1.7 miles west of the SR 163/Friars Road interchange. Study area facilities located on the east side of SR 163 in the neighborhoods of Mission Valley East and Birdland are served by the Eastern Division, located at 9225 Aero Drive, approximately 4.3 miles from the SR 163/Friars Road interchange.

The SDPD currently utilizes a five-level priority dispatch system, with priority E (Emergency), One, Two, Three and Four (lowest priority) calls. The calls are prioritized by the phone dispatcher. Priority E and One calls involve serious crimes in progress or those with a potential for injury. Priority Two calls include vandalism and property crimes. Priority Three includes calls after a crime has been committed, such as burglaries and noise calls (e.g., loud music and dogs barking). Priority Four calls include nuisance calls, such as children playing in the street or lost and found reports. Table 5.11-2, SDPD

Call Priority Response Time Goals and Actual Responses, lists the department's response time goals, as well as 2008 average response time for calls City-wide and within the Serra Mesa (Beat 311), Birdland (Beat 314), Mission Valley East (Beat 326), Linda Vista (Beat 621), and Mission Valley West (Beat 623) communities.

Table 5.11-2
SDPD CALL PRIORITY RESPONSE TIME GOALS AND ACTUAL RESPONSES

Priority of Call	Response Time (in minutes)						
	SDPD Goal	City-wide	Beat 311	Beat 314	Beat 326	Beat 621	Beat 623
E	7	6.6	5.8	8.3	7.4	7.4	6.9
One	12	13.1	11.7	12.8	12.6	13.6	11.4
Two	30	24.4	24.0	28.7	21.3	26.6	25.4
Three	90	63.1	54.6	48.9	53.2	60.2	64.0
Four	90	60.2	33.5	45.2	57.9	60.2	59.4

Source: San Diego Police Department 2009

5.11.1.2 Regulatory Setting

Utilities

Public utilities, such as water and gas distribution lines, are often placed within streets that are franchised public right-of-way. Pursuant to the Public Utilities Code, "A district may construct works across or along any street or public highway, or over any of the lands which are the property of the state, and it shall have the same rights and privileges appertaining thereto as are granted to municipalities within the State. The district shall restore any such street or highway to its former state as near as may be … and shall not use it in a manner to unnecessarily impair its usefulness" (Public Utilities Code, Section 12808).

Solid Waste Disposal

City policies require recycling (diversion) programs aimed at reducing the amount of waste to be deposited at local landfills. The enactment of California's Integrated Waste Management Act of 1989 (also known as Assembly Bill 939) further increased the amount of recycling required by the City, requiring at least 50 percent waste reduction by the year 2000. Waste reduction and recycling programs have been implemented to enable the City to achieve a 64 percent diversion rate in 2008. The City of San Diego Municipal Code also includes several regulations aimed at avoiding the potential consequences of failing to comply with AB 939. Specifically, compliance with the Construction and Demolition Ordinance (§66.0601-66.0610), Recycling Ordinance (§66.0701-66.0718) and Storage Regulation (§142.0801-142.0830) are mandatory. Submittal of a Waste Management Form with the building permit or demolition/removal

permit must provide a general estimate of the total waste generated by the Project, including how much will be recycled. The Construction and Demolition Ordinance also requires a minimum diversion rate of 50 percent for building permits or demolition/removal permits issued within 180 calendar days of the effective date of the ordinance, and a minimum diversion rate of 75 percent for building permits or demolition/removal permits issued after 180 calendar days from the effective date of the ordinance; provided that a certified recycling facility accepting mixed construction and demolition debris operates within 25 miles of the City Administrative Building.

5.11.2 Analysis of Issue 1: Utilities and Solid Waste

Issue 1: ***Would the proposed Project result in a need for new systems, or require substantial alterations to existing facilities, including the following: power/energy, natural gas, communications systems, water, sewer or storm water drainage and solid waste disposal?***

5.11.2.1 Impact Threshold

In accordance with City Significance Determination Thresholds (2007a), a significant impact to utilities and solid waste may be found if the Project would:

1. Conflict with the community plan in terms of the number, size and location of public service facilities.
2. Result in direct impacts from the construction of new or expanded public utilities needed to serve the Project.
3. Cause a significant increase in demand for electrical power, natural gas services, water services, wastewater services, communication services, storm drains or solid waste disposal services.
4. Result in direct impacts from the removal, construction, or relocation of a utility facility.
5. Propose predominantly non-drought-resistant landscaping and excessive water usage for irrigation and other purposes. (City Significance Determination Threshold 6.1.)

5.11.2.2 Impact Analysis

Utilities

The Project would not place increased permanent or temporary demands on water, wastewater or other utilities in the area. In particular, the Landscape Concept Plan for the Project (refer to Subsection 3.2.6 of this EIR) includes primarily drought-resistant landscaping that would not put excessive demands on water usage.

The Project would not involve the construction of new or expanded public utilities. It would not, therefore, conflict with the applicable community plans in terms of the number, size and location of public service facilities.

The storm water pump station adjacent to Camino de la Reina would be protected in place. The Project has been specifically designed to avoid the high voltage regional overhead transmission conductors and towers. Were such avoidance not possible, an alternative other than the Project likely would be proposed. Approximately 43 feet of vertical clearance would be maintained between the flyover bridge and the overhead transmission lines, and 7.5 feet of horizontal clearance would be maintained between the flyover bridge and the existing adjacent electrical transmission tower. The Project also has been designed to provide the minimum 30 feet of clearance that SDG&E requires between its steel transmission poles and the toe of any fill slope.

While no major power line (e.g., high-voltage regional transmission lines), gas line, water line or wastewater line relocations are planned, the Project would require the removal or relocation of several of the local utility facilities described in Subsection 5.11.1.1. In particular, approximately 100 to 150 feet of the 20-inch diameter high-pressure natural gas transmission main in Friars Road may have to be relocated. The exact location of the gas line would be determined by potholing during the detailed project design phase. If a conflict is found, relocation plans would be made at that time. Options for relocation of the gas line include placing it in a widened bridge, relocating it to travel under the footing of the tieback wall, or relocating it to run parallel to the tieback wall. Any relocation is anticipated to occur within the disturbance footprint analyzed in this EIR. All gas, water and wastewater facilities that have risers, valves or boxes at surface level near the proposed Friars Road widening also would be relocated.

Notices to relocate would be required for each company that owns or operates existing utility facilities that are in conflict with areas of proposed work. As a matter of standard practice, utility providers do not prepare plans for utility relocation until they know that a particular roadway design will be implemented (i.e., until the Planning Commission or City Council certifies the environmental document and approves a project). The specific locations where utility lines would be relocated are therefore unknown at this time, and would be determined during final Project design. It is anticipated, however, that the relocations would occur within the proposed roadbed or, at a minimum, within the evaluated Project impact footprint. It is therefore not anticipated that such relocations would result in environmental impacts beyond those evaluated in this EIR. That would be confirmed through a conformity review at the time utility relocation plans are available. If additional CEQA documentation (e.g., an addendum) is necessary, it would be prepared at that time.

Encroachment permits would be obtained to enter utility rights-of-way to perform relocation work. The relocation of underground water or wastewater lines would be conducted by City water or wastewater authorities in conjunction with Project construction activities and would be undertaken in such a manner as to avoid contamination of drinking water. No significant interruptions of service are anticipated as the relocations would be accomplished in accordance with routing protocols for roadway improvements.

It should be noted that it is the sole responsibility of the constructors of the Project to rectify any damage caused to or by public water facilities within the Project area due to the construction activities associated with the Project. Water facilities would be protected in place at all times until completion of the Project. In the event any such facility loses integrity, the constructor would reconstruct any damaged public water facility in a manner satisfactory to the City's Water Department Director and the City Engineer.

Solid Waste Disposal

This Project is estimated to produce 220,000 tons of waste, which will have a significant impact on the solid waste disposal services during the demolition and construction phases of the Project. Since inert building materials are especially recyclable, a diversion rate of 75 percent should be targeted during the construction and demolition phase. This can be achieved through source separation of materials on site to be reused on premises or taken to a City-certified recycling facility. In order to receive full return of the Construction and Demolition Deposit, an overall diversion rate of 50 to 75 percent must be documented and verifiable.

5.11.2.3 Significance of Impact

No new systems are proposed for the Project, and there would be no excessive use of fuel, energy, power or water associated with the construction or long-term operation of the relocated utilities. Future utility relocation plans would be subject to conformity/CEQA review at the time specific details are available. Temporary impacts associated with demolition and construction waste disposal are considered significant.

5.11.2.4 Mitigation Measures

Implementation of the following mitigation measures would reduce short-term impacts related to demolition and construction waste disposal to less than significant levels.

PF-1 The Project shall implement a Waste Management Plan, which would minimize the Project's solid waste impact and ensure compliance with applicable policies and regulations. The plan shall address demolition and construction phases of the Project, as applicable. Measures may include reducing waste disposal and/or implementing compensatory measures, such as use of materials with post-consumer content. The plan must be approved by the City's Environmental Services Department.

5.11.3 Analysis of Issue 2: Public Services

Issue 1: ***Would the proposed Project substantially affect fire-rescue or police response times (i.e., increase the existing response times in the Project area)?***

5.11.3.1 Impact Threshold

According to the City's Significance Determination Thresholds (2007a), the analysis should address a project's potential to conflict with the community plan in terms of the number, size, and location of public service facilities. If a conflict exists, the applicant should determine direct impacts from the construction of proposed new public service facilities needed to serve the project.

5.11.3.2 Impact Analysis

Currently, average fire-rescue response times to prominent intersections in the three community planning areas within the Project vicinity are all at or below five minutes, meeting the standard response time standards established by the National Fire Protection Association. The average response time for the six SDPD beats within the Project vicinity for emergency calls is 7.07 minutes, which does not meet the SDPD Call Priority Response Time Goals.

At the present time, significant response time deficiencies due to the lack of personnel or equipment can only be resolved by continued mandatory approval by City Council. Response time deficiencies are not a CEQA concern but rather a budgetary issue. Individual projects cannot be required to fund ongoing operational costs of public services, nor can they make budgetary decisions regarding such funding.

Regardless, travel lanes would remain open on all roadways and on the freeway, or appropriate adjacent routing would be provided for emergency access during constructions. Even where traffic may become congested during construction, it is anticipated that drivers would yield to emergency vehicles in accordance with the law. Therefore, impacts to emergency access during construction would not be expected to occur.

Project implementation would not result in an increased demand for fire-rescue or police services, and would not directly affect emergency response. After Project completion, traffic would be less congested, representing a benefit to emergency services.

5.12 HAZARDOUS MATERIALS

Dokken, in cooperation with Environmental Data Resources, Inc., prepared a Hazardous Waste Initial Site Assessment (ISA) for the Project, dated December 22, 2004. In addition, Southern California Soil and Testing, Inc. prepared a Report of Environmental Site Assessment for Aerially Deposited Lead (ADL) for the study area, dated November 19, 2003. This section summarizes the findings of these two reports, which are included in Appendix K to this EIR.

5.12.1 Existing Conditions

5.12.1.1 Affected Environment

A number of resources were consulted in order to identify existing locations and types of hazardous materials within the study area. These included review of historical 1953 to 1994 aerial photographs; review of available regulatory information to identify possible past or present environmental violations or problems; agency records search to identify California-certified hazardous waste sites; agency records search to identify business types likely to store, transfer or use large quantities of hazardous materials; and field reconnaissance on January 26 and April 26, 2004. During the 2004 field reconnaissance, no limiting conditions such as weather, facility access, physical obstruction, bodies of water, or other obstacles restricted or prevented any aspect of the environmental site assessment investigation.

The records search and regulatory review in the ISA revealed several spill or release sites in or near the study area that are listed on local, state or federal hazardous materials databases. Past violations were minor, and/or appropriate remedial actions were taken or are underway. No Superfund sites were identified during the records search.

During the site visit, it was confirmed that the Hazard Center Auto Mart has nine underground fuel storage tanks and residual oil surface staining from tune-ups, brake work and oil changes performed at the service station. A release from this service station would have the potential to impact the study area. One incident in October 1987 involving a leaking underground storage tank (UST) at the gasoline/diesel fuel service station Hazard Center Auto Mart, located at 7698 Friars Road (adjacent to Frazee Road), where the UST apparently did contaminate a local groundwater aquifer. The incident is still under investigation, with groundwater at the site being monitored and reports being generated on a quarterly basis. The ISA concluded that this incident and other past incidents would not pose a threat to the environmental integrity of the study area.

Small amounts of debris items such as discarded paper, plastic bags and other pieces of benign trash were observed throughout the study area, but no evidence of hazardous materials, clarifiers, sumps, distressed vegetation, substantial staining, or spills were detected (Appendix K).

Due to the location of the Project in an area subject to leak deposition from existing vehicular activity at freeway intersections, a Report of Environmental Site Assessment for Aerially Deposited Lead was prepared for the study area. To determine the presence or absence of ADL, in September 2003, 126 soil samples were collected at 42 locations from depths of 0.5 foot, 1.0 foot and 2.0 feet. Soil samples were analyzed for total lead content in a state-accredited laboratory. All sampling and analysis was completed in accordance with USEPA requirements. Further information on the sampling methodology used and the statistical analysis of data are included in Appendix K of this EIR. Of the 126 soil samples tested, 93 samples were determined to have lead concentrations greater than or equal to 50 milligrams per kilogram (mg/kg), which are considered substantial lead concentrations and inappropriate for uncontrolled re-use. Re-use and proper disposal of excavated soil is described in Subsection 5.12.2.2, below.

5.12.1.2 Regulatory Setting

Several sets of laws and regulations are applicable to hazardous materials-related environmental concerns (Table 5.12-1, Regulatory Agency Responsibility Matrix).

Federal

The 1972 Federal Water Pollution Control Act established a federal framework for the regulation of water quality. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), also known as "Superfund," and the Superfund Amendments and Reauthorization Act of 1986 (SARA) provide a federal framework for setting priorities for cleanup of hazardous substances releases to air, water and land. This framework provides for the regulation of the cleanup process, cost recovery, response planning and communication standards. The federal Resource Conservation and Recovery Act of 1976 (RCRA) established the authority of the USEPA to develop regulations to track and control hazardous substances from their production, through their use, to their disposal. The USEPA has the authority under RCRA to authorize states to implement the requirements of RCRA, and California is a RCRA-authorized state. Title 40 of the CCR Part 280 establishes technical standards and corrective action requirements for owners and operators of USTs under RCRA.

State

The Porter-Cologne Water Quality Act (California Water Code Section 13000) established the authority of the SWRCB and provided the RWQCB with the primary responsibility for the control of water quality in California. The California Health and Safety Code establishes legal requirements for control and management of hazardous wastes (Chapter 6.5), aboveground storage tanks (Chapter 6.6), and USTs.

CCR Title 22, Division 4.5, provides state requirements for the classification, management and cleanup of hazardous waste sites. CCR Title 27, Division 3, Chapter 15, establishes minimum requirements for proper waste management treatment, storage, or disposal in landfills, surface impoundments, waste piles and land treatment facilities.

The regulations in CCR Title 23, Division 3, Chapter 16, establish requirements regarding the management of USTs for the protection of state waters from hazardous substances discharges.

Table 5.12-1
REGULATORY AGENCY RESPONSIBILITY MATRIX

Law	Purpose	Federal	State	County	City
Clean Air Act (CAA)	Restore air quality	USEPA	California Air Resources Board	Air Pollution Control District	--
CWA	Restore water quality	USEPA	SWRCB	RWQCB	--
RCRA	Hazardous waste regulation	USEPA	Department of Toxic Substances Control	Department of Environmental Health	Fire Department
CERCLA	Cleanup of hazardous waste sites	USEPA	Department of Toxic Substances Control	--	--
SARA III	Community right-to-know	USEPA	Office of Emergency Services	Regional Office of Emergency Services	Emergency Planning Commission

Note: Portions of the state Health and Safety Code govern various actions of the CARB, SWRCB and Department of Toxic Substances Control.

Local

The RWQCB Basin Plan for the San Diego Region establishes policies and requirements for the protection of ground and surface water quality in the region. The Basin Plan also summarizes drinking water standards as specified by the California Department of Health Services, the California Inland Surface Waters Plan (SWRCB 1991) and Title 40 CFR Part 131, which establish federal water quality standards under the CWA. More information on control of water quality is provided in Section 5.3, Hydrology/Water Quality, of this EIR.

The County of San Diego Department of Environmental Health (DEH) is responsible for regulating hazardous materials and wastes within the City of San Diego.

5.12.2 Analysis of Issue 1: Hazardous Materials

Issue 1: Would the proposed Project result in an increase in risks to the public from exposure to hazardous materials?

5.12.2.1 Impact Threshold

In accordance with the City Significance Determination Thresholds (2007a), a significant impact will be identified if the Project would:

1. Be located on or near known contamination sources and, as a result, create a significant hazard to the public or environment. (City Significance Determination Threshold 2.)
2. Be located within 1,000 feet of a known contamination site and, as a result, create a significant hazard to the public or environment. (City Significance Determination Threshold 3a.)
3. Be located within 2,000 feet of a known "border zone property" (also known as a "Superfund" site) or a hazardous waste property subject to corrective action pursuant to the Health and Safety Code. (City Significance Determination Threshold 3b.)
4. Excavate in an area with an opened or closed Department of Environmental Health (DEH) site file which would disturb contaminated soils. (City Significance Determination Threshold 3c.)
5. Be located on a site presently or previously used for agricultural purposes. (City Significance Determination Threshold 3h.)

5.12.2.2 Impact Analysis

<u>Aerially Deposited Lead</u>

Due to the location of the Project in an area subject to lead deposition from existing vehicular activity at freeway intensities, the levels of lead in immediately adjacent soils were identified as inappropriate for uncontrolled re-use. The ADL Site Assessment concluded that soil within the Caltrans right-of-way is suitable to be reused within the right-of-way, but soil containing ADL that is excavated outside the Caltrans right-of-way would have to be disposed of as a hazardous waste. The Department of Toxic Substances Control lead variance issued to Caltrans also provides special provisions where soils within the Caltrans right-of-way would be re-used. Conformance with these provisions is assumed as part of Project design:

- Soil excavated within Caltrans' right-of-way to a depth of 2.0 feet must be placed beneath 1.0 foot of clean fill material or pavement at least 4.9 feet above the maximum groundwater level.
- Soil excavated within Caltrans' right-of-way that is transported to a location other than its origin must be handled as a hazardous waste, and disposed of as such.
- A health and safety plan for lead must be provided.

Other Hazardous Materials

A search of the County of San Diego DEH records did not indicate any existing hazardous waste issues. Similarly, no Superfund sites were identified during the records search.

There are neither existing agricultural operations nor potential for farming operations within or near the study area. As discussed within the ISA, aerial photographs from as far back as 1953 do not show any farming operations within the vicinity of the study area.

The Project would involve the use of some limited hazardous materials during construction. Operationally, the Project would not involve the development of a hazardous waste facility or require the routine transport, handling, storage or treatment of hazardous materials, although it is possible that the Project could be used by others to transport hazardous materials, in the same manner as currently occurs. Construction and long-term Project activities would be required to comply with existing regulatory requirements related to hazardous waste disposal and water quality, including applicable elements of the Caltrans NPDES Storm Water Permit and SWMP, NPDES Municipal Permit, City Storm Water Standards and SUSMP guidelines and the RWQCB Basin Plan. Examples of site design (maintenance) BMPs, source control (design pollution prevention) BMPs and treatment control BMPs, as well as BMPs regarding demolition-related debris generation and construction-related hazardous materials, are described in Section 5.3, Hydrology/Water Quality, of this EIR.

Electric and telephone lines and associated pole-mounted transformers present potential high-voltage electricity hazards that would be managed in conformance with regulatory requirements and BMPs during construction activities. Coordination with utility providers for this purpose is discussed in Section 5.11, Utilities and Solid Waste.

Yellow thermoplastic material, used for street striping, has been tested in the past and found to contain lead. In this case, because existing pavement would be removed, it is anticipated that removal of yellow thermoplastic material would be required. Such removal would adhere to the mandatory removal guidelines of the Caltrans Notice to Contractors and Special Provisions for Construction on State Highways.

As previously discussed, the records search for the Project identified several sites within and in the vicinity of the study area listed on local, state and federal hazardous materials/waste databases. Although many of these sites are in or near the study area, they do not pose a threat to the environmental integrity of the Project, public or environment. The cases for the spills and releases near the study area have been closed or the ground water is currently being monitored at the site. The Project would encroach on the parking lot of the Hazard Center Auto Mart property. Any hazardous materials encountered in the construction process would be properly handled and disposed of according to established protocols, BMPs and standards. As noted above, these are described in Section 5.3 of this EIR. Other sites in the Project vicinity with identified

storage areas for potentially hazardous materials would not be affected by implementation of the Project.

In the unlikely event that undocumented areas of contamination are suspected or encountered during Project construction activities, work would be discontinued until appropriate health and safety procedures are implemented. A contingency plan would be prepared to address contractor procedures for such an event, to minimize the potential for costly construction delays. In addition, either the County of San Diego DEH or the RWQCB, depending on the nature of the contamination, would be notified regarding the suspected contamination. Each agency has its own mechanism for initiating an investigation. The appropriate program would be selected based on the nature of the contamination identified. Any contamination remediation and removal activities would be conducted in accordance with pertinent local, state and federal regulatory guidelines, under the oversight of the appropriate regulatory agency. No significant impacts related to hazardous materials are, therefore, anticipated.

5.12.2.3 Significance of Impact

Potentially adverse hazardous materials impacts would be avoided or adequately minimized with implementation of identified regulatory requirements, industry standards and BMPs. As a result, no significant impacts to worker and/or public health and safety are anticipated as a result of Project implementation.

5.12.2.4 Mitigation Measures

Because no significant hazardous materials impacts would result from the Project, no mitigation measures are required.

CHAPTER 6.0

SIGNIFICANT ENVIRONMETNAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

6.0 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

The significant environmental effects of the Project are discussed in detail in Chapter 5.0, Environmental Analysis, of this EIR. In summary, the Project would have potentially significant environmental effects on the following areas of the environment: biological resources, historical resources, paleontological resources, aesthetics, noise and air quality. With the exception of aesthetics, noise and air quality, all significant environmental effects of the Project would be mitigated to below a level of significance.

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CHAPTER 7.0

SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

7.0 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Implementation of the Project would involve a commitment of a range of natural and physical resources. Widening and improving the roadways would represent the continuation of an existing and planned commitment of the Project site to transportation uses. If a greater need were to arise for use of the land or roadways were no longer needed, the facilities theoretically could be abandoned and the land converted to another use. At present, however, there is no reason to believe such a conversion would ever be appropriate or feasible. The Project improvements are, therefore, considered to represent an irreversible commitment of resources.

The Project would result in significant, irreversible impacts to biological resources and could result in significant, irreversible impacts to historical and paleontological resources.

As noted in Section 5.4, Biological Resources, the Project would result in impacts to disturbed southern willow scrub, southern cottonwood-willow riparian forest, Diegan coastal sage scrub and non-native grassland. Direct impacts to these sensitive habitats would be considered significant and require mitigation. While impacts to these habitat types would be mitigated at the ratios specified in the City of San Diego's Biology Guidelines (2002), the Project would permanently remove these resources.

Paleontological resources which could be disturbed would be salvaged, as necessary, and data recovered. Impacts to paleontological resources would result in a significant irreversible change to a non-renewable resource. Significant impacts associated with paleontological resources would be mitigated to below a level of significance as described in Section 5.7, Paleontological Resources.

Although there are no known historical resources in the study area, Project construction has the potential to disturb currently unknown archaeological deposits. Such impacts would not be reversible. They would, however, be mitigated to below a level of significance as described in Section 5.5, Historical Resources.

Besides changes to the Project site, implementation of the Project would involve the consumption of energy derived from non-renewable sources, such as fossil and nuclear fuels, and construction materials such as cement, aggregate and steel. Roadway construction materials also, although perhaps recyclable in part at some long-term future date, could for practical purposes be considered permanently consumed. Additionally, large amounts of natural resources would be used in the fabrication and preparation of construction materials. These materials are generally not retrievable. However, they are not in short supply and their use would not have an adverse effect upon continued availability of these resources.

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CHAPTER 8.0

GROWTH INDUCEMENT

8.0 GROWTH INDUCEMENT

CEQA requires that environmental documents evaluate whether a proposed project would induce direct or indirect growth of population, economic development or housing construction (Public Resources Code Section 21100; State CEQA Guidelines Section 15126[d]). This includes projects that remove obstacles to growth by accommodating additional population or construction, such as expansion of major public service facilities. The State CEQA Guidelines (Section 15126.3[d]) state that "it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

The Project consists of roadway improvements along the SR 163/Friars Road interchange and adjacent streets. Improvements would center on the interchange of the eight-lane north-south trending freeway (including the San Diego River Bridge) and the generally six-lane east-west Friars Road. The total length of the Project is approximately 2.1 miles along the SR 163 mainline and 0.6 mile on Friars Road. This roadway extension is intended to accommodate existing and future traffic patterns and volumes in the area and relieve congestion, in compliance with the intent of the *Mission Valley Community Plan* and *Linda Vista Community Plan*. The assessment of whether or not the Project would induce growth is therefore based on the compatibility of the Project design with these established land use plans and the associated traffic forecasts, to determine consistency in terms of both capacity and timing.

Improvements to the SR 163/Friars Road interchange are expressly assumed in the *Mission Valley Community Plan*. The *Linda Vista Community Plan* also discusses the congestion that occurs at the SR 163 southbound on- and off-ramps along Friars Road and Ulric Street. At the time the plan was written (1998), traffic in that locale was operating at LOS E during the evening peak hours. The Project would be consistent with the intent of these community plans to improve transportation safety and reduce congestion in the study area.

The study area and surrounding areas are essentially built out. Major commercial, office and residential developments have been built in the vicinity since the completion of the SR 163/Friars Road interchange in 1970. Despite a lack of undeveloped land, via increased density and/or redevelopment of non-residential uses, the area is proposed to increase in population over the next quarter century. This growth is already planned, and would not be a result of the Project. Similarly, because projects to date have not been conditioned upon improvement of this interchange, the Project has not been assessed as "facilitating" planned growth.

Construction of the Project would not reduce or remove any physical barrier to growth. The Project would not encourage the zoning or reclassification of lands in the General Plan or applicable community plans. The Project also would not include the extension or improvement of any infrastructure (e.g., water, sewer and electrical lines) to areas that are not currently served.

Substantial development has occurred in the general area since the interchange was constructed in 1970, including growth in the Linda Vista community served by Ulric Street and along Friars Road to the east of SR 163. Traffic loading based on through traffic in all directions also has increased based on overall growth in the San Diego region. The Project is intended to relieve congestion, accommodate projected traffic volumes through 2030 at improved levels of service, remove or minimize weaving patterns and improve turn conditions from and to Friars Road. The Project would not be growth inducing, but would rather accommodate existing and projected traffic loading in a more efficient manner.

Chapter 9.0

CUMULATIVE IMPACTS

9.0 CUMULATIVE IMPACTS

9.1 INTRODUCTION

The State CEQA Guidelines define cumulative impacts as "two or more individual affects that, when considered together, are considerable or which compound or increase other environmental impacts" (CEQA Guidelines Section 15355). According to CEQA Guidelines Section 15130, an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively significant. A cumulative impacts analysis must include either (1) a list of past, present and reasonable anticipated future projects, or (2) a summary of projections contained in adopted plans designed to evaluate regional or area-wide conditions.

A cumulative effect assessment considers 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. The cumulative resource analysis presented in this section addresses all the resource issues addressed in this EIR, which were, in turn, included because they were considered to have the potential for adverse impacts or were considered sensitive or controversial issues by the local public, local governmental organizations, local resource agency personnel or local interest groups.

9.2 PROJECTS EVALUATED FOR CUMULATIVE IMPACTS

As noted throughout this EIR, the study area has changed substantially over the past 50 years, transforming from a generally pastoral setting accessed from the north by Old Highway 395, to the highly developed setting present today. The amount of change resulting from past and ongoing projects has been substantial, as can be seen in Figure 9-1, Growth in Mission Valley Area. The study area has been transformed in terms of its use, density and resulting overall character. The question that remains is the extent to which the Project would contribute to this regionally significant cumulative effect.

To determine resources with the potential for regional impacts, the cumulative analysis relied primarily on regional growth projections and planning documents. For all other issue areas, the analysis focused on the cumulative impacts of the Project when combined with a list of projects in the vicinity of the Project provided by the City and presented in Table 9-1, Cumulative Projects. Table 9-1 provides a summary of both public and private development projects in the vicinity of the Project; Figure 9-2, Location of Cumulative Projects, illustrates the location of these projects.

Specifically, there are 19 private projects and 2 public projects that have been recently constructed, are under construction, are in various stages of processing/review by the City or are currently planned for future development. Cumulative development includes residential projects (University High School Site, Fashion Walk, Murray Canyon Apartments, Rio Vista West), mixed-use developments (Morena Vista, Presidio View Apartments, West End, Mission Valley Mixed Use, Hazard Center Redevelopment, Quarry Falls, Mission Valley Shopping Center Redevelopment, Mission City, Centrepointe at Grantville, Shawnee, River Park at Mission Gorge), two hotels (Hampton

Inn, Jacob Vernon [Spring Hill Suites]), office projects (Mission Valley Heights—Lot 3, Rio Vista East) and a commercial development (Riverwalk Commercial Center), along with extension of Hazard Center Drive and construction of a new fire station. It should be noted that the Project would not preclude the proposed extension of Hazard Center Drive, as the bottom elevation of the San Diego River Bridge has been designed to be as high as possible at this location.

Table 9-1
CUMULATIVE PROJECTS

Map Key	Project	Within 0.5 mile?	Project #	Action	Project Description	Status
1	Morena Vista	No	6137	PDP, SDP, TM	Mixed-use (residential and commercial) on 4.7 acres, including 1.1 acres associated with the Morena/Linda Vista Trolley Station; Linda Vista Road/Napa Street intersection in the Linda Vista community	Built
2	University High School Site	No	93731	CPA, SDP, VTM, EA	Commercial condominiums and 562 residential condominiums; 901 Hotel Circle South in the Linda Vista community	Under review by City
3	Jacob Vernon (Spring Hill Suites)	No	144234	SDP, PDP	6-story hotel with 169 rooms; 1904 Hotel Circle North in the Mission Valley community	Under review by City
4	Presidio View Apartments	No	99-0348	CPA, GPA, Rezone, PDP	350 multi-family dwelling units, with future redevelopment of the existing Handlery Hotel; 950 and 1450 Hotel Circle North in the Mission Valley community	Built
5	West End	Yes	120280	SPA, CPA, GPA	562 multi-family dwelling units and commercial development; 901 Hotel Circle South in Mission Valley community	Planning Commission approved initiation of plan amendments January 25, 2007
6	Hampton Inn	Yes	154312	SDP	5-story hotel with 72 rooms; 605 Hotel Circle South in the Mission Valley community	Under review by City
7	Fashion Walk	Yes	4301	PCD, RPO, TM	161 condos in the SW corner of vacant 8-acre site in Linda Vista CP; 7148 Friars Road	Built
8	Mission Valley Mixed Use	Yes	77887	SDP, LLA	127,310 sf commercial building and 72 residential (apartment) units; 444 Camino Del Rio South in the Mission Valley Community.	Under review by City
9	Hazard Center Drive Extension	Yes	2763	N/A	Construction of a 1,029-foot-long modified two- to four-lane collector from Hazard Center Drive to Fashion Valley Center; road would narrow from existing 4 to 2 lanes to cross under SR 163 Bridge through existing piers 19 and 20 and connect with existing two-lane road in Fashion Valley Center	Design revisions in progress

Table 9-1 (cont.)
CUMULATIVE PROJECTS

Map Key	Project	Within 0.5 mile?	Project #	Action	Project Description	Status
10	Hazard Center Redevelopment	Yes	146803	CPA, PDP, SDP, VTP	Removal of existing movie theatre and addition of 473 residential dwelling units and 6,060 sf of commercial space; south of Friars Road and east of SR 163 in the Mission Valley community	Under review by City
11	Mission Valley Heights—Lot 3	Yes	2052	PDP, PCD amendment, SP amendment	26,000 sf of commercial office use; 2.22 acres within the Mission Valley Heights Specific Plan Area	Approved by City Council February 18, 2003
12	Murray Canyon Apartments	Yes	5700	PDP, SDP	Approx. 268-unit apartment complex; 17.04-acre site; 5745 Mission Center Road; Mission Valley Planned District	Under construction
13	Quarry Falls	Yes	49068	CPA, GPA, Rezone, SP, PDP, SDP, VTM	4,780 residential units, 603,000 sf of retail space, 620,000 sf of office/business park uses, and an optional school site; north of Friars Road and east of Mission Center Road in the Mission Valley and Serra Mesa communities	Approved by City Council
14	Mission Valley Shopping Center Redevelopment	Yes	162627	CPA	Redevelopment of existing shopping center with 500,000 sf of new retail space, 50,000 sf of office space or hotel, 250 condos, and several parking structures	Application filed August 5, 2008
15	Rio Vista West	Yes	N/A	CPA, SPA	Recently developed with 237 attached units; parking area could have residential development	Built
16	Rio Vista East	Yes	98-0518	PCD amendment	350,000 sf general office uses; south of Friars Road and west of the I-805 bridge	Built
17	Mission City (Fenton Market Place)*	No	96-0544	SP, CPA, GPA, Rezone, TM, CUP amendment	Ultimate build-out allows for up to 4,475 residential units, 400,000 sf of commercial space, and 174,240 sf of office space; north and south of Friars Road in eastern portion of *Mission Valley Community Plan*	Built
18	Mission Valley Fire Station	No	6595	City Council action	Fire station and public mini-park; 9366 Friars Road in the Mission Valley community	Final MND dated April 12, 2004
19	Centrepointe at Grantville	No	80450	CPA, PDP, VTM, rezone	588 multi-family residential units and 135,288 sf of commercial/office/retail space; 6160 Mission Gorge Road in the Navajo community	City Council approved May 15, 2007
20	Shawnee	No	174988	VTM, PDP, SDP, RZ	958 multi-family and 24 single-family dwellings; Mission Gorge Road and Old Cliffs Road in the Navajo community	Under review by City
21	River Park at Mission Gorge	No	146248	CPA, SDP, PDP, RZ, VTM	2,156 residential condominiums and commercial/R&D buildings; 7500 Mission Gorge Road within the Navajo community	Under review by City

9.3 CUMULATIVE EFFECTS ANALYSIS

9.3.1 Cumulative Effects Found to be Significant

9.3.1.1 Noise

Noise levels in the Project vicinity reflect the dense population present in Mission Valley and surrounding areas, as well as the residential, recreational, commercial and transportation facilities that support this population. These noise levels would be increased incrementally by the addition of the projects identified in Table 9-1. None of these projects, however, require improvements to the SR 163/Friars Road intersection prior to their project approval or implementation. Improvements associated with the Project would solely relieve existing and projected continued congestion along the roadway and would not be related to other changes in decibel levels throughout the City.

As noted in Section 5.9, Noise, existing decibel levels immediately adjacent to the SR 163/Friars Road intersection exceed stated City criteria. Construction activities associated with the Project, such as grading, earthwork and/or blasting, would result in temporary increases in these ambient noise levels. These impacts, however, would not incrementally contribute to significant regional effects due to their extremely localized impact zone and their short-term and temporary nature.

The Project would incrementally exacerbate currently excessive (cumulatively significant) noise levels. Operation of the Project would result in an increase of between one and three dBA CNEL, compared to conditions that would occur without the Project. The Project's contribution to the cumulative impact is considered less than significant under City standards. Furthermore, the noise attenuation barriers contemplated as a Project design feature would additionally reduce the cumulative impact at a majority of the sensitive receptors along the Project roadways.

9.3.1.2 Air Quality and Greenhouse Gas Emissions

Air Quality

The SDAB is currently classified as a nonattainment area under federal standards for eight-hour O_3 thresholds and state standards for O_3 and PM_{10}. It is also classified as a federal maintenance area for CO. These indicate that there is a cumulatively significant regional air quality issue within the SDAB.

The study area, however, is not located in an area with unusually high levels or unusual sources of PM_{10} that would lead to cumulative effects of the Project to contribute to a violation of the PM_{10} standard. Furthermore, implementation of the Project would not result in any increases in traffic volumes, but rather would improve traffic flows and thus reduce emissions associated with idling due to traffic congestion. Because the Project would not result in increases in traffic, it is unlikely that the Project's emissions would cause or contribute to a violation of the NAAQS for PM_{10}.

The development forecasted for the Mission Valley area and the San Diego region would continue to generate increased emission levels from transportation and stationary sources resulting in continued adverse cumulative air quality effects. Combined emissions from the City and other developed areas in the SDAB are expected to continue to exceed state and federal standards. Potential cumulative air quality impacts would be partially reduced by the implementation and achievement of emission levels identified in the San Diego APCD's air quality management plan. To achieve this goal, the RAQS calls for basin-wide implementation of every feasible control measure to reduce emissions. For the plan to succeed, development within the San Diego County needs to be consistent with the strategy's objectives, policies, programs and growth assumptions.

Based on the analysis procedure presented in the Caltrans CO Protocol specifically designed to address roadway projects, the Project would not have a substantial adverse impact on either a regional or local basis. Operation of the Project would not result in new emissions sources entering the air basin; to the contrary, it is designed to accommodate existing and projected buildout traffic loading. Therefore, Project-related emissions would not be expected to cause or contribute to an air quality violation. In fact, the Project would be expected to improve traffic movement, thereby reducing congestion and associated idling, as well as lowering Friars Road contributions to CO and O_3, resulting in a beneficial effect.

With regard to potential construction-period effects, standard air quality attenuation measures are required as part of project implementation. These include such measures as watering exposed surfaces, application of non-toxic soil stabilizers, etc. Nonetheless, the Project would result in significant, unmitigable impacts related to NO_x emissions during the construction period. It would, therefore, contribute to cumulatively significant regional air quality impacts.

Greenhouse Gas Emissions

Existing Conditions

Gases that trap heat in the atmosphere are often called greenhouse gases (GHGs). GHGs are emitted by natural processes and human activities. The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without these natural GHGs, the earth's surface would be about 61°F cooler (California Energy Commission [CEC] 2006). Emissions from human activities such as electricity production and vehicle use have elevated the concentration of these gases in the atmosphere.

According to a recent white paper by the Association of Environmental Professionals (AEP 2007), "an individual project does not generate enough GHG emissions to significantly influence global climate change." Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHG.

In 2004, total GHG emissions worldwide were estimated at 20,135 million metric tons of carbon dioxide equivalent emissions (United Nations Framework Convention on Climate Change 2006). The United States contributed the largest portion of GHG emissions at 35 percent of global emissions. In California, according to the California Energy Commission (2006), CO_2 accounts for approximately 84 percent of statewide GHG emissions, with methane and nitrous oxide accounting for approximately 5.7 and 6.8 percent, respectively, of GHG emissions. Other pollutants account for approximately 2.9 percent of GHG emissions in California. The transportation sector is the single largest category of California's GHG emissions, accounting for 41 percent of emissions statewide. On-road vehicle emissions account for 46 percent of GHG emissions in San Diego County (University of San Diego 2008).

Because it is built out, the study area currently produces GHGs due to burning of fossil fuels from vehicles utilizing Project roadways; however, the amount has not been quantified. The study area also contains vegetation, which acts as a sink for carbon dioxide, and therefore helps counteract the effect of GHGs.

Caltrans and its parent agency, the Business, Transportation and Housing Agency, have taken an active role in addressing GHG emissions reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels, and 41 percent of all human made GHG emissions are from transportation, Caltrans has created and is implementing the *Climate Action Program* (2006). One of the main strategies in the *Climate Action Program* to reduce GHG emissions is to make California's transportation system more efficient.

Regulatory Framework

Federal

There currently are no adopted federal plans, policies, regulations or laws mandating reductions in GHG emissions that cause global warming. According to the USEPA, "the United States government has established a comprehensive policy to address climate change" that includes slowing the growth of emissions; strengthening science, technology and institutions; and enhancing international cooperation. To implement this policy, "the federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science." The federal government's goal is to reduce the GHG intensity (a measurement of GHG emissions per unit of economic activity) of the American economy by 18 percent over the 10-year period from 2002 to 2012. In addition, the USEPA administers multiple programs that encourage voluntary GHG reductions, including Energy Star, Climate Leaders and Methane Voluntary Programs. California, in conjunction with several environmental organizations and several other states, sued to force the USEPA to regulate GHGs as a pollutant under the CAA (*Massachusetts vs. Environmental Protection Agency et al.,* U.S. Supreme Court No. 05–1120. 549 U.S., argued November 29, 2006—decided April 2, 2007). The court ruled that GHGs do fit within the CAA's definition of a pollutant, and that USEPA does have the authority to regulate GHGs. Despite the

Supreme Court ruling, there are no promulgated federal regulations to date limiting GHG emissions.

State

In 2002, with the passage of Assembly Bill (AB) 1493, California launched an innovative and pro-active approach to dealing with GHG emissions and climate change at the state level. AB 1493 requires the CARB to develop and implement regulations to reduce automobile and light truck GHG emissions; these regulations apply to automobiles and light trucks beginning with the 2009 model year. ARB estimates that the regulation will reduce statewide climate change emissions from the light duty passenger vehicle fleet by 18 percent in 2020 and by 27 percent in 2030 (AEP 2007). Once implemented, emissions from new light-duty vehicles are expected to be reduced in San Diego County by 21 percent by 2020 (University of San Diego 2008). The federal Corporate Average Fuel Economy (CAFE) standard determines the fuel efficiency of certain vehicle classes in the U.S. In 2007, as part of the Energy and Security Act of 2007, CAFE standards were increased for new light-duty vehicles to 35 miles per gallon by 2020.

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 2000 levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by the year 2050.

In 2006, this goal was further reinforced with the passage of AB 32, the Global Warming Solutions Act of 2006. AB 32 directs the ARB to do the following:

- Make publicly available a list of discrete early action GHG emission reduction measures that can be implemented prior to the adoption of the statewide GHG limit and the measures required to achieve compliance with the statewide limit.
- Make publicly available a GHG inventory for 1990 and determine target levels for 2020.
- On or before January 1, 2010, adopt regulations to implement the early action GHG emission reduction measures.
- On or before January 1, 2011, adopt quantifiable, verifiable, and enforceable emission reduction measures by regulation that will achieve the statewide GHG emissions limit by 2020, to become operative on January 1, 2012, at the latest. The emission reduction measures may include direct emission reduction measures, alternative compliance mechanisms, and potential monetary and non-monetary incentives that reduce GHG emissions from any sources or categories of sources that ARB finds necessary to achieve the statewide GHG emissions limit.
- Monitor compliance with and enforce any emission reduction measure adopted pursuant to AB 32.

AB 32 requires that ARB determine what the statewide GHG emissions level was in 1990, and approve a statewide GHG emissions limit equivalent to that level, to be achieved by 2020. While the level of 1990 GHG emissions has not yet been officially

approved, the ARB has estimated that the 1990 GHG emissions level was 427 million metric tons (MMT) net carbon dioxide equivalent (CO_2e; ARB 2007b). In 2004, the emissions were estimated at 480 MMT net CO_2e (ARB 2007b). The ARB estimates that a reduction of 173 MMT net CO_2e emissions below "business as usual" would be required by 2020 to meet the 1990 levels (ARB 2007b). This amounts to a 15 percent reduction from today's levels, and a 30 percent reduction from projected business as usual levels in 2020 (ARB 2008). Attainment of GHG-related emissions at 80 percent below 1990 levels by 2050 has been projected as the level at which negative GHG effects could be appropriately controlled.

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.

Senate Bill 97, enacted in 2007, amends the CEQA statutes to clearly state that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. It directed the State Office of Planning and Research to develop draft CEQA guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions" by July 1, 2009 and directs the Resources Agency to certify and adopt the CEQA guidelines by January 1, 2010. Some literature equates these reductions to 11 percent by 2010 and 25 percent by 2020.

With EO S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020. It is assumed that the effects of the low carbon fuel standard would be a 10 percent reduction in GHG emissions from fuel use by 2020.

Local

On January 29, 2002, the San Diego City Council unanimously approved the San Diego Sustainable Community Program, which includes the City's GHG Emission Reduction Program, which sets a reduction target of 15 percent by 2010 using 1990 as a baseline, and the establishment of a scientific Ad Hoc Advisory Committee to expand the GHG Emission Reduction Action Plan for the City organization and broaden the scope to include community actions.

The City's *Climate Protection Action Plan* (2005) calls for the City to achieve a 15 percent reduction in GHG emissions by 2010 and describes what San Diego can do to achieve target greenhouse gas reduction. With regard to transportation, the *Climate Protection Action Plan* recommends reducing fuel consumption and traveling in vehicles with lower emissions. The City proposes to develop and adopt the Community Fuel Reduction and Transportation Efficiency Policy to reduce gasoline fuel consumption and encourage the use of vehicles that meet or exceed the Super Ultra Low Emission Vehicle rating.

The City's General Plan also addresses climate change/GHG emissions. Within the Land Use and Community Planning Element, it is encouraged to create "villages" where residential, commercial, employment and civic centers are sited in the same area; this

helps to reduce vehicle trips, which in turn, reduces the amount of GHGs emitted in the area.

Transportation Demand Management (TDM) is a general term for strategies that assist in reducing the demand by single-occupant vehicles to increase the efficiency of existing transportation resources. TDM is discussed in the General Plan's Mobility Element. TDM strategies also are a part of the City's overall effort to reduce vehicle emissions that degrade air quality and contribute to global climate change.

The Conservation Element of the General Plan acknowledges that climate change is a growing concern for cities around the world and that GHG emissions contribute to climate change. Goals related to climate change include reduction of the City's carbon dioxide footprint by improving energy efficiency, increasing use of alternative modes of transportation, employing sustainable planning and design techniques, providing environmentally sound waste management, and becoming a city that is an international model of sustainable development and conservation. Related policies include influencing state and federal efforts to reduce GHG emissions so that implementation requirements are equitably applied throughout the state, and to address actions that are beyond the jurisdiction of local government, reducing fuel emission levels by encouraging alternative modes of transportation and increasing fuel efficiency, reducing construction and demolition waste, and implementing sustainable landscape design and maintenance.

Impacts

Issue 1: ***Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?***

Issue 2: ***Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?***

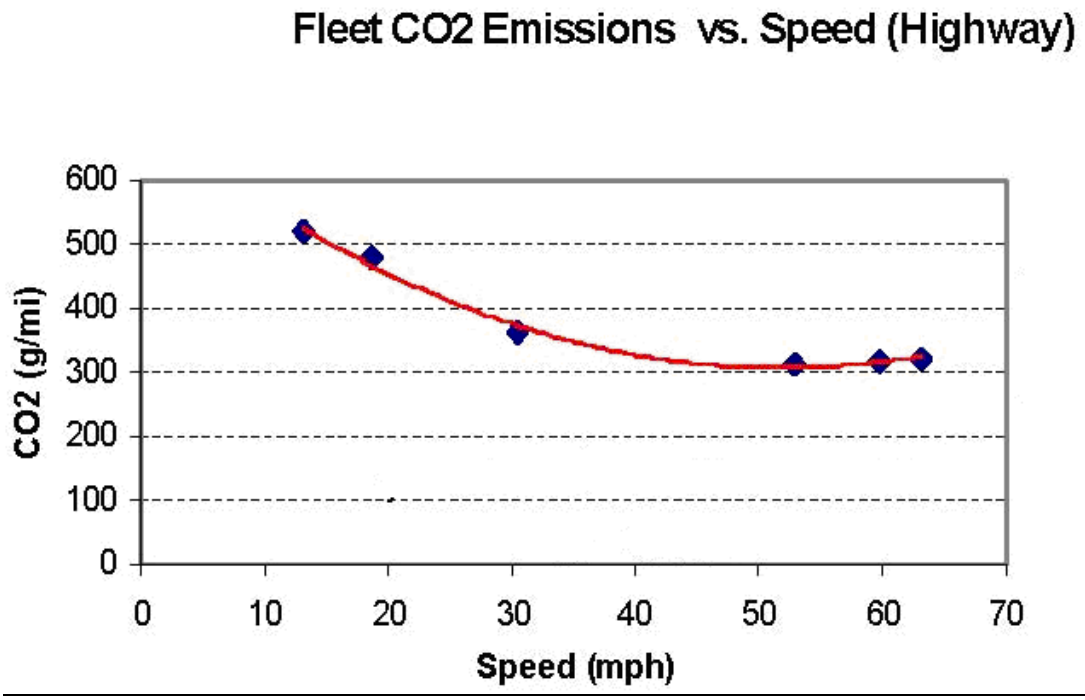
Impact Thresholds

The City's adopted Significance Determination Thresholds (2007a) do not address GHG emissions. In 2008, CARB released a Preliminary Draft Staff Proposal on the Interim Significance Thresholds for Greenhouse Gases (GHG) for CEQA projects. As indicated in their Staff Proposal, CARB recommended statewide interim thresholds of significance for GHGs for industrial sources, which may be adopted by local lead agencies for their own use. CARB staff did not, however, attempt to address GHG significance thresholds for other land uses.

Section 15064 (h)(3) notes, "A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including, but not limited to…plans or regulations for the reduction of greenhouse gas emissions) that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located."

Impact Analysis

As noted above, transportation accounts for approximately 41 percent of GHG emissions statewide and approximately 46 percent in San Diego County. Transportation's contribution to GHG emissions is dependent on three factors: the types of vehicles on the road, the types of fuel the vehicles use and the time/distance the vehicles travel. The same overall number of on-road vehicle trips would occur regardless of whether the Project is constructed. The Project would not result in an increase in the number, or change in types (or associated fuel types), of vehicles on Project roadways. The highest levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0 to 25 mph, see illustration below). Relieving congestion by enhancing operations and improving travel times in high congestion travel corridors would lead to an overall reduction in GHG emissions. One of the policies of the Conservation Element of the General Plan includes the reduction of fuel emission levels by increasing fuel efficiency. Implementation of the Project would be consistent with this policy as stop-and-go traffic would be less of an issue following Project buildout. The Project would, therefore, result in a long-term decrease in vehicular emissions of GHG emissions in the SDAB.



Source: Center for Clean Air Policy— http://www.ccap.org/Presentations/Winkelman%20TRB%202004%20(1-13-04).pdf

The Governor's Climate Action Team is active as CARB works to implement AB 1493 and AB 32. As part of the Climate Action Program, vehicle miles traveled are being reduced by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high-density housing along transit corridors. Energy efficiency of the transportation sector is also being improved by

increasing vehicle fuel economy in new cars and light- and heavy-duty trucks (control of fuel economy standards is held by the USEPA and CARB). For instance, the average on-road fuel economy, which correlates with emissions per vehicle miles traveled (VMT), is declining, primarily due to replacement of traditional cars with newer fuel efficiency standards (the CAFE standards noted above, which would increase vehicle mileage to 35 miles per gallon by 2020). This reduction in GHG emissions per VMT would lower the vehicle-related GHG emissions in year 2020 and beyond. Lastly, the use of alternative fuels also is being considered. Consistent with these efforts, the City continues to implement its GHG Emission Reduction Program, Climate Protection Action Plan and General Plan policies related to GHG emission reductions. These efforts are anticipated to reduce cumulative GHG emissions, including emissions of vehicles using Project roadways.

It is acknowledged that the Project would result in some emissions of GHGs during the construction period. These emissions would, however, be minimal in the context of the global climate, or even in the region, and would be temporary. Existing CARB regulations (Title 13 of the California Code of Regulations, Sections 2480 and 2485), which limit idling of diesel-fueled commercial motor vehicles, would help to limit GHG emissions associated with Project-related construction vehicles. Also, all construction diesel engines used for construction activities that have a rating of 100 hp or more would be required to meet, at a minimum, the Tier 3 California Emission Standards for Off-Road Compression- Ignition Engines as specified in California Code of Regulations, Title 13, section 2423(b)(1) unless it is certified by the construction contractor that such engine is not available for a particular item of equipment. Additionally, CARB released its Scoping Plan, which includes the following: California Light-Duty Vehicle GHG standards, the Low Carbon Fuel Standard, Heavy-Duty Vehicle GHG emission reductions and energy efficiency. These measures are expected to reduce construction-related GHG emissions. Applicable measures that are ultimately adopted are expected to become effective during implementation of the Project and the Project could be subject to these requirements.

In addition, standard SDAPCD regulations would require the contractor to maintain all construction equipment, shut down equipment when not in use for extended periods of time, and implement BMPs for the control of fugitive dust emissions.

The Project would be consistent with the above-described applicable plans, policies and regulations for the reduction of GHG emissions (e.g., City GHG Emission Reduction Program, Climate Protection Action Plan and General Plan; AB 32). Given that: (1) Project implementation would result in incrementally lowered GHG emissions during operations, (2) the proposed Project would not emit a substantial amount of GHG emissions during construction; (3) the proposed Project would not contribute significantly to global climate change such that it would impede the state's ability to meet its GHG reduction targets under AB 32; and (4) past, current and probable future state and local GHG reduction measures have reduced and will continue to reduce a project's contribution to climate change; the proposed Project would not result in a considerable contribution to global climate change.

9.3.2 Cumulative Effects Found Not to be Significant

9.3.2.1 Land Use

As demonstrated on Figure 9-1, changes to the character of land use in the study area and vicinity within the last 50 years have been cumulatively significant. At mid-century, the area was mainly comprised of agricultural uses and few roadways; today, the study area and vicinity are highly urbanized and essentially built out.

The study area contains a variety of land uses, as previously discussed in Section 5.1 of this EIR. The majority of the study area contains street rights-of-way or other paved areas. Additional land uses include single- and multi-family residences, a school, commercial uses, parks/open space and water. Small patches of undeveloped land are sporadically located throughout the Mission Valley area. Fashion Valley Center (located south of Friars Road and west of SR 163), Hazard Center (located south of Friars Road and east of SR 163), and Friars Mission Center (located north of SR 163 and Friars Road and east of Frazee Road) are included in the study area.

Major commercial, office and residential developments have been built in the vicinity since the completion of the SR 163/Friars Road interchange in 1970. Despite a lack of currently undeveloped land, the valley overall is proposed to increase in population over the next quarter century via increased density and/or redevelopment of non-residential uses. Although the amount of through traffic at the interchange may increase as a result of population increase throughout the County, with resultant use of this major north-south route and commercial center, it is not expected that the Project would attract population or development not currently planned. In fact, the amount of growth projected, although substantial in terms of residential percentage, would not substantially change the character of the current setting from its highly developed nature. As such, the minor amount of hardscape expansion and the contribution of additional engineered elements (e.g., retaining walls, an expanded bridge), would not constitute a cumulatively substantial contribution to the regionally significant cumulative changes in character that the Mission Valley area has experienced.

9.3.2.2 Traffic/Circulation

Future development generally will result in substantial delays at intersections and substandard LOS on roadway segments in the Project vicinity. These cumulative transportation/traffic circulation impacts are substantial and are assessed as regionally significant. The proposed improvements to the SR 163/Friars Road interchange would increase the capacity of the facility and eliminate weave operations, and is therefore assessed as beneficial.

Although adverse conditions related to roadway capacity and traffic loading would be expected to continue (and be exacerbated) as other planned development is implemented, the proposed road widening would not contribute to this cumulative impact over the long-

term as it is designed to ease congestion and associated traffic delays. This is true for both the SR 163 and Friars Road improvements. Accordingly, no adverse contribution to local transportation or circulation cumulative impacts is expected to result from implementation of the Project. Effects associated with the Project would not be cumulatively considerable with regard to traffic and circulation.

9.3.2.3 Hydrology/Water Quality

As described in Section 5.3, implementation of the Project would require conformance with a number of regulatory requirements related to hydrology and water quality, including applicable elements of the CWA, NPDES, City storm water standards, FEMA floodplain standards and RWQCB Basin Plan. Based on such conformance, all identified Project-level hydrology and water quality impacts associated with the Project would be effectively avoided or addressed.

To the extent that there would be other active grading and construction projects underway at the same time as the Project, proposed construction would contribute to existing cumulative water quality impacts associated with erosion, sediment transport and potential spills or runoff of solid and liquid wastes, fuels, lubricants, etc. The Project-related contribution to short-term water quality impacts would be minimized through implementation of the associated avoidance and minimization measures listed in Section 5.3. Specifically, these measures would include compliance with mandatory storm water pollution prevention plans and erosion controls pursuant to local storm water and grading ordinances, as well as related federal NPDES permit standards. Such regulatory conformance would effectively avoid or reduce Project-related contributions to substantial adverse cumulative water quality impacts from proposed construction.

The long-term operation and maintenance of the Project would result in floodplain/floodway encroachment, as well as generation of runoff and associated contaminants that could, in concert with other existing and future development projects, incrementally contribute to cumulative hydrology and water quality issues. Implementation of the Project would include a number of avoidance and minimization measures related to long-term hydrology and water quality impacts, including implementation of appropriate LID, source control and treatment control BMPs as described in Section 5.3, Hydrology/Water Quality. These measures would ensure project conformance with applicable federal, state and local regulatory standards related to hydrology and water quality. Based on the above conformance and the regional/watershed-based approach associated with water quality measures, as well as the fact that similar conformance also would be required for all identified cumulative projects, no substantial adverse contribution to cumulative hydrology and water quality impacts is anticipated from implementation of the Project.

9.3.2.4 Biological Resources

As discussed in Section 5.4, Biological Resources, the City, USFWS, CDFG and other local jurisdictions joined together in the late 1990s to develop the MSCP, a program to

ensure sensitive habitat and species viability throughout the region, while still permitting some level of continued development. Preserve areas identified under the MSCP are designated as MHPA. Because the MSCP establishes which areas within the region are to be preserved and can be developed, this program takes into account the cumulative impacts to sensitive upland habitats and MSCP-covered species. All species that would potentially be impacted by the Project are MSCP-covered species, except for the San Diego County viguiera, yellow-breasted chat and San Diego black-tailed jackrabbit. No direct impacts would occur to the chat or jackrabbit and indirect impacts would not be significant. Direct impacts would occur to 39 San Diego County viguiera. This represents a very small proportion of the viguiera in the BSA, and this species has a relatively low sensitivity (CNPS 4.2). Direct and indirect impacts to this species are not considered significant. In addition, cumulative impacts to these species' preferred habitats are included in the MSCP.

The wetland and riparian habitats within the BSA are all covered vegetation communities under the City's MSCP Subarea Plan (City 1997a). Construction of the Project would occur in compliance with the mandatory no-net-loss requirements for wetland/riparian habitats. Specifically, impacts to wetland/riparian habitats would be mitigated at a 3:1 ratio, which would include a minimum 1:1 creation component and a 2:1 enhancement component. The minimum 1:1 creation component would ensure that no net loss to wetland/riparian habitats would occur. Additionally, because of the 2:1 enhancement component, existing wetland/riparian habitats would be enhanced to a higher quality and would provide an increased benefit to the MHPA and its conservation.

In summary, the Project would not substantially contribute to significant cumulative impacts to biological resources due to the implementation of the MSCP and conformance with "no net loss" requirements for wetland/riparian habitats.

9.3.2.5 Historical Resources

Active development within Mission Valley and the surrounding area has resulted in the loss of historical resources. This constitutes a significant cumulative regional loss. However, environmental legislation has diminished the likelihood that discovered resources would be destroyed without contact with appropriate Native American descendants and/or data recovery, as appropriate.

With regard to the Project, no historic structures or known archaeological sites are located within the area of potential effect. An historical resources mitigation, monitoring and reporting program (MMRP), however, would be implemented to avoid or reduce impacts to currently unknown subsurface resources to below a level of significance. The Project would not result in a cumulatively considerable contribution to loss of regional resources.

9.3.2.6 Geology/Seismicity/Soils

As described in Section 5.6, all potential Project-specific geotechnical impacts would be avoided or effectively addressed through conformance with geotechnical

recommendations and established regulatory requirements. With the exception of erosion/sedimentation (as discussed below), potential geology and soils effects are inherently restricted to the areas proposed for development and would not contribute to cumulative impacts associated with other planned or proposed development. That is, issues including seismic ground rupture, ground acceleration, liquefaction and landsliding, as well as manufactured slope stability, expansive/corrosive soils, facility design (e.g., foundations), settlement, disposal of oversize materials and shallow groundwater would involve effects to (and not from) the Project and/or are specific to on-site conditions. Accordingly, addressing these potential hazards for the Project would involve using measures to conform with existing requirements and/or site-specific design and construction efforts that have no relationship to, or impact on, off-site areas. Avoiding liquefaction impacts through excavation/replacement of unsuitable materials, for example, would not affect or be affected by similar deposits/hazards in off-site areas. Because of the site-specific nature of these potential hazards and the measures to address them, there is no connection to similar potential issues or cumulative effects to or from other properties.

During implementation of the proposed roadway improvements under the Project, graded areas would be exposed to potential erosion and sedimentation impacts. Project-related erosion and sedimentation could contribute to associated cumulative effects in concert with other existing and future development in the Project vicinity. Implementation of the Project, however, would include a number of avoidance and minimization measures related to erosion and sedimentation impacts, including BMPs described in Section 5.6. These measures would ensure Project conformance with applicable federal (NPDES), state and local regulatory standards related to erosion and sedimentation, and would reduce any Project-related contribution to cumulative impacts involving construction-generated erosion to below cumulatively significant levels.

9.3.2.7 Paleontological Resources

The study area includes three geologic formations with either moderate or high paleontological resource potential. Based on these conditions, implementation of the Project could potentially result in substantial adverse impacts to paleontological resources. As described in 5.7, Paleontological Resources, however, all potential direct Project impacts to paleontological resources would be effectively avoided or addressed through identified mitigation measures.

The importance of individual paleontological resources is related to the inherent scientific data and associated research value. Information gained from test excavations and data recovery programs within the study area and other locations having paleontological resource impacts would be presented in reports and filed with appropriate regulatory agencies and scientific institutions with permanent paleontological collections, such as the San Diego Natural History Museum. The fossil collections from any potentially significant site also would be curated at such a scientific institution and would be available to other paleontologists for further study.

Each of the cumulative projects identified in Table 9-1 would be subject to similar analysis and (if applicable) mitigation requirements for paleontological resources as

described in Section 5.7 for the Project (and pursuant to applicable regulatory guidelines). If any additional development projects in the area (i.e., beyond those listed in Table 9-1) result in potential impacts to such resources, they also would be subject to similar requirements for assessing and mitigating impacts to paleontological resources.

Based on the required compliance of both the Project and applicable cumulative projects with analysis and mitigation requirements for paleontological resources, implementation of the Project would not result in significant cumulative paleontological resource impacts.

9.3.2.8 Visual/Aesthetics

Cumulative visual effects are related to overall changes in the visual character of a location based on the change in elements seen within the viewshed. The importance of those changes is based not only upon the extent to which a particular project contributes to the level of change, but also to what the community plans and intends to see in the area.

As described throughout this EIR, the Project vicinity has shifted in character over the last 40 to 60 years from a primarily open setting with notable mining, agricultural and agriculturally related residential uses, as well as the meandering San Diego River (see Section 5.5 of this EIR, in particular) to an intensively developed setting with open space restricted to the (now) relatively narrow San Diego River corridor and steep slopes of the canyons. Excluding those areas, the Project vicinity is developed with multiple competing and individually dominant visual elements – the single-family homes on the mesa tops, the current interchange and related roads (both at Friars Road and I-8), and commercial interests lining both sides of the valley.

The non-roadway elements of this area (the homes on the mesas, the commercial interests) developed following establishment of the location as a major transportation node (starting with the 6th Street Extension and Cabrillo Highway) and continuing after development of the SR 163/Friars Road interchange in 1970. Non-transportation and commercial uses have seen the addition of large-scale shopping centers and other business interests, as well as a steady intensification of stacked and elevated roadways, elevated ramps, bridges, etc. The area interchanges all present the viewer with bands of elevated concrete roadways curving across the field of view and skyline.

To this developed and visually imposing mix of uses, the Project would contribute large retaining walls, potential sound walls, expanded and additional bridge structures and the flyover. Proposed thematic landscaping along SR 163 and Friars Road also would enhance the regional context relating to the areas the road travels through.

Immediately adjacent to the transportation corridor, these Project features are not expected to create a contribution to the cumulative effect. While imposing notable (and in some cases, as detailed in Section 5.8, significant) impacts on a Project-direct basis, addition of the Project would not change the character of the developed and transportation-loaded setting. The transformation from a natural or agricultural setting to a densely developed commercial center and major transportation corridor has previously

occurred. Any intersection of this character would constitute a less than considerable contribution to the valley character.

Additionally, the *Mission Valley Community Plan* acknowledges that transportation corridors and the surrounding community are in continual evolution to ever more complex and dense urban development. Through the landscape design measures proposed, the Project can help to unify the corridor, create a stronger urban character and enhance the relationship of the community to the visual context of the San Diego River. This approach would be consistent with long-range land use planning for the area as expressed in the *Mission Valley Community Plan*.

A similar finding is made for the sound walls sited up-slope and adjacent to the single-family residences. These comprise new consistent linear forms in an area that currently includes more individual, random design elements – fences or walls may be present or not. Where present, they are built of different materials and property edging treatments vary in setback. Although the sound walls (particularly Walls B6, B7 and B8) would result in new, standard features, inclusion of glass panels would allow retention of much of the residential variation upon the mesa top. That consideration, combined with screening vegetation and/or the distance from which viewers see the walls, results in a less than considerable contribution for change related to these features as well. No significant cumulative impact is identified.

9.3.2.9 Public Facilities and Services

Utilities

As discussed in Section 5.11, Utilities, the Project would require the removal and relocation of several utility facilities during the construction process. These relocations would be accomplished in coordination with the applicable utility companies and/or City departments, in accordance with standard protocols. It is anticipated that the relocations would occur within the proposed roadbed or, at a minimum, within the evaluated Project impact footprint, and therefore would not result in environmental impacts beyond those evaluated in this EIR. Subsequent conformity analysis/CEQA review would be required once specific relocation plans are known.

As it consists of roadway improvements proposed to accommodate existing and otherwise projected demand, the Project would not generate a long-term increase in demand for communications systems, water, wastewater or other utilities or public services in the area. Therefore, the Project would not substantially contribute to significant cumulative impacts to utilities.

Solid Waste

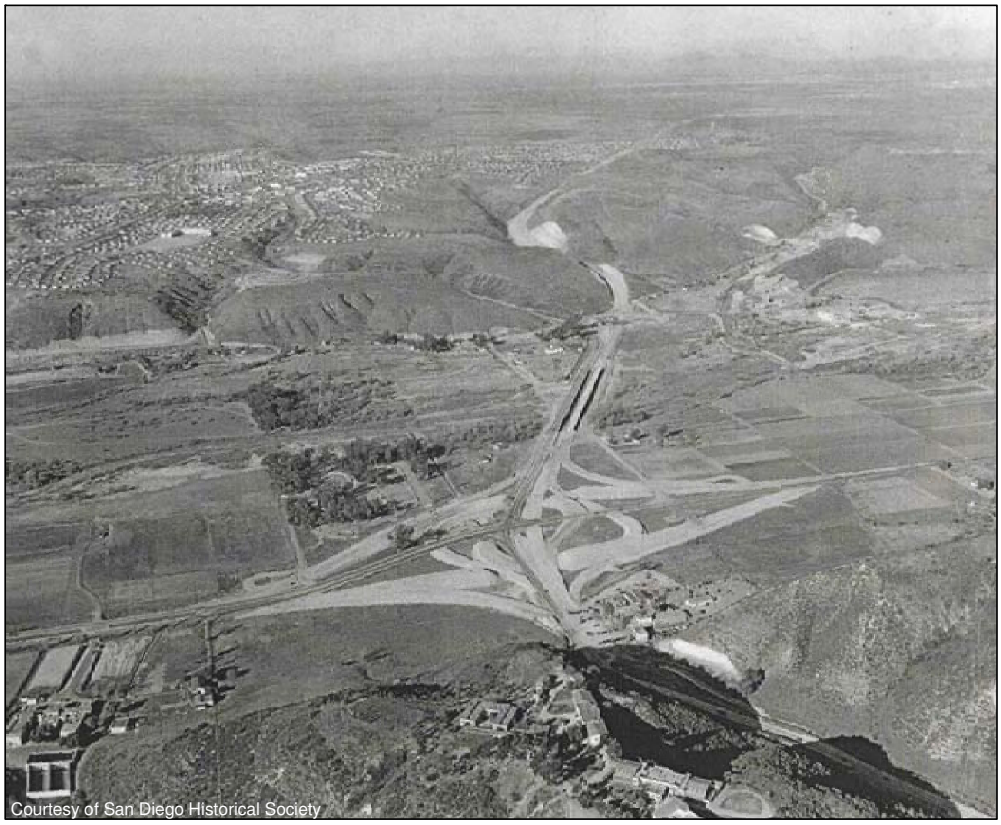
The Project would result in short-term demand for solid waste services. This Project, and other projects that could be implemented in the vicinity, would be required to prepare and comply with a Waste Management Plan, which would reduce associated cumulative impacts to less than significant levels.

Fire Protection and Emergency Medical Services

As described in Section 5.11.1.1, not all of the police stations that serve the Project vicinity are able to meet response time goals. Additional development in Mission Valley and surrounding communities could exacerbate this situation, as well as taxing fire services, which currently do meet response time goals in the Project area. Project implementation would not result in an increased demand for fire-rescue or police services, and would not directly affect emergency response. After Project completion, traffic would be less congested, representing a benefit to emergency services. The Project would not result in a cumulatively considerable contribution to fire protection or emergency medical services impacts.

9.3.2.10 Health and Safety/Hazardous Materials

As discussed in Section 5.12, Hazardous Materials, the Project would not result in significant impacts to hazardous waste or hazardous materials. As with the Project, any future projects in the vicinity would be required to implement, as appropriate, similar site-specific measures to address potential impacts from hazardous waste or hazardous materials. Based on these requirements, and the less-than-significant anticipated Project impacts, the Project would not substantially contribute to any significant cumulative impacts from hazardous waste or hazardous materials.



1959 Aerial Photograph

2006 Aerial Photograph

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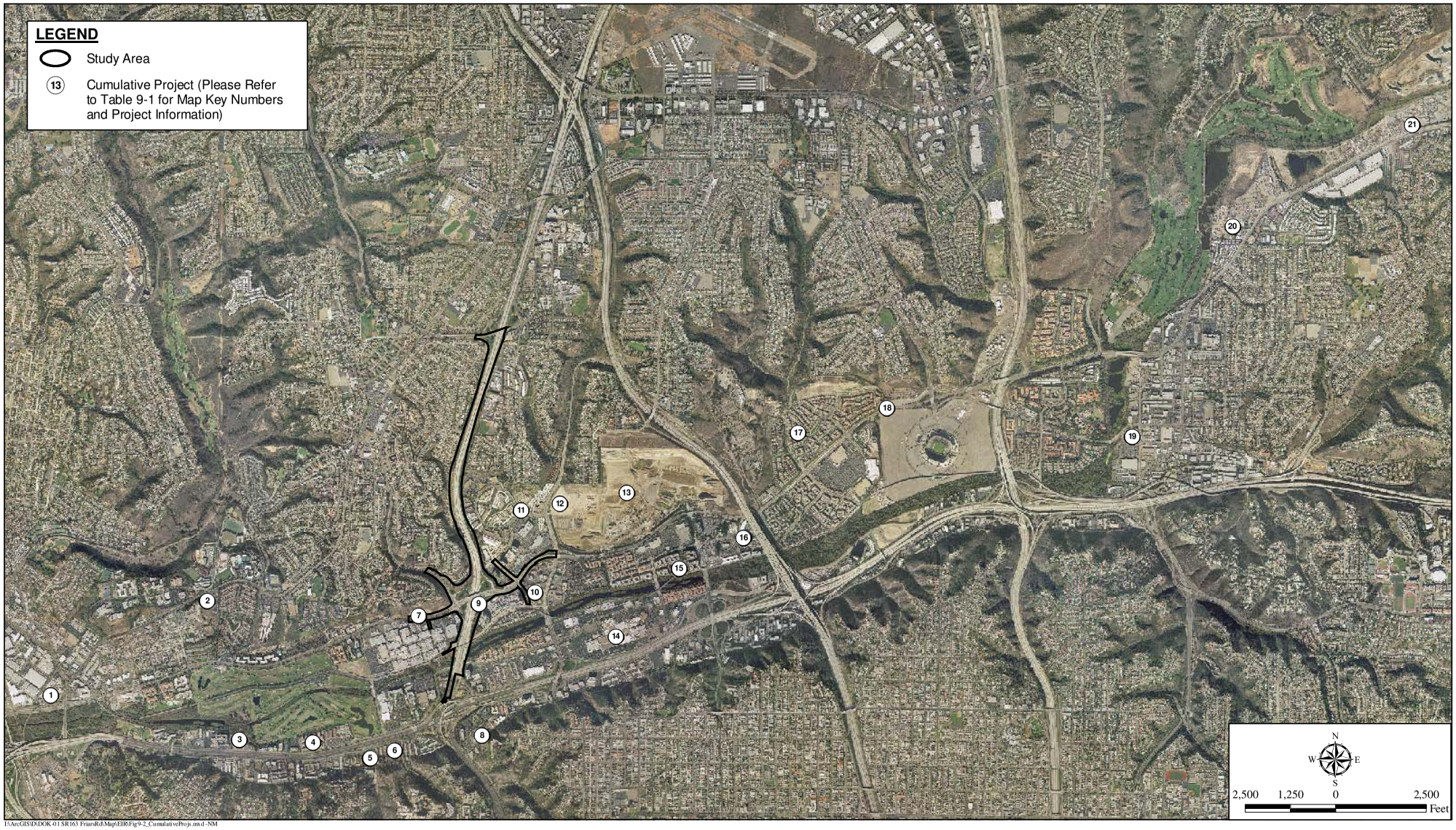
Growth in Mission Valley Area

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 9-1



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Location of Cumulative Projects

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 9-2

CHAPTER 10.0

EFFECTS FOUND NOT TO BE SIGNIFICANT

10.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

Based upon initial environmental review, the City has determined that the Project would not have the potential to cause significant impacts associated with the following issue areas:

- Agricultural Resources
- Mineral Resources
- Energy Conservation
- Population/Housing
- School and Recreational Facilities
- Water Conservation

These topics are briefly addressed below.

10.1 AGRICULTURAL RESOURCES

The study area is an existing major transportation corridor in a highly urbanized area and is surrounded on all sides by developed land. The Project also would span the San Diego River immediately adjacent to the existing SR 163 overcrossing. There are neither existing agricultural operations, nor the potential for farming operations, in the vicinity. The City has therefore determined that impacts to agricultural resources would not be significant and that no further study of this issue is warranted.

10.2 MINERAL RESOURCES

The study area is located within MRZ-2 as well as MRZ-3. MRZ-2 is defined by the State Mining and Geology Board as "Areas where adequate information indicates that significant mineral deposits are present or where it is judged that there is a high likelihood for their presence," while MRZ-3 is defined as "Areas containing mineral deposits, the significance of which cannot be evaluated from available data." The portions of the study area in MRZ-2 include a segment of SR 163 from Friars Road north approximately midway to Genesee Avenue and Friars Road east of SR 163. The portions of the study area in MRZ-3 include SR 163 from Genesee Avenue south approximately midway to Friars Road, SR 163 south of Friars Road and Friars Road west of SR 163.

Under the City's Significance Determination Thresholds (2007a), impacts to MRZ-3 are not considered significant. Considerations in determining whether impacts to MRZ-2 are significant include whether the site is currently being mined and if it is economically feasible to mine.

The study area is not currently mined and it is unlikely that that it would be mined in the future. SR 163 and Friars Road currently provide critical access within and across Mission Valley. They are also abutted by established and new residential, commercial and other uses in a relatively narrow canyon setting. It is highly unlikely that the use would change within the next 50 years to allow mining. Mining operations would conflict with the existing and planned uses in the area, and therefore it would be unlikely

that the City would allow mining operations within the study area. Even if mining was allowed, it would be economically infeasible to mine the site considering that the economic value of any potential mineral within the study area would exceed the cost of its extraction. The areas that would be affected by Project improvements would be slivers of land, rather than a contiguous block. Thus, the area lost to potential future mining activities would be substantially less than the 10-acre threshold that the City identifies as the typical minimum to allow economically feasible aggregate mining operations. Considering these existing conditions, the potential loss of recoverable known mineral resources is considered less than significant.

10.3 ENERGY CONSERVATION

Fuel consumption required by cars driving on the Project-improved road segments would not be attributable to proposed improvements—those vehicles would be expected to be on the road regardless of whether or not the Project is installed. The Project would, however, require the expenditure of some fuel and energy for construction, with lesser amounts for maintenance. It also would require the consumption of minimal amounts of electric power to operate signals, street lights and irrigation timers (most of which are existing uses). The amounts of energy required for these uses would be minimal and would not represent a significant impact.

10.4 POPULATION/HOUSING

The Project is planned and designed to reduce existing and projected congestion on an existing freeway and local roads. New and widened transportation facilities would be constructed within the existing corridor and would not displace any existing houses or persons. The Project would not represent an extension of infrastructure into areas currently not served; nor would it involve building of any new homes or businesses. With regard to population/housing, the Project is essentially neutral. For these reasons, the City has determined that impacts to population and housing would not be significant, and that no further study of this issue is warranted.

10.5 SCHOOL AND RECREATIONAL FACILITIES

The Project would not result in the construction of any new homes or businesses that would increase demand for school or recreational facilities. As discussed in Subsection 5.1.3.2, Land Use, the Project would result in construction near an existing and proposed pathway associated with the San Diego River, however, the Project would be consistent with applicable recommendations in the San Diego River Park Draft Master Plan (City 2005a) and would not result in any impacts to recreational facilities. No significant impacts to school or recreational facilities would occur in association with the Project.

10.6 WATER CONSERVATION

As it is an existing facility, the SR 163/Friars Road interchange would not result in an appreciable change in water demand, and would not exceed established significance

thresholds for water usage. The Project would utilize a minimal amount of water for standard dust control during construction, which would represent a short-term impact. The only long-term water demand would be for irrigation of Project landscaping. All planted areas would be irrigated by an automatic irrigation system, using low-precipitation sprinklers, water monitoring devices, check valves and appropriate water conserving equipment, in accordance with the City of San Diego Landscape Technical Manual. Although reclaimed water is not currently available in the study area, the Project would install reclaimed water pipelines. This would be done in anticipation of the City's reclaimed water program and ultimately would provide an important connection in the area's system, facilitating water conservation efforts. Accordingly, no significant impacts would occur with regard to water conservation.

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CHAPTER 11.0

ALTERNATIVES

11.0 ALTERNATIVES

11.1 INTRODUCTION

During consideration of a project for implementation, CEQA requires that alternatives be considered.

This section presents potential alternatives to the Project and evaluates them as required by CEQA. Each major issue area included in the Project's detailed impact analysis (see Chapter 5.0, Environmental Analysis, of this EIR) is included in the analysis of the two system alternatives. In accordance with State CEQA Guidelines section 15126.6(d), "the EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project."

The State CEQA Guidelines also require EIRs to identify the Environmentally Superior Alternative from among the alternatives (including the proposed Project). The Environmentally Superior Alternative is identified in Section 11.5 of this chapter. A matrix comparing the Project system and No Project alternatives and their anticipated environmental effects is provided as a summary in Section 11.5 of this chapter.

11.2 SUMMARY OF PROJECT OBJECTIVES AND SIGNIFICANT EFFECTS

In developing the alternatives to be addressed in this section, consideration was given to their ability to meet most of the basic objectives of the Project. These objectives were identified in Chapter 3.0 of this EIR and include the goals to:

- Achieve acceptable levels of service on the interchange and surrounding local street system, and reduce traffic weaving where possible, through the Project design year 2030.
- Relieve traffic congestion, delays and queues on the interchange and surrounding local street system caused by population growth and planned land use development in the Mission Valley area.
- Provide a standard and efficient interchange facility for vehicle traffic on SR 163 and for vehicle, pedestrian and bicycle traffic on Friars Road.
- Enhance traffic safety in the study area.
- Comply with the intent of the *Mission Valley Community Plan* to improve the SR 163/Friars Road interchange and widen Friars Road.

Based on analysis in Chapter 5.0, the Project would have significant effects with regard to the following issues: biological resources, historical resources, paleontological resources, aesthetics/neighborhood character/visual quality, noise and air quality. With the exceptions of aesthetics/neighborhood character/visual quality, noise and air quality all significant Project-specific environmental effects would be mitigated to below a level of significance.

11.3 ALTERNATIVES CONSIDERED BUT REJECTED

As described below, alternatives considered but rejected included locational (Subsection 11.3.1) and system design options (Subsection 11.3.2) as well as the No Project (Section 11.4). These rejected alternatives include all of the potential alternatives developed for the Project. This is unusual, but does not result in any inadequacy under CEQA. The principles guiding alternative development have to do with reason and public disclosure. Section 15126.6(a) of the State CEQA Guidelines states that an EIR shall describe "a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project," as well as provide an evaluation of "the comparative merits of the alternatives." Under that section, an EIR does not need to consider every conceivable alternative to the project. The range of alternatives "is governed by the 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice." The focus is on informed decision-making and public participation rather than providing a set of alternatives simply to satisfy format.

The absence of potential build alternatives is the direct result of the design history of this Project. The Project is severely constrained by the surrounding topography, natural resources and land uses. Because there is such a small potential footprint to work within, and because the road segments addressed under the Project carry heavy traffic loads, any work on the system has the potential to disrupt use patterns and provide an irritation to the public, even with use of a TCP during construction. As a result, Project design was also guided by a desire on the part of the City to implement the most effective design—the one that would handle traffic conditions most effectively now and in the future, and minimize future disruption due the need for additional upgrades.

Active planning for additional upgrades to the system began in the last decade. The current process consists of engineering and environmental evaluation of alternative project elements in an effort to provide the least impacting, most efficient design. In an effort to identify this most effective and least impactive project, numerous design configurations for specific northbound and southbound roadway elements were developed. The design configurations developed and evaluated included 4 configurations for the northbound ramps and 13 configurations for the southbound ramps.

Simple configurations included designs that would either close a ramp, relocate a ramp or create a new ramp. Mid-range configurations included minor rearrangement of the interchange or addition of minor bridge structures. The simple and mid-range configurations were evaluated based on engineering feasibility and traffic function. They are addressed in Subsection 11.3.3, Design Scenarios Not Reviewed in Detail. Based on engineering constraints and/or initial traffic modeling, these alternate focused design scenarios were eliminated from further study prior to detailed environmental review, as described in Subsection 11.3.3. The best of the elements from the early design scenarios also were incorporated into the Project, as described below.

Complex configurations included major re-design of the interchange with large-scale bridge structures and design elements extending from I-8 in the south to Genesee Avenue in the north.

Future traffic demands, Project objectives, topographic constraints, environmental effects, utility locations and construction staging areas were considered for each system alternative.

11.3.1 Alternative Location

Under CEQA, off-site alternatives should be considered if development of another site is feasible and would reduce or avoid the significant impacts of the proposed Project. Factors that need to be considered when identifying an off-site alternative include the size of the site, its location, the General Plan (or other applicable planning document) land use designation and availability of infrastructure.

For the current Project, the overall purpose is to alleviate congestion on existing roadways in a highly urbanized setting. If the Project were to consist of another road sited in an alternative location, it could not guarantee meeting the objective of satisfying reduction in congestion on these specific road and state route segments. Travelers might choose to still use the existing congested roadway option due to familiarity, or because it is in a more direct line of travel.

Locating a new road elsewhere also would do nothing to address the SR 163 weave on the existing facility south of Friars Road. Additionally, the applicable planning documents (e.g., the *Mission Valley Community Plan*) propose improvements in these specific locations, focusing on improving existing facilities within (or as near as possible) to the existing footprint. Providing a river crossing in another location or a road parallel to Friars Road would not comply with the cited planning documents.

Finally, a baseline requirement of the CEQA alternative location is that the new location reduce significant impacts associated with the location of the proposed Project. Because there are so few north-south routes into the valley, and because the surrounding mesas are heavily developed, it is not anticipated that an alternative location would lessen potential impacts. Any crossing of the river would entail riparian impacts, and the proposed crossing would occur in an area containing a substantial portion of previously disturbed habitat and no known sensitive species. Choosing an area that does not already have a bridge crossing and installing one would almost certainly result in increased impacts to biological and hydrological resources. Similarly, although significant noise impacts are identified for adjacent mesa-top residential areas, there is no location just west or east of SR 163 that would lighten state route congestion and not affect existing adjacent residences. A new road route would increase noise impacts by moving the road closer to homes, and require removal of homes as well. A potential for greater, rather than reduced, impacts would occur if the crossing location were to be changed.

Taking all of these factors into account, the identification of an alternative location was rejected as not feasible.

11.3.2 Design Alternatives Reviewed in Detail

Two potential system alternatives – Alternative 6 (consisting of SB6/NB4) and the Reduced Footprint Alternative[1] (consisting of SB1/NB4) – were analyzed in the Project technical studies. Although not required under CEQA, these alternatives were evaluated in the same level of detail

[1] This alternative is referred to in the Project technical studies as the No Project Alternative.

as the Project, allowing for a much greater understanding of the detail associated with their possible implementation.[2] They were reviewed with regard to compliance with Project objectives, engineering feasibility and detailed environmental analysis.

Alternative 6 was based on the same northbound interchange design as the Project, but incorporated the southbound design element considered least impactive prior to design of the Project element (SB13). The Reduced Footprint Alternative reflected the interchange design/Friars Road improvements proposed in the 1985 *Mission Valley Community Plan*, which reflected City planning and community hopes for the interchange. Based on the technical studies analyses and other considerations detailed below, they were eliminated from further consideration under federal criteria, as they did not meet Project purpose and need.

Alternative 6

Description

The construction elements (signage, construction control measures, traffic management and erosion control) common to both Alternative 6 and the Project are described in Subsection 3.2.9.4. Elements specific to Alternative 6 design are discussed below.

Alternative 6 would have implemented all of the upgrades to SR 163 through lanes and Friars Road/Ulric Street local roads discussed under the Project (Figures 11-1a and b, Alternative 6). Improvements to the northbound on- and off-ramps in the eastern quadrants also would have been the same as those described for the Project. Prior to a Value Engineering Analysis session held on June 21 and 22, 2004 (which resulted in development of the Project), Alternative 6 was considered most promising in terms of meeting Project objectives. Many elements were similar to the Project; including the flyover and retaining walls.

A major design element specific to Alternative 6 would have been the construction of a collector lanes/bypass viaduct structure[3] (Figures 11-1a and b). The bypass structure would have crossed over the existing Friars Road Bridge and under the elevated San Diego Trolley Bridge before crossing the San Diego River parallel to the existing SR 163 Bridge. The southbound SR 163 exit lanes for eastbound and westbound Friars Road would have passed under this structure and the Friars Road Bridge. The individual design elements unique to Alternative 6 are outlined below.

The Alternative 6 viaduct would have been approximately 3,150 feet in length, with 20 spans supported on 19 large-diameter single columns and CIDH piles. The Friars Road Bridge widening would have occurred on the south side of the existing bridge rather than on the north side, as designed for the Project.

[2] CEQA alternatives analysis generally consists of a "greater/lesser" comparison with a proposed project. In this case, the system alternatives underwent environmental review equal to the Project.
[3] A "viaduct structure" is a combination retaining wall and bridge structure. A viaduct structure is useful in areas where bridges are constructed near steep hillsides.

Many of the retaining walls would have been exactly the same for Alternative 6 as they would be for the Project. Table 1-1 lists the retaining walls needed for Alternative 6 that differed from those for the Project. The noted "visible surface" of the wall in the following discussion refers to the portion of the wall that is above ground.

Table 11-1
RETAINING WALLS NEEDED FOR ALTERNATIVE 6
(Differing from Project)

Location	Length (feet)	Maximum Visible Surface (feet)
Soil nail wall west of SR 163, north of Friars Road overpass	292	11.5
West of southbound SR 163/Friars Road off-ramp under Friars Road Bridge	72.2	23.0
West of southbound SR 163/Friars Road off-ramp under Friars Road Bridge	193.6	23.0
East of northbound SR 163 under Friars Road Bridge	45.9	24.6
East of northbound SR 163 under Friars Road Bridge	68.9	26.2

The 292-foot-long soil nail wall that would support the slope edging the western side of SR 163 north of the Friars Road overpass would replace a 1,384-foot-long soil nail wall required for the Project. Alternative 6 also would eliminate the need for a 331-foot-long, 23-foot-tall tie-back wall east of northbound SR 163, under Friars Road. These would be off-set by the viaduct structure and the four (shorter) additional retaining walls noted above.

Alternative 6 ultimately would have met the Project objectives of relieving traffic congestion. Landscaping, erosion control, drainage facilities and subsurface utility relocation resulting from Alternative 6 would be similar to those described for the Project. The following discussion compares the environmental effects of Alternative 6 and the Project, as well as identifying why Alternative 6 was eliminated from further consideration.

Analysis

Compared with Alternative 6, the Project would resolve a greater amount of traffic congestion sooner in the construction phasing schedule. In addition, Alternative 6 construction could not have begun until after the utility relocation process described below was completed (approximately three to five years for that process). Full benefits of Project implementation, therefore, would have been delayed under Alternative 6.

Because the construction footprints for Alternative 6 and the Project are similar, impacts to land use, historical resources, hydrology/water quality, geology/seismicity/soils, paleontological

resources, hazardous materials, and utilities and solid waste would be anticipated to be similar. For each of these topics, ultimate impacts would be less than significant for either alternative. With regard to biological resources, riparian effects would be identical and differences in impacts to non-native grassland and other non-native vegetation would be negligible.

In terms of environmental effects differences, an integral element of Alternative 6 project design was a highly visible viaduct. This structure would have resulted in a significant visual impact to viewers from SR 163 as well as to residents on the abutting mesas. Due to limited space, the potential for introduction of planting or other measures to reduce the visual effect would have been minimal. According to the VIA (Appendix G), the visual impact of Alternative 6 would have been more significant than that of the Project and would have resulted in a "net reduction" in visual quality.

The viaduct also would have resulted in construction and operational noise levels for Alternative 6 varying from those of the Project. Temporary construction noise associated with the vibratory pile installation of 19 columns and CIDH piles would have been 96 dBA for Alternative 6 as opposed to 84 dBA for the installation of 11 columns and CIDH piles under the Project. Operational traffic noise levels also would have been 0 to 4 dBA higher under Alternative 6 than under the Project in the northwest quadrant of the SR 163/Friars Road interchange. Under the City's CEQA Significance Determination Thresholds, operational noise impacts of the Project would be less than significant, but implementation of Alternative 6 would have resulted in a noise level increase of 5 dBA at the east end of Minden Drive, which would constitute a significant impact.

Operational air quality effects of Alternative 6 would have been comparable to those of the Project; both being less than significant. Due to the construction schedule differences discussed above, however, construction emissions under Alternative 6 would have been extended and would be in closer proximity to area residents in comparison with the Project. The air quality benefits of reduced operational emissions due to improved traffic flows also would have been delayed. Differences in daily construction emissions between the two alternatives would vary, but none except NO_x would exceed significance criteria. This exceedance would constitute a significant, temporary impact for both alternatives.

Implementation of Alternative 6 would have had a more adverse effect on utilities systems than would implementation of the Project. There are two existing SDG&E regional electrical transmission towers within the northwest quadrant of the SR 163/Friars Road interchange. One lattice-style tower supports 512 kV power lines (conduits), and a hollow tube-type tower supports 69 kV power lines. The towers are both approximately 200 feet tall with the lowest set of conduits approximately 140 feet above the ground. The power lines traversing the study area in a generally east-west direction are part of the regional electrical transmission system.

The bypass structure over Friars Road associated with Alternative 6 would have directly conflicted with the lowest set of conduits that cross SR 163. Detailed analysis and survey measurements demonstrate that there would have been only an approximately three-foot clearance between the top of the Alternative 6 flyover bridge and the lowest set of existing conduits. To rectify this, either two new and taller towers would have had to be constructed at

the original site or the towers would have had to be relocated to a different site. In addition to relocating these two towers, one or more of the existing adjacent towers may have required relocation as well. If new and taller towers were to be constructed at the original site, the existing towers could not have been removed until temporary towers were erected. Each solution would have added considerably to the Project schedule and environmental impacts.

Tower relocation would have required the identification and acquisition of new, suitable right-of-way outside of state right-of-way. Since precise relocation areas were not identified, the environmental impacts associated with new tower locations have not been addressed; subsequent analysis would be required. In general, however, if the towers were to be moved to an alternate location, the most suitable location for the new towers would be to the north because of span width limitations and the limited available areas on which to place a tower. Moving the towers to a new location also would have necessitated the acquisition of a replacement easement on single-family properties. Construction of a new tower in this area would place high-voltage electrical lines adjacent to existing single-family residences, which might require full acquisition of some properties, resulting in a greater community impact. Erecting a new tower in this location would also necessitate additional large cut slopes, retaining walls and heavy foundations to support the tower structures. Not only would the construction of these required elements potentially have significant visual effects, they would have resulted in impacts to biological resources, portions of which have been identified as potential habitat for the coastal California gnatcatcher.

The relocation would have required interruptions in electrical service to about half of San Diego's population for several hours while the conduits are placed in their new location. Relocating the towers would have required California Public Utilities Commission approval, and Joint Use Agreements and Construction and Maintenance Agreements with Sempra Energy Company.

Relocation of the towers also would have delayed construction of intersection improvements by an anticipated three to five years due to requirements for environmental clearance described above; right-of-way acquisition; plan preparation; and tower manufacture and construction.

Construction of taller towers at the current location (to gain adequate clearance over Alternative 6's flyover bridge) also was studied. Taller towers at the same location would have required the installation of a temporary tower system with interim electrical conduits. Installing a temporary tower system would have required disruption to the regional electrical power grid served by these towers. The regional electrical power grid would have been interrupted twice, once to install new conduits to the temporary tower configuration, and then again during switch back to the new taller towers. As with the tower relocation scenario, approximately half of San Diego's population would have experienced a loss of power for several hours. Installing a temporary tower would have required the same agreements and approvals as would the tower relocation. Since the towers would need to be constructed before any roadway improvements, Alternative 6 construction with the taller towers also would have delayed the project by three to five years.

Reasons for Elimination

Alternative 6 was, overall, similar to the Project in terms of alternative benefits and footprint impacts. When this similarity was combined with greater adverse noise, air quality and visual effects, and the need for transmission tower relocation and environmental clearance, as well as an extended construction period and delayed benefits, Alternative 6 was eliminated from further consideration.

Reduced Footprint Alternative

The Reduced Footprint Alternative (Figure 11-2) would have involved improvement of City streets as designated in the *Mission Valley Community Plan* (City 1985). Improvements to SR 163 would have been limited to its interchange with Friars Road; no improvements to the SR 163 mainlines would have been involved.

As described in the *Mission Valley Community Plan*:

> The SR 163 and Friars Road interchange would need a new southbound to westbound ramp to remove these turns from the traffic signal at Friars Road and Ulric Street. The existing signal for the eastbound to northbound movement would have to be moved eastward to create more left-turn vehicle storage space or else be replaced by either a loop-ramp in the southeast quadrant or a flyover. The median on the Friars Road Bridge over SR 163 needs to be narrowed to allow striping for three westbound through lanes and a westbound auxiliary lane between the ramps in the northwest and northeast quadrants. The SR 163 northbound off-ramp to eastbound Friars Road would need to be improved by widening to allow an additional eastbound lane and possible signalization to prevent weaving problems. The ramp should also continue to allow free movement into a separate eastbound lane.

In addition, it was noted that Friars Road ultimately would need to be widened to eight lanes between SR 163 and Mission Center Road.

Description

The construction elements (signage, construction control measures, traffic management and erosion control) common to both the Reduced Footprint Alternative and the Project are described in Subsection 3.2.9.4. The components specific to the Reduced Footprint Alternative are described below.

The Reduced Footprint Alternative is depicted on Figure 11-2. It had three components: southbound SR 163 improvements, including on- and off-ramps; northbound SR 163 improvements, including on- and off-ramps; and Friars Road and Ulric Street improvements. Under this alternative, the design team considered southbound SR 163 improvements under Alternative SB1, with the following elements differing from the Project:

- Construct a new southbound SR 163 to Friars Road off-ramp connecting to Ulric Street (northwest quadrant)
- Construct a retaining wall adjacent to the SR 163 to Friars Road off-ramp (northwest quadrant)
- Widen Ulric Street (northwest quadrant)
- Add signal to southbound SR 163 off-ramp at Ulric Street (northwest quadrant)
- Widen the existing southbound diamond on-ramp to accommodate both eastbound and westbound Friars Road traffic (southwest quadrant)
- Prohibit westbound Friars Road turning movements from the existing southbound SR 163 off-ramp (southwest quadrant)
- Add dual left turn and right turn pockets to northbound SR 163 loop off-ramp to Friars Road (northeast quadrant)
- Add second right turn pocket to northbound SR 163 on-ramp from westbound Friars Road

A preliminary environmental study for the SR 163/Friars Road Interchange and Ulric Street Improvement Project was prepared for a project very similar to the Reduced Footprint Alternative (City 1997c). The difference between that study and the Reduced Footprint Alternative is that the project in the previous study proposed to widen the northbound SR 163 off-ramp to eastbound Friars Road rather than eliminate it. (The *Mission Valley Community Plan* recommends that the SR 163 northbound off-ramp to eastbound Friars Road be widened to allow for an additional eastbound lane. This improvement, however, would not be feasible from an engineering standpoint, as clarified during additional analysis completed for the current study. Therefore, the SR 163 northbound off-ramp to eastbound Friars Road was eliminated under the Reduced Footprint Alternative.) Access to eastbound Friars Road instead would be achieved via the existing loop ramp in the northeast quadrant. Dual left- and right-turn pockets would be added at the signalized intersection with Friars Road.

Under this alternative, the Friars Road Bridge would have been widened on the south side to provide four through lanes in each direction plus two left-turn lanes to northbound SR 163 on-ramp. No additional lanes or capacity across the San Diego River would be constructed.

Grading activities for the Reduced Footprint Alternative would have occurred within the SR 163/Friars Road interchange area and immediately west of southbound SR 163 to accommodate the auxiliary lane/off-ramp to Ulric Street/Friars Road west. It was assumed that the total amount of earthmoving would have been approximately 111,180 cubic yards. It also was assumed, per the 1997 Draft Project Report that the retaining wall adjacent to the new southbound SR 163 off-ramp to Ulric Street would have been approximately 1,880 feet long, with a varying height to a maximum of 28 feet.

Analysis

Because the construction footprint for the Reduced Footprint Alternative was smaller than that of the Project, potential adverse effects would have been incrementally reduced to land use, historical resources, hydrology/water quality, geology/seismicity/soils, paleontological resources, hazardous materials, and public facilities and services.

The Reduced Footprint Alternative would have eliminated the weaving section between the existing westbound Friars Road to southbound SR 163 loop on-ramp and the southbound loop off-ramp. The alternative would not, however, have eliminated weaving movements between traffic accessing eastbound I-8 from the southbound SR 163 diamond on-ramp and traffic accessing westbound I-8/Hotel Circle North from southbound SR 163. This last weaving section actually would be worsened by the increased traffic flow on the southbound diamond on-ramp. Since the spacing distance between Friars Road and the new signalized ramp intersection on Ulric Street would not have conformed to current design standards, a mandatory design exception would have been required. The alternative also would have increased signalization requirements.

As the construction footprint for the Reduced Footprint Alternative would have been smaller than that of the Project and would not have crossed the river, effects on biological resources would be reduced. Unlike the Project, the Reduced Footprint Alternative would not impact riparian habitats and biological resources within the San Diego River corridor, including potential least Bell's vireo and southwestern willow flycatcher impacts. Impacts to Diegan coastal sage scrub would have been greater under the Reduced Footprint Alternative (0.6 acre compared to 0.3 acre), as would impacts to non-native grassland (3.3 acres compared to 1.8 acres), respectively, under the Project.

With respect to visual impacts, the flyover bridge that is an integral element of Project design in the Project would not have been a part of the Reduced Footprint Alternative, with consequently reduced visual effects. The retaining wall required adjacent to the new southbound SR 163 off-ramp to Ulric Street under the Reduced Footprint Alternative, however, would have been longer than that required under the Project (1,880 feet long compared to 1,493 feet), but shorter (28 feet high compared to 32 feet). Because Project-specific noise impacts would generally be considered less than significant by the City and this alternative would not qualify for federal funding (thereby avoiding the need for sound attenuation under Caltrans/FHWA criteria), most of the sound walls that would be constructed in association with the Project would not be required under this alternative. The only potential sound wall would be at the east end of Minden Drive (see below). Associated visual effects would therefore be reduced under this alternative.

Since the Reduced Footprint Alternative would not have involved a flyover bridge, some construction and operational noise levels for the Reduced Footprint Alternative would have been different than those of the Project. There would not have been temporary construction noise associated with driven pile installation, although there would still have been significant temporary noise impacts due to nighttime construction. The Reduced Footprint Alternative would have generated operational traffic noise levels similar to levels associated with Alternative 6 in the SR 163/Friars Road interchange area (higher than under the Project in the northwest quadrant). Outside the interchange area, noise levels would have been essentially the same as for the No Project Alternative. Operational noise impacts of the Reduced Footprint Alternative in the vicinity of the interchange would have been between 1 and 3 dBA, with the exception of a noise level increase of 5 dBA CNEL at the east end of Minden Drive. This would have been a significant impact that would have required mitigation.

Air pollutant emissions during construction of the Reduced Footprint Alternative would have been less than half the levels anticipated for construction of the Project due to the smaller Project footprint. Construction emissions would have constituted a significant, temporary impact for both alternatives. Similarly, operational air quality impacts would be less than significant for both alternatives, although slightly higher for the Reduced Footprint Alternative due to the more limited reduction in traffic congestion. The potential for CO 'hotspots' would have been slightly higher under the Reduced Footprint Alternative, but would have remained below significance standards.

Reasons for Elimination

Although environmental impacts would have been generally similar to or less than those assessed for the Project due to the more limited footprint, the Reduced Footprint Alternative would have failed to achieve the Project's objectives. The alternative would not have alleviated unacceptable freeway weave operations on southbound SR 163 north of Friars Road in the future, relieved unacceptable ramp merge operations on southbound SR 163 at Friars Road or maintained acceptable freeway mainline operations on southbound SR 163 north of Friars Road. This alternative was eliminated from further review, therefore, because it would not have met Project objectives – it would not have achieved acceptable levels of service on the interchange through year 2030 nor sufficiently relieved traffic congestion, delays and queues.

11.3.3 Design Scenarios Not Reviewed in Detail

As noted in the introduction to this section, a number of alternative SR 163/Friars Road interchange design elements were defined during preliminary engineering for this Project. Alternative design elements were developed separately for northbound (NB) and southbound (SB) interchange ramps. (Although these focused design scenarios technically are not system or CEQA alternatives as described above, they are referred to here as alternatives for consistency with the traffic study and Project Report.) Four configurations (NB 1 through NB 4) were studied for the northbound ramps. Alternative NB4 was incorporated into Project design and is not discussed below. Thirteen configurations (SB1 through SB13) were analyzed for the southbound ramps. One configuration, SB13, also was incorporated into Project design and is not discussed below. (Both of these elements are described as part of the Project in Subsection 3.2.1 of this EIR.) NB3 and SB1 were withdrawn from consideration as stand-alone design solutions, but were included as elements of Alternative 6 and the Reduced Project Alternative, respectively. Focused design scenarios NB1 through NB3 and SB1 through SB12 were withdrawn from further consideration due to engineering constraints or anticipated shortfalls in service improvements prior to detailed environmental review, or due to their failure to meet the Project objectives, as summarized below.

Northbound 1

NB1 proposed to widen the northbound SR 163 diamond on-ramp, remove the free-right entrance to it, eliminate the free-right turning movement from the northbound loop off-ramp to westbound Friars Road and signalize the northbound diamond off-ramp.

The primary advantage of this scenario would have been the elimination of the current weaving movement on Friars Road created by (existing unrestricted) eastbound traffic movements from the northbound diamond off-ramp to Frazee Road. NB1, however, would have resulted in a non-standard design of the northbound ramps intersection, resulting in less efficient traffic flow on Friars Road. In addition, NB1 would not have accommodated higher 2030 traffic volumes.

Consequently, NB1 would not have relieved traffic congestion, delays and queues as well as NB4.

Northbound 2

NB2 proposed to remove the northbound SR 163 loop off-ramp in the northeast quadrant, realign the northbound diamond on-ramp in the northeast quadrant and realign the northbound diamond off-ramp in the southeast quadrant.

Similar to NB1, the primary advantage of this scenario would have been the elimination of the current weaving movement on Friars Road created by unrestricted eastbound traffic movements from the northbound diamond off-ramp. This configuration was not favored for the following reasons: additional eastbound to northbound left-turn lanes would have been required on Friars Road, resulting in more traffic backup on the Friars Road Bridge and less effective through-traffic movement; grading requirements would have been difficult to satisfy in the northeast and southeast quadrants due to topographical constraints and existing development; and off-ramp longer queue lines would be doubled, resulting in greater congestion and more stopped or slowly moving vehicles on the freeway off-ramp.

Consequently, NB2 would not relieve traffic congestion, delays and queues as well as NB4.

Northbound 3

NB3 proposed to realign the northbound SR 163 diamond off-ramp in the southeast quadrant and remove the free-right turning movement for westbound Friars Road traffic exiting the northbound loop off-ramp in the northeast quadrant.

Although this scenario would have lengthened the weave length for northbound SR 163 traffic accessing northbound Frazee Road, multiple left-turn lanes would have been required, left-turn vehicle storage for eastbound to northbound traffic would have been limited (resulting in more traffic backup on the Friars Road Bridge and less effective through-traffic movement) and grading requirements would have been difficult to satisfy in the southeast quadrant due to topographic constraints and existing development. SB1, recommended by the *Mission Valley Community Plan*, proposed to remove the existing westbound to southbound elongated loop on-ramp in the northwest quadrant, widen the existing southbound diamond on-ramp in the southwest quadrant to accommodate both eastbound and westbound traffic, prohibit westbound turning movements from the existing southbound loop off-ramp and construct a new southbound to westbound off-ramp connecting to Ulric Street.

The primary advantage of this scenario would be the elimination of the weaving section between the existing westbound to southbound loop on-ramp and the southbound loop off-ramp.

This scenario would not eliminate weaving movements between traffic accessing I-8 East/Hotel Circle from the southbound diamond on-ramp and traffic accessing I-8 West/Hotel Circle from southbound SR 163. This weaving section would actually have been worsened by the increased traffic flow on the southbound diamond on-ramp.

The spacing distance between Friars Road and the new signalized ramp intersection on Ulric Street would not have conformed to current design standards; a mandatory design exception would be required. The alternative would also have increased signalization requirements.

Southbound 2

SB2 proposed to remove the southbound SR 163 loop off-ramp and construct a southbound SR 163 off-ramp similar to that of the Reduced Footprint Alternative.

SB2 was found infeasible because ramp weaves would not have been eliminated and traffic congestion, including backup onto the freeway from exiting vehicles, would not have been resolved. Also, there would have been a short weave length between the southbound SR 163 on-ramp and the I-8 eastbound and westbound on-ramps. This scenario would have resulted in short intersection spacing between the SR 163 off-ramp/Ulric Street and Friars Road/ Ulric Street, which would have resulted in heavy traffic loading on the ramp. Also, a weave condition on southbound Ulric Street would have been created. Finally, coordinated signalization at Ulric Street would have been required. That would have been difficult to achieve because it would have required synchronization with Friars Road east-west coordinated signalization.

SB2 would not have achieved the acceptable intersection and weaving LOS.

Southbound 3

SB3 proposed to remove the southbound SR 163 diamond on-ramp in the southwest quadrant, remove the southbound loop off-ramp in the southwest quadrant, construct a southbound diamond off-ramp in the northwest quadrant connecting to Ulric Street and reconstruct a portion of the westbound Friars Road to southbound SR 163 loop on-ramp in the northwest quadrant to connect to Ulric Street.

Under this scenario, ramp weaves would not have been eliminated and traffic congestion, including backup onto the freeway from exiting vehicles, would not have been resolved. Extensive left-turning movements would have been required at the intersection of Friars Road and Ulric Street, which would have resulted in heavy traffic loading. This scenario would have resulted in short intersection spacing between the SR 163 off-ramp/Ulric Street and Friars Road/Ulric Street, which also would have created vehicle-backup problems. Finally, similar to SB2, coordinated signalization at Ulric Street would have been required. This would have been

difficult to achieve in concert with Friars Road synchronized signals. SB3 would not have resulted in an acceptable LOS for intersections or weaving conditions.

Southbound 4

SB4 proposed to remove the southbound SR 163 loop off-ramp in the southwest quadrant, realign the southbound diamond on-ramp in the southwest quadrant, remove the westbound Friars Road to southbound SR 163 elongated loop on-ramp in the northwest quadrant, and construct a southbound diamond off-ramp in the northwest quadrant.

This scenario was found infeasible because the short intersection spacing on Friars Road between Ulric Street and the southbound ramp connections and extensive left-turning movements at the southbound ramps intersection (with limited space for vehicle backup) would not have adequately relieved congestion. Also, the possible relocation of an electrical transmission tower would have added unnecessary delay and potentially would have had a greater impact on the environment, including biological resources.

SB4 would not have resulted in an acceptable LOS for intersections or weaving conditions.

Southbound 5

SB5 proposed to remove the southbound SR 163 diamond on-ramp in the southwest quadrant, eliminate westbound turning movements from the existing southbound loop off-ramp, realign the elongated westbound Friars Road to southbound SR 163 loop on-ramp to connect to Ulric Street and construct a southbound diamond off-ramp connecting to Ulric Street. Implementation of SB5 would have exacerbated traffic conditions within the weaving section between the westbound Friars Road to southbound SR 163 on-ramp and the southbound loop off-ramp and the extensive left-turn requirements at the Friars Road/Ulric Street intersection. Traffic congestion and delays would not have been sufficiently improved.

SB5 would not have achieved an acceptable LOS for intersection and weaving conditions.

Southbound 6A

SB6A proposed to remove the existing westbound Friars Road to southbound SR 163 loop on-ramp in the northwest quadrant, eliminate the free-right access from the southbound SR 163 loop off-ramp for eastbound Friars Road traffic, construct a bypass flyover structure for traffic accessing westbound I-8/Hotel Circle North from southbound SR 163 and connect an on-ramp from Ulric Street to the proposed flyover. In addition, this variation of SB6 proposed a southbound SR 163 to westbound Friars Road off-ramp connecting to Ulric Street.

The new off-ramp would have eliminated the requirement for westbound Friars Road turning movements from the southbound SR 163 loop off-ramp in the southwest quadrant. Under this alternative, extensive left-turning movements would have been required at the intersection of Friars Road and Ulric Street, which would have resulted in vehicle backup problems.

SB6A would not have achieved an acceptable LOS for intersection and weaving conditions.

Southbound 6B

SB6B proposed to remove the existing westbound Friars Road to southbound SR 163 loop on-ramp in the northwest quadrant, eliminate the free-right access from the southbound SR 163 loop off-ramp for eastbound Friars Road traffic, construct a bypass flyover structure for traffic accessing westbound I-8/Hotel Circle North from southbound SR 163 and connect an on-ramp from Ulric Street to the proposed flyover. In addition, this variation of SB6 proposed to reconfigure the southbound diamond on-ramp to connect to the flyover structure for eastbound Friars Road traffic accessing westbound I-8/Hotel Circle North, construct an additional southbound diamond on-ramp under the flyover structure for eastbound and westbound Friars Road traffic accessing eastbound I-8/southbound SR 163, and construct a southbound SR 163 to westbound Friars Road off-ramp connecting to Ulric Street.

The new off-ramp would have eliminated the requirement for westbound Friars Road turning movements from the southbound SR 163 loop off-ramp in the southwest quadrant. The additional off-ramp would not have provided significant traffic improvements within the interchange, and consequently would not have sufficiently relieved traffic congestion and delay.

SB6A would not have achieved acceptable LOS for intersection or weaving movements.

Southbound 6C – Modified "Complex" Southbound Configuration

SB6C proposed to construct a bypass flyover structure for traffic accessing westbound I-8/Hotel Circle North from southbound SR 163, reconfigure the westbound Friars Road to southbound SR 163 loop on-ramp to connect to the flyover structure, construct a diamond on-ramp drop structure beneath the flyover structure for eastbound and westbound Friars Road traffic accessing eastbound I-8/southbound SR 163, reconfigure the eastbound Friars Road to southbound SR 163 diamond on-ramp to connect with the flyover structure, eliminate the free-right turning movement from the southbound SR 163 loop off-ramp to eastbound Friars Road and construct a southbound to westbound diamond off-ramp connecting to Ulric Street.

The spacing distance between Friars Road and the new signalized ramp intersection on Ulric Street would not have conformed to current design standards. SB6B also would have increased signalization requirements to alleviate safety concerns. Although SB6C would have achieved an acceptable intersection and weaving LOS, it had more complex design and would have been more difficult to construct than the Project.

Southbound 7

SB7 proposed to remove the westbound to southbound elongated loop on-ramp in the northwest quadrant, eliminate westbound-turning movements from the southbound loop off-ramp, construct a bypass flyover structure for traffic accessing I-8 West/Hotel Circle from southbound SR 163, connect an on-ramp from Ulric Street to the proposed flyover and construct a southbound diamond off-ramp in the northwest quadrant connecting to Ulric Street.

This scenario would have resulted in extensive turning movement requirements at the Friars Road/Ulric Street intersection, resulting in heavy backup.

SB7 would not have achieved acceptable LOS for intersection or weaving movements.

Southbound 8 – "Mid-Range" Southbound Configuration

SB8 proposed to remove the existing southbound SR 163 loop off-ramp and southbound diamond on-ramp in the southwest interchange quadrant, construct an on-ramp in the southwest interchange quadrant for eastbound Friars Road traffic accessing westbound I-8/Hotel Circle North and construct a four-way elevated intersection connecting at nearly 90 degrees to the Friars Road Bridge. The elevated intersection would have served vehicles exiting southbound SR 163 to both eastbound and westbound Friars Road as well as vehicles entering eastbound I-8/southbound SR 163 from both eastbound and westbound Friars Road. A concrete barrier would have been installed to separate traffic accessing westbound I-8/Hotel Circle North from traffic accessing eastbound I-8/southbound SR 163.

SB8 would have allowed highly concentrated traffic flows to occur between Project construction phases. At the completion of Phase I, the new diagonal on-ramp structure to southbound SR 163 would have temporarily needed to accommodate all the traffic destined for I-8 west/Hotel Circle and I-8 east/SR 163 south. In the ultimate condition, the new diagonal on-ramp structure would have only needed to accommodate traffic destined for I-8 east/SR 163 south. Depending upon funding availability, considerable periods of time could have occurred between completion of the interim Phase I and subsequent Phases II and III. Furthermore, the concentrated traffic flow from the on-ramp structure would have had to weave with southbound SR 163 traffic moving toward I-8 west/Hotel Circle. This weave condition would have been worsened due to the shortened weave distance between the on-ramp exit gore point (triangular zone on a freeway where an on- or off-ramp veers off and is separated from the main road by barriers) to the I-8 west/Hotel Circle entrance gore point.

The elevated four-way intersection at the SR 163 on-/off-ramps with Friars Road would have required a design exception and would have been difficult for large trucks exiting the southbound SR 163 off-ramp and turn left to eastbound Friars Road to navigate. The spacing distance between Friars Road and the new signalized ramp intersection on Ulric Street also would not have conformed to current design standards. Finally, this scenario also would have increased signalization requirements.

Southbound 9

SB9 proposed to remove the existing southbound loop off-ramp in the southwest quadrant, realign the existing southbound diamond on-ramp in the southwest quadrant and construct a three-way elevated intersection connecting at nearly 90 degrees to the Friars Road Bridge.

The elevated intersection would have served vehicles exiting southbound SR 163 to both eastbound and westbound Friars Road. The primary advantage of this scenario would have been

the elimination of the weaving section between the existing westbound to southbound loop on-ramp and the southbound loop off-ramp. This scenario would not, however, have eliminated weaving movements between traffic accessing eastbound I-8 from the southbound diamond on-ramp and traffic accessing westbound I-8/Hotel Circle North from southbound SR 163. Since SB9 would not have eliminated the southbound weaving movement between the Friars Road interchange and I-8, thereby maintaining poor weaving conditions and traffic backup problems, acceptable LOS for weaving movement would not have been achieved. SB 9 also would not have achieved an acceptable intersection LOS.

Southbound 10

SB10 proposed to remove the southbound SR 163 loop off-ramp in the southwest quadrant, realign a portion of the westbound Friars Road to southbound SR 163 elongated loop on-ramp in the northwest quadrant to connect to Ulric Street and construct a southbound diamond off-ramp in the northwest quadrant connecting to Ulric Street. SB10 would have resulted in extensive turning movements at the intersection of Friars Road and Ulric Street, resulting in heavy traffic backup on Friars Road and consequently less effective management of traffic congestion. SB10 would not have achieved an acceptable LOS for intersections or weaving.

Southbound 11

SB11 proposed to remove the existing southbound SR 163 loop off-ramp in the southwest quadrant, realign the existing westbound Friars Road to southbound SR 163 loop on-ramp in the northwest quadrant and construct a new southbound diamond off-ramp in the northwest quadrant, creating a nonstandard five-point intersection at Friars Road and Ulric Street.

The new off-ramp, connecting to Friars Road on a 45-degree skew, would have provided access for both eastbound and westbound traffic. This scenario would have eliminated the weaving section between the existing westbound Friars Road to southbound SR 163 loop on-ramp and the southbound loop off-ramp. SB11, however, would not have eliminated weaving movements between traffic accessing eastbound I-8 from the southbound diamond on-ramp and traffic accessing westbound I-8/Hotel Circle North from southbound SR 163. Although the design would have eliminated non-standard intersection spacing on Ulric Street, the intersection design would have been infeasible.

Southbound 12

SB12 was a variation on SB8 and SB11. SB12 would have created a complex five-point intersection with SR 163 on- and off-ramps to Friars Road and Ulric Street. This alternative would have resulted in short intersection spacing between the SR 163 off-ramp/Ulric Street and Friars Road/Ulric Street, which would have resulted in vehicle backup problems. SB12 would not have improved traffic operations.

11.4 NO PROJECT ALTERNATIVE

11.4.1 Description

Pursuant to Section 15126.6(e)(3)(B), the No Project Alternative is the "circumstances under which the project does not proceed." The No Project Alternative assumes that the SR 163/Friars Road interchange would not be improved, and no major roadway construction would occur within the study area. Existing maintenance activities would continue. No approvals from the City or other agencies would be required (although a General Plan Amendment/Community Plan Amendment to delete the currently planned improvements potentially could be pursued). Impacts associated with this alternative, as compared to the Project, are described below.

11.4.2.1 Environmental Analysis

Because the No Project Alternative would not involve any physical improvements, it would avoid potential impacts related to hydrology/water quality, biological resources, historical resources, geology/seismicity/soils, paleontological resources, aesthetics/neighborhood character/visual quality, utilities and hazardous materials.

The No Project Alternative assumes that the SR 163/Friars Road interchange would not be improved, and no major roadway construction would occur within the study area. The upgrades specified in the *Mission Valley Community Plan* Transportation Element would not be implemented, and existing, adverse conditions would be exacerbated through growth planned in the City and in the region in general. As expansion of the Project roadway is already necessary to maintain acceptable traffic flows, continued growth would intensify existing impacts to roadway capacity under the No Project Alternative. Roadway capacity and operational deficiencies would not be corrected and Project objectives would not be met with the implementation of the No Project Alternative. Accordingly, the No Project Alternative would not be consistent with the General Plan, and Mission Valley and Linda Vista Community Plans. This would represent a significant and unmitigated impact.

Under the No Project Alternative, all existing traffic infrastructure on Friars Road would remain the same, including the free-right turn vehicle movements to and from Friars Road. No sidewalk would be constructed on the north side of the Friars Road Bridge, as proposed for the Project. As noted above, roadway capacity and operational deficiencies would not be corrected under this alternative, and existing congestion is anticipated to be exacerbated as a result of further growth in the area. This alternative, therefore, has the potential to result in significant and unmitigated impacts to the circulation system that would not occur with the Project.

Under the No Project Alternative, the year 2030 traffic volume along SR 163 would increase by the same amount as anticipated for the Project (LLG 2008a). The future additional traffic volume would result in a relatively minimal noise level increase as compared to the existing conditions. Noise abatement walls would not be provided with the No Project Alternative. Thus, the areas that currently exceed the City's CNEL standard would continue to exceed these noise thresholds in the future, and the exceedance would be slightly exacerbated by increasing

traffic levels. Significant construction-related noise impacts would, however, be avoided under this alternative.

Improvements to the Friars Road/SR 163 interchange are assumed in current assessments of air quality for San Diego. Failure to improve this interchange could result in a significant increase in long-term vehicular air pollution emissions, which would be unmitigated. Significant, temporary construction-related air quality impacts would, however, be avoided.

Under the No Project Alternative, no change from existing visual conditions would occur. Motorists, residents, pedestrians, trolley riders and bicyclists would continue to view the predominantly urban visual environment of modern buildings, shopping centers and roadway and interchange networks, interspersed with occasional natural elements (such as the coastal sage scrub existing on the slopes above Ulric Street and the riparian vegetation within the San Diego River) and landscaped areas (such as the eucalyptus and iceplant slopes and rights-of-way along SR 163). While no change from existing conditions results in a finding of significant visual impacts, it should be noted that the same overall visual experience would be experienced under the Project. Nonetheless, significant impacts assigned to the Project based on construction-period effects as well as some highly visible and insufficiently obscured wall features would be avoided. Although unifying landscaping would not be installed along Friars Road or SR 163 without the Project, for this topic, the No Project Alternative would be preferred.

While the No Project Alternative would avoid significant, but mitigable, biological impacts associated with the Project, it would not involve the removal of non-native species from off-site wetland habitats, as is proposed as mitigation for the Project (refer to Mitigation Measures BR-1 and BR-2). Therefore, this alternative would not result in a benefit to wetland habitats in the San Diego River watershed.

The No Project Alternative would avoid direct impacts to the existing sensitive resources in the study area. It would not, however, meet the basic Project objectives or comply with the applicable planning documents, and would result in some increased impacts over the Project as proposed (e.g., traffic, noise, air quality).

11.5 SUMMARY OF PROJECT ALTERNATIVES AND IDENTIFICATION OF THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE

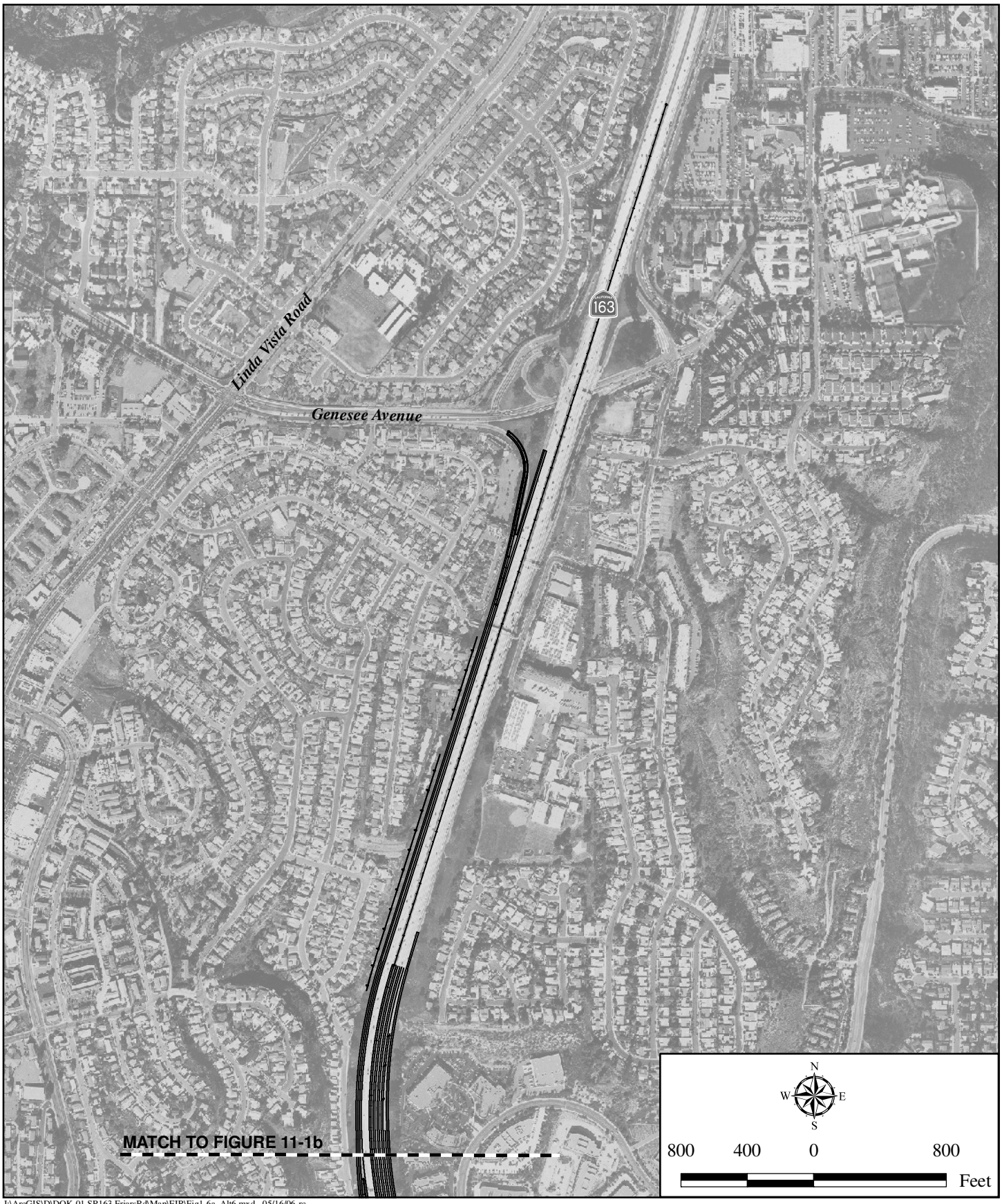
Table 11-2, Full System Project Alternatives Summary of Impacts, compares the significance of the potential impacts for the Project and for the alternative considered in detail. The No Project Alternative discussed in this section would reduce significant environmental impacts anticipated as a result of the Project. Although the No Project Alternative would result in minimal environmental impacts, the State CEQA Guidelines require identification of an alternative other than the No Project Alternative as environmentally superior.

Table 11-2
FULL SYSTEM PROJECT ALTERNATIVES
SUMMARY OF IMPACTS

Environmental Issue	Proposed Project	Alternative 6	Reduced Footprint Alternative	No Project Alternative
Land Use	LS	LS	LS	SU
Traffic/Circulation	LS (B[1])	LS (B[1])	SU (B)[2]	SU
Hydrology/Water Quality	LS	LS	LS	N
Biological Resources	SM	SM	SM	N
Historical Resources	SM	SM	N	N
Geology/Seismicity/Soils	LS	LS	LS	N
Paleontological Resources	SM	SM	SM	N
Aesthetics/Neighborhood Character/ Visual Quality	SU	SU	SU	N
Noise	SU	SU	SU	SU
Air Quality	SU	SU	SU	SU
Public Facilities and Services	LS	SM	LS	N
Hazardous Materials	LS	LS	LS	N

SU=Significant and unmitigated; SM=Significant but mitigable; LS=Less than significant; N=No impact; B=Beneficial.
[1]This alternative would alleviate traffic congestion by improving Project area roadways.
[2]This alternative would alleviate local traffic congestion through improvements to City streets, but it would not achieve acceptable levels of service associated with the interchange and SR 163.

As seen in Table 11-2, the Project and Alternative 6 have the fewest significant and unmitigable impacts of the alternatives analyzed. As stated in discussion above, however, Alternative 6 would have increased adverse visual effects over the Project. Additionally, it should be noted that the impacts summarized in Table 11-2 do not include the environmental impacts associated with utility tower reconstruction or relocation that would have been required under this Alternative 6 because details of that reconstruction/relocation were not developed. Utility tower relocation would be expected to result in substantially increased environmental impacts. The Project would alleviate existing and projected congestion on both SR 163 on- and off-ramps and Friars Road; provide highest levels of service on SR 163 mainlines in the future; and comply with the intent of the *Mission Valley Community Plan* in the most expeditious manner and with the least impact to users. It is therefore considered to be the environmentally superior alternative by the City Entitlements Division.



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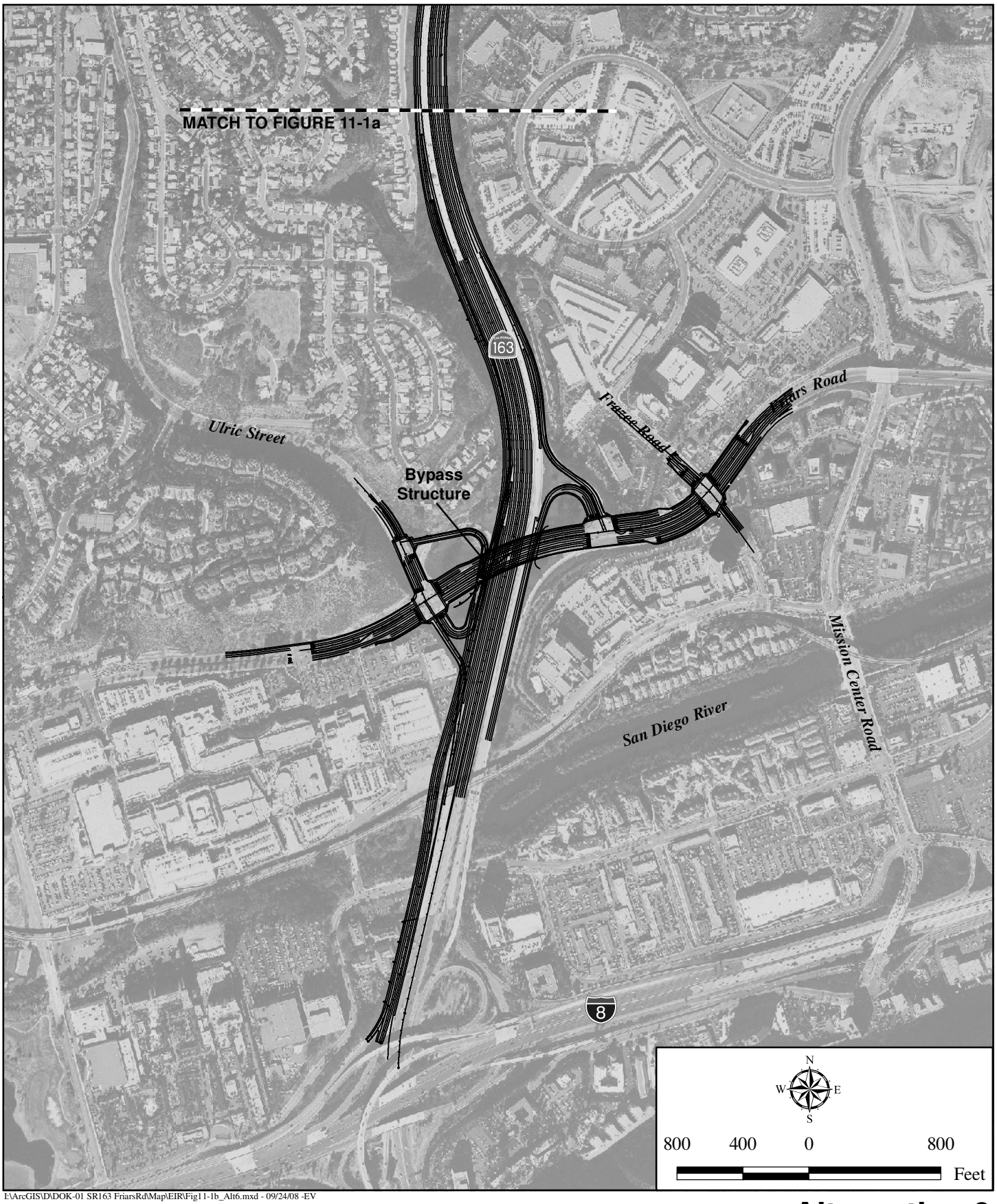
Alternative 6

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 11-1a



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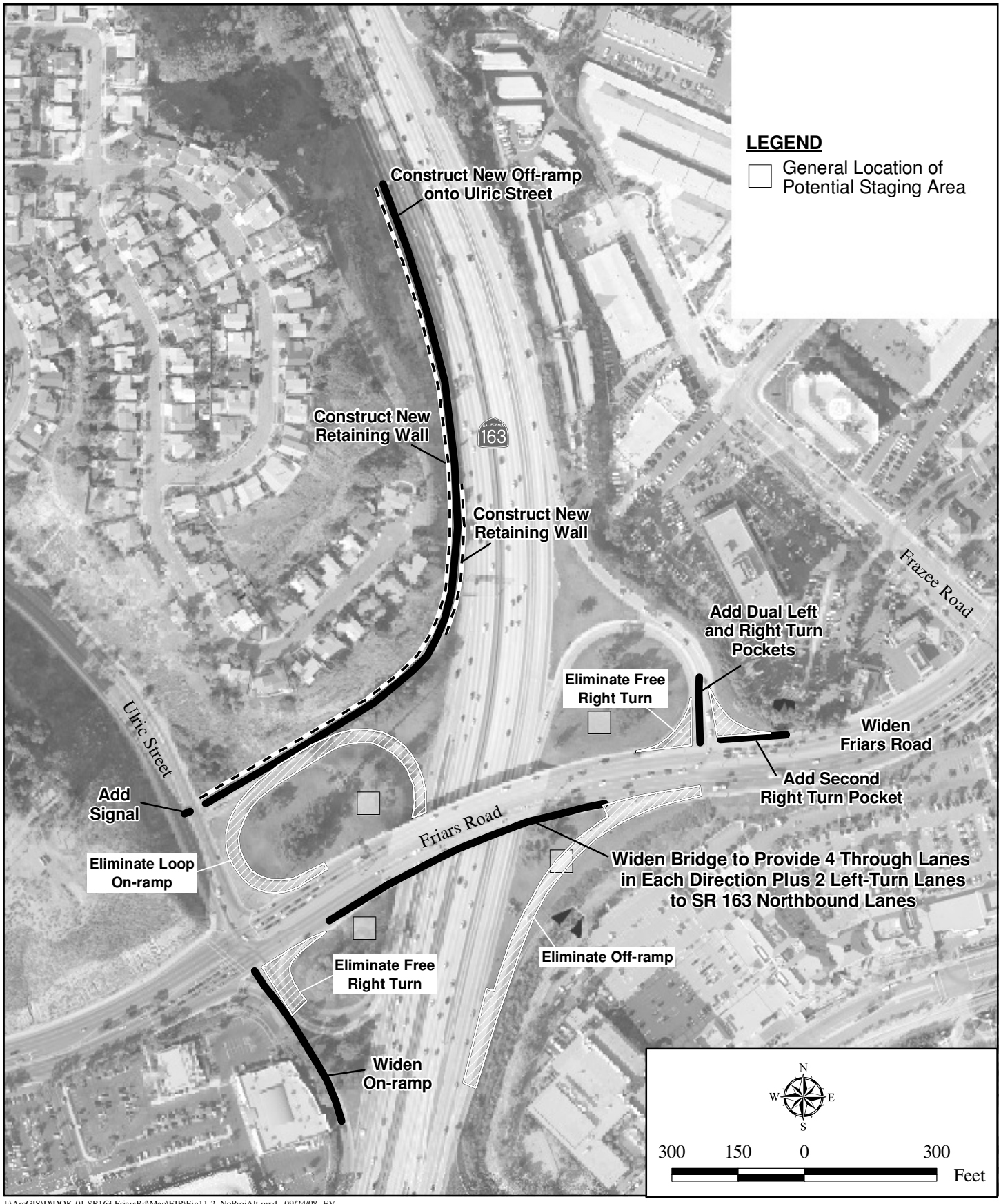
Alternative 6

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 11-1b



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Reduced Footprint Alternative

SR 163/FRIARS ROAD INTERCHANGE PROJECT

Figure 11-2

CHAPTER 12.0

MITIGATION MONITORING AND REPORTING PROGRAM

12.0 MITIGATION MONITORING AND REPORTING PROGRAM

To ensure that site development would avoid significant environmental impacts, a Mitigation, Monitoring and Reporting Program (MMRP) is required. Compliance with the mitigation measures shall be the responsibility of the Applicant. The mitigation measures are described below.

Prior to the issuance of a Notice to Proceed (NTP) or issuance of any construction permit, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits, the Assistant Deputy Director (ADD) Environmental Designee of the Entitlements Division shall verify that the following statement is shown on the grading and/or construction plans as a note under the heading *Environmental Requirements*: "SR 163/Friars Road Interchange Project is subject to a Mitigation, Monitoring and Reporting Program and shall conform to the mitigation conditions as contained in the EIR (City Project No. 72782, State Clearinghouse No. 2005111032)."

General Requirements

1. Prior to issuance of a Notice to Proceed (NTP) or issuance of any construction permit, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits, the Assistant Deputy Director (ADD) Environmental Designee of the Entitlements Division shall verify that the appropriate Mitigation Measures **Land Use/Multiple Species Conservation Program (MSCP), Historical Resources, Biological Resources, Paleontological Resources, Solid Waste Generation/ Disposal, and Health and Safety** have been included verbatim on the submitted construction documents and contract specifications, and included under the heading, "Environmental Mitigation Requirements." In addition, the requirements for a Preconstruction (Precon) Meeting shall be noted on all construction documents.

2. Prior to the commencement of work, a Precon Meeting shall be conducted and include the City of San Diego's Mitigation Monitoring Coordination (MMC) Section, Resident Engineer, Building Inspector, Applicant, Project Consultant (Biologist, Archaeologist and Paleontologist) and other parties of interest.

3. Evidence of compliance with other permitting authorities is required, if applicable. Evidence shall include either copies of permits issued, letters of resolution issued by the Responsible Agency documenting compliance, or other evidence documenting compliance and deemed acceptable by the ADD Environmental Designee.

4. Pursuant to Section 1600 et seq. of the State of California Fish & Game Code, evidence of compliance with Section 1602 is required. Evidence shall include either copies of permits issued, letters of resolution issued by the Responsible Agency documenting compliance, or other evidence documenting compliance and deemed acceptable by the ADD Environmental Designee.

Biological Resources

Sensitive Habitats

BR-1 Impacts to 0.26 acre (consisting of 0.11 acre of temporary impact and 0.15 acre of permanent impact) of disturbed southern willow scrub shall be mitigated at a 3:1 ratio (with a minimum 1:1 creation component) through the creation of 0.26 acre and the restoration/enhancement of 0.52 acre of southern willow scrub, for a total of 0.78 acre, as detailed in Appendix D. If mitigation in accordance with the plan contained in Appendix D is determined not to be feasible, the City shall identify and implement an appropriate alternate mitigation program, subject to approval by the ADD, ACOE and CDFG.

BR-2 Impacts to 0.43 acre total (consisting of 0.20 acre of temporary impact and 0.23 acre of permanent impact) of southern cottonwood-willow riparian forest shall be mitigated at a 3:1 ratio (with a minimum 1:1 creation component) through the creation of 0.43 acre and the restoration/enhancement of 0.86 acre of southern cottonwood-willow riparian forest, for a total of 1.29 acres, as detailed in Appendix D. If mitigation in accordance with the plan contained in Appendix D is determined not to be feasible, the City shall identify and implement an appropriate alternate mitigation program, subject to approval by the ADD, ACOE and CDFG.

BR-3 Prior to issuance of a Notice to Proceed (NTP) or any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits, and Building Plans/Permits, the owner/permittee shall contribute to the City of San Diego HAF to mitigate for the loss of 0.3 acre of Diegan coastal sage scrub (Tier II) and 1.8 acres of non-native grassland (Tier IIIB). This fee is based on mitigation ratios, per the City of San Diego Biology Guidelines, of 1:1 for Diegan coastal sage scrub and 0.5:1 for non-native grassland impacts (of which both impacts occurred outside the MHPA, yet mitigation would be required inside the MHPA). Therefore, the resulting total mitigation required for direct Project impacts is for a total of 1.2 acres equivalent contribution to the City's Habitat Acquisition Fund (HAF) plus a ten percent (10%) administrative fee.

BR-4 Prior to the issuance of a NTP or any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits, and Building Plans/Permits, the ADD or Environmental Designee of the City's Entitlements Division shall incorporate the following mitigation measures into the Project design and include them verbatim on all appropriate construction documents.

Prior to Permit Issuance

A. Entitlements Division Plan Check
   1. Prior to the NTP or issuance for any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits, and Building Plans/Permits, whichever is applicable, the ADD or environmental designee shall verify that the requirements for the revegetation/restoration plans and specifications, including mitigation of direct impacts to southern willow scrub (0.26 acre) and southern

cottonwood-willow riparian forest (0.43 acre) have been shown and noted on the appropriate landscape construction documents. The landscape construction documents and specifications must be found to be in conformance with the Wetland Restoration Plan prepared by HELIX Environmental Planning, November 2009, the requirements of which are summarized below:

B. Revegetation/Restoration Plan(s) and Specifications

1. Landscape Construction Documents (LCD) shall be prepared on D-sheets and submitted to the City of San Diego Development Services Department, Landscape Architecture Section (LAS) for review and approval. LAS shall consult with Mitigation Monitoring Coordination (MMC) and obtain concurrence prior to approval of LCD. The LCD shall consist of revegetation/restoration, planting, irrigation, and erosion control plans, including all required graphics, notes, details, specifications, letters, and reports, as outlined below.
2. Landscape Revegetation/Restoration Planting and Irrigation Plans shall be prepared in accordance with the San Diego Land Development Code (LDC) Chapter 14, Article 2, Division 4, the LDC Landscape Standards submittal requirements, and Attachment "B" (General Outline for Revegetation/ Restoration Plans) of the City of San Diego's LDC Biology Guidelines (July 2002). The Principal Qualified Biologist (PQB) shall identify and adequately document all pertinent information concerning the revegetation/restoration goals and requirements, such as but not limited to, plant/seed palettes, timing of installation, plant installation specifications, method of watering, protection of adjacent habitat, erosion and sediment control, performance/success criteria, inspection schedule by City staff, document submittals, reporting schedule, etc. The LCD shall also include comprehensive graphics and notes addressing the ongoing maintenance requirements (after final acceptance by the City).
3. The Revegetation Installation Contractor (RIC), Revegetation Maintenance Contractor (RMC), Construction Manager (CM), and Grading Contractor (GC), where applicable, shall be responsible for ensuring that all grading and contouring, clearing and grubbing, installation of plant materials, and any necessary maintenance activities or remedial actions required during installation and the 120-day plant establishment period are done per approved LCD. The following procedures at a minimum, but not limited to, shall be performed:
   a. The RMC shall be responsible for the maintenance of the wetland mitigation areas for a minimum period of 120 days. Maintenance visits shall be conducted on a weekly basis throughout the plant establishment period.
   b. At the end of the 120 day period, the PQB shall review the mitigation area to assess the completion of the short-term plant establishment period and submit a report for approval by the MMC.
   c. The MMC will provide approval in writing to begin the five-year long-term establishment/maintenance and monitoring program.
   d. Existing indigenous/native species shall not be pruned, thinned, or cleared in the revegetation/mitigation area.
   e. The revegetation site shall not be fertilized.

f. The RIC is responsible for reseeding (if applicable) if weeds are not removed, within one week of written recommendation by the PQB.
g. Weed control measures shall include the following: (1) hand removal, (2) cutting, with power equipment, and (3) chemical control. Hand removal of weeds is the most desirable method of control and will be used wherever possible.
h. Damaged areas shall be repaired immediately by the RIC/RMC. Insect infestations, plant diseases, herbivory, and other pest problems will be closely monitored throughout the five-year maintenance period. Protective mechanisms such as metal wire netting shall be used as necessary. Diseased and infected plants shall be immediately disposed of off site in a legally-acceptable manner at the discretion of the PQB or Qualified Biological Monitor (QBM; City approved). Where possible, biological controls will be used instead of pesticides and herbicides.

4. If a Brush Management Program is required, the revegetation/restoration plan shall show the dimensions of each brush management zone and notes shall be provided describing the restrictions on planting and maintenance and identify that the area is impact-neutral and shall not be used for habitat mitigation/credit purposes.

C. Letters of Qualification Have Been Submitted to ADD

1. The applicant shall submit, for approval, a letter verifying the qualifications of the biological professional to the MMC. This letter shall identify the PQB, Principal Restoration Specialist (PRS), and QBM, where applicable, and the names of all other persons involved in the implementation of the revegetation/restoration plan and biological monitoring program, as they are defined in the City of San Diego Biological Review References. Resumes and the biology worksheet should be updated annually.
2. The MMC will provide a letter to the applicant confirming the qualifications of the PQB/PRS/QBM and all City-approved persons involved in the revegetation/restoration plan and biological monitoring of the Project.
3. Prior to the start of work, the applicant must obtain approval from the MMC for any personnel changes associated with the revegetation/restoration plan and biological monitoring of the Project.
4. The PBQ must also submit evidence to the MMC that the PQB/QBM has completed Storm Water Pollution Prevention Program training.

<u>Prior to Start of Construction</u>

A. PQB/PRS Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring:
   a. The owner/permittee or their authorized representative shall arrange and perform a Precon Meeting that shall include the PQB or PRS, CM, and/or GC, Landscape Architect (LA), RIC, RMC, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC.

b. The PQB shall also attend any other grading/excavation-related Precon Meeting to make comments and/or suggestions concerning the revegetation/restoration plan(s) and specifications with the RIC, CM, and/or GC.
c. If the PQB is unable to attend the Precon Meeting, the owner shall schedule a focused Precon Meeting with the MMC, PQB/PRS, CM, BI, LA, RIC, RMC, RE, and/or BI, if appropriate, prior to the start of any work associated with the revegetation/ restoration phase of the Project, including site grading preparation.

2. Where Revegetation/Restoration Work Will Occur
   a. Prior to the start of any work, the PQB/PRS shall also submit a revegetation/restoration monitoring exhibit (RRME) based on the appropriate reduced LCD (reduced to 11" x 17" format) to the MMC and RE, identifying the areas to be revegetated/restored, including the delineation of the limits of any disturbance/grading and any excavation.
   b. The PQB shall coordinate with the construction superintendent to identify appropriate BMPs on the RRME.
3. When Biological Monitoring Will Occur
   a. Prior to the start of any work, the PQB/PRS shall also submit a monitoring procedures schedule to the MMC and RE indicating when and where biological monitoring and related activities will occur.
4. PQB Shall Contact MMC to Request Modification
   a. The PQB may submit a detailed letter to the MMC prior to the start of work or during construction requesting a modification to the revegetation/ restoration plans and specifications. This request shall be based on relevant information (such as other sensitive species not listed by federal and/or state agencies and/or not covered by the MSCP and to which any impacts may be considered significant under CEQA), which may reduce or increase the potential for biological resources to be present.

<u>During Construction</u>

A. PQB or QBM Present During Construction/Grading/Planting
   1. The PQB or QBM shall be present full-time during construction activities, including but not limited to, site preparation, cleaning, grading, excavation, and landscape establishment in association with Project construction and/or grading activity which could result in impacts to sensitive biological resources as identified in the LCDs and on the RRME. **The RIC and/or QBM is responsible for notifying the PQB/PRS of changes to any approved construction plans, procedures, and/or activities. The PQB/PRS is responsible to notify the CM, LA, RE, BI, and MMC of the changes.**
   2. The PQB or QBM shall document field activity via the Consultant Site Visit Record Forms (CSVR). The CSVR shall be faxed by the CM on the first day of monitoring, the last day of monitoring, monthly, and in the event that there is a deviation from conditions identified within the LCD and/or biological monitoring program. The RE shall forward copies to MMC.
   3. The PQB or QBM shall be responsible for maintaining and submitting the CSVR at the time that CM responsibilities end (i.e., upon the completion of construction activity other than that associated with biology).

4. All construction activities (including staging areas) shall be restricted to the development areas as shown on the LCD. The PQB/PRS or QBM staff shall monitor construction activities as needed, with MMC concurrence on method and schedule. This is to ensure that construction activities do not encroach into biologically sensitive areas beyond the limits of disturbance as shown on the approved LCD.
5. The PQB or QBM shall supervise the placement of orange construction fencing or City approved equivalent along the limits of potential disturbance adjacent to (or at the edge of) all sensitive habitats (southern willow scrub, southern cottonwood-willow riparian forest, Diegan coastal sage scrub and non-native grassland), as shown on the approved LCD.
6. The PBQ shall provide a letter to the MMC indicating that limits of potential disturbance have been surveyed, staked, and that the construction fencing is installed properly.
7. The PQB or QBM shall oversee implementation of BMPs, such as gravel bags, straw logs, silt fences or equivalent erosion control measures, as needed, to ensure prevention of any significant sediment transport. In addition, the PQB/QBM shall be responsible for verifying the removal of all temporary construction BMPs upon completion of construction activities. Removal of temporary construction BMPs shall be verified in writing on the final construction phase CSVR.
8. The PQB shall verify in writing on the CSVR that no trash stockpiling or oil dumping, fueling of equipment, storage of hazardous wastes or construction equipment/material, parking, or other construction-related activities shall occur adjacent to sensitive habitat. These activities shall occur only within the designated staging area located outside the area defined as biological sensitive area.
9. The long-term establishment inspection and reporting schedule per LCD must all be approved by the MMC prior to the issuance of the Notice of Completion or any bond release.

B. Disturbance/Discovery Notification Process
1. If unauthorized disturbances occur or sensitive biological resources are discovered that where not previously identified on the LCD and/or RRME, the PQB or QBM shall direct the contractor to temporarily divert construction in the area of disturbance or discovery and immediately notify the RE or BI, as appropriate.
2. The PQB shall also immediately notify the MMC by telephone of the disturbance and report the nature and extent of the disturbance and recommend the method of additional protection, such as fencing and appropriate BMPs. After obtaining concurrence with the MMC and RE, the PQB and CM shall install the approved protection and agreement on BMPs.
3. The PQB shall also submit written documentation of the disturbance to the MMC within 24 hours by fax or email with photos of the resource in context (e.g., show adjacent vegetation).

C. Determination of Significance
1. The PQB shall evaluate the significance of disturbance and/or discovered biological resource and provide a detailed analysis and recommendation in a letter report with the appropriate photo documentation to the MMC to obtain concurrence and formulate a plan of action that may include fines, fees, and supplemental mitigation costs.
2. The MMC shall review this letter report and provide the RE with MMC's recommendations and procedures.

Post Construction

A. Mitigation Monitoring and Reporting Period
   1. Five-Year Mitigation Establishment/Maintenance Period
      a. The RMC shall be retained to complete maintenance monitoring activities throughout the five-year mitigation monitoring period.
      b. Maintenance visits will be conducted twice per month for the first six months, once per month for the remainder of the first year, and quarterly thereafter.
      c. Maintenance activities will include all items described in the LCD.
      d. Plant replacement will be conducted as recommended by the PQB (note: plants shall be increased in container size relative to the time of initial installation or establishment or maintenance period may be extended to the satisfaction of the MMC).
   2. Five-Year Biological Monitoring
      a. All biological monitoring and reporting shall be conducted by a PQB or QBM, as appropriate, consistent with the LCD.
      b. Monitoring shall involve both qualitative horticultural monitoring and quantitative monitoring (i.e., performance/success criteria). Horticultural monitoring shall focus on soil conditions (e.g., moisture and fertility), container plant health, seed germination rates, presence of native and non-native (e.g., invasive exotic) species, any significant disease or pest problems, irrigation repair and scheduling, trash removal, illegal trespass, and any erosion problems.
      c. After plant installation is complete, qualitative monitoring surveys will occur monthly during year one and quarterly during years two through five.
      d. Upon the completion of the 120-days short-term plant establishment period, quantitative monitoring surveys shall be conducted at 0, 6, 12, 24, 36, 48, and 60 months by the PQB or QBM. The revegetation/restoration effort shall be quantitatively evaluated once per year (in spring) during years three through five, to determine compliance with the performance standards identified on the LCD. All plant material must have survived without supplemental irrigation for the last two years.
      e. Quantitative monitoring shall include the use of fixed transects and photo points to determine the vegetative cover within the revegetated habitat. Collection of fixed transect data within the revegetation/restoration site shall result in the calculation of percent cover for each plant species present, percent cover of target vegetation, tree height and diameter at breast height (if applicable), and percent cover of non-native/non invasive vegetation. Container plants will also be counted to determine percent survivorship. The data will be used to determine attainment of performance/success criteria identified within the LCD.
      f. Biological monitoring requirements may be reduced if, before the end of the fifth year, the revegetation meets the fifth year criteria and the irrigation has been terminated for a period of the last two years.
      g. The PQB or QBM shall oversee implementation of post-construction BMPs, such as gravel bags, straw logs, silt fences, or equivalent erosion control measure, as needed to ensure prevention of any significant sediment transport. In addition, the PBQ/QBM shall be responsible for verifying the removal of all temporary

post-construction BMPs upon completion of construction activities. Removal of temporary post-construction BMPs shall be verified in writing on the final post-construction phase CSVR.

B. Submittal of Draft Monitoring Report
   1. A draft monitoring letter report shall be prepared to document the completion of the 120-day plant establishment period. The report shall include discussion on weed control, horticultural treatments (pruning, mulching, and disease control), erosion control, trash/debris removal, replacement planting/ reseeding, site protection/signage, pest management, vandalism, and irrigation maintenance. The revegetation/ restoration effort shall be visually assessed at the end of a 120-day period to determine mortality of individuals.
   2. The PQB shall submit two copies of the Draft Monitoring Report that describes the results, analysis, and conclusions of all phases of the Biological Monitoring and Reporting Program (with appropriate graphics) to the MMC for review and approval within 30 days following the completion of monitoring. Monitoring reports shall be prepared on an annual basis for a period of five years. Site progress reports shall be prepared by the PQB following each site visit and provided to the owner, RMC and RIC. Site progress reports shall review maintenance activities, qualitative and quantitative (when appropriate) monitoring results (including progress of the revegetation relative to the performance/success criteria), and the need for any remedial measures.
   3. Draft annual reports (three copies) summarizing the results of each progress report (including quantitative monitoring results and photographs taken from permanent viewpoints) shall be submitted to the MMC for review and approval within 30 days following the completion of monitoring.
   4. The MMC shall return the Draft Monitoring Report to the PQB for revision or for preparation of each report.
   5. The PQB shall submit a revised Monitoring Report to the MMC (with a copy to the RE) for approval within 30 days.
   6. The MMC will provide written acceptance to the PQB and RE of the approved report.

C. Final Monitoring Reports(s)
   1. The PQB shall prepare a Final Monitoring upon achievement of the fifth year performance/success criteria and completion of the five-year maintenance period.
      a. This report may occur before the end of the fifth year if the revegetation meets the fifth year performance /success criteria and the irrigation has been terminated for a period of the last two years.
      b. The Final Monitoring report shall be submitted to the MMC for evaluation of the success of the mitigation effort and final acceptance. A request for a pre-final inspection shall be submitted at this time, which the MMC will schedule after review of the report.
      c. If any of the revegetated area fails to meet the Project's final success standards, the applicant must consult with the MMC. This consultation shall take place to determine whether the Revegetation effort is acceptable. The applicant understands that failure of any significant portion of the revegetation/restoration area may result in a requirement to replace or

renegotiate that portion of the site and/or extend the monitoring and establishment/maintenance period until all success standards are met.

Land Use/MHPA

BR-5 Prior to the issuance of any construction permits, the ADD Environmental Designee shall verify that all MHPA boundaries and limits of disturbance have been delineated on all construction documents.

A. Prior to the first Precon Meeting, the owner/permittee shall provide a letter of verification to the Mitigation Monitoring Coordination Section stating that a qualified Biologist, as defined in the City of San Diego Biological Review References, has been retained to implement the Project's MSCP monitoring Program. The letter shall include the names and contact information of all persons involved in the Biological Monitoring of the Project.

B. At least thirty days prior to the Precon Meeting, the QB shall submit all required documentation to MMC, verifying that any special reports, maps, plans and time lines, such as but not limited to, revegetation plans, plant relocation requirements and timing, MSCP requirements, avian or other wildlife protocol surveys, impact avoidance areas or other such information has been completed and updated.

C. The QB (Project biologist) shall attend the first Precon Meeting and discuss the Project's biological monitoring program.

D. In addition the following mitigation measures related to the MHPA Land Use Adjacency Guidelines shall be implemented:
   1. Prior to initiation of any construction-related grading, the construction foreman and/or Project biologist shall discuss the sensitive nature of the adjacent habitat with the crew and subcontractor.
   2. The limits of grading shall be clearly delineated by a survey crew prior to brushing, clearing or grading. The limits of grading, as shown on approved Exhibit A, shall be defined with silt fencing or orange construction fencing and checked by the biological monitor before initiation of construction grading. All native plants or species of special concern, (i.e., the coast barrel cactus) as identified in the biological technical report, shall be staked, flagged and avoided within Brush Management Zone 2.
   3. Invasive non-native plant species shall not be introduced into areas adjacent to the MHPA. Landscape plans shall contain non-invasive native species adjacent to sensitive biological areas as shown on approved Exhibit A.
   4. All lighting adjacent to the MHPA shall be shielded, unidirectional, low pressure sodium illumination (or similar) and directed away from preserve areas using appropriate placement and shields. If lighting adjacent to the MHPA is required for nighttime construction, it shall be directed away from the preserve and the tops of adjacent trees with potentially nesting raptors, using appropriate placement and shielding.

5. All construction activities (including staging areas and/or storage areas) shall be restricted to the development area as shown on the approved Exhibit A. No equipment maintenance shall be conducted within or near the adjacent open space and/or sensitive areas and shall be restricted to the development area as shown on the approved Exhibit A and shall not encroach into sensitive biological areas within either the open space and/or MHPA areas. The Project biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas beyond the limits of disturbance as shown on the approved Exhibit A.
6. Natural drainage patterns shall be maintained as much as possible during construction. Erosion control techniques, including the use of sandbags, hay bales, and/or the installation of sediment traps, shall be used to control erosion and deter drainage during construction activities into the adjacent open space. Drainage from all development areas adjacent to the MHPA shall be directed away from the MHPA, or if not possible, must not drain directly into the MHPA, but instead into sedimentation basins, grassy swales, and/or mechanical trapping devices as specified by the City Engineer.
7. No trash, oil, parking or other construction-related activities shall be allowed outside the established limits of grading, as shown on approved Exhibit A. All construction-related debris shall be removed off site to an approved disposal facility.

Jurisdictional Waters

BR-6 Pursuant to Sections 401 and 404 of the CWA and Section 1600 et seq. of the California Fish and Game Code, evidence of compliance is required, if applicable. Evidence shall include either copies of permits issued, letters of resolution issued by the Responsible Agency documenting compliance, or other evidence documenting compliance and deemed acceptable by the ADD or Environmental Designee.

Sensitive Plants

BR-7 Prior to the Precon Meeting, the two San Diego barrel cacti within the Project footprint shall be salvaged and relocated to areas of suitable habitat within the BSA.

General Avian

BR-8 If Project grading/brush management is proposed in or adjacent to native habitat during the typical bird breeding season (i.e., February 1 to September 15), the Project biologist shall conduct a pre-grading survey for active nests in the development area and within 300 feet of it, and submit a letter report to the MMC prior to the Precon Meeting.

A. If active nests are detected, or considered likely, the report shall include mitigation in conformance with the City's Biology Guidelines (i.e., appropriate follow-up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) to the satisfaction of the ADD of the Entitlements Division. Mitigation requirements determined by the Project biologist and the ADD shall be

incorporated into the Project's Biological Construction Monitoring Exhibit (BCME) and monitoring results incorporated in to the final biological construction monitoring report.

B. If no nesting birds are detected per "A" above, mitigation under "A" is not required.

Raptors

BR-9 If Project grading is proposed during the raptor breeding season (February 1 through September 15), the Project biologist shall conduct a pre-grading survey for active raptor nests in within 500 feet of the development area and submit a letter report to the Mitigation Monitoring Coordinator prior to the Precon Meeting.

A. If active raptor nests are detected, the report shall include mitigation in conformance with the City's Biology Guidelines (i.e. appropriate buffers, monitoring schedules, etc.) to the satisfaction of the ADD of the Entitlements Division or Environmental Designee. Mitigation requirements determined by the Project biologist and the ADD of Entitlements Division shall be incorporated into the Project's Biological Construction Monitoring Exhibit and monitoring results incorporated in to the final biological construction monitoring report.

B. If no nesting raptors are detected during the pre-grading survey, no mitigation is required.

Listed Avian Species

BR-10 LEAST BELL'S VIREO (State Endangered/Federally Endangered)

Prior to the Precon Meeting, the ADD or Environmental Designee shall verify that the following Project requirements regarding the least Bell's vireo are shown on the construction plans:

No clearing, grubbing, or other construction activities shall occur between March 15 and September 15, the breeding season of the least Bell's vireo, until the following requirements have been met to the satisfaction of the ADD or Environmental Designee:

A. A QB (possessing a valid Endangered Species Act Section 10(a)(l)(A) Recovery Permit) shall survey those wetland areas that would be subject to construction noise levels exceeding 60 dB(A) hourly average for the presence of the least Bell's vireo. Surveys for the least Bell's vireo shall be conducted pursuant to the protocol survey guidelines established by the USFWS within the breeding season prior to the commencement of construction. If the least Bell's vireo is present, then the following conditions must be met:

I. Between March 15 and September 15, no clearing, grubbing, or grading of occupied least Bell's vireo habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a QB; and

II. Between March 15 and September 15, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB(A) hourly average at the edge of occupied least Bell's vireo habitat. An analysis showing that noise generated by construction activities would not exceed 60 dB(A) hourly average at the edge of occupied habitat must be completed by a Qualified Acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animals) and approved by the ADD or Environmental Designee at least two weeks prior to the commencement of construction activities. Prior to the commencement of construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a QB; or

III. At least two weeks prior to the commencement of any construction activities, under the direction of a Qualified Acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) hourly average at the edge of habitat occupied by the least Bell's vireo. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring* shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the Qualified Acoustician or QB, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (September 15).

* Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the ADD or Environmental Designee, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

B. If least Bell's vireo are not detected during the protocol survey, the QB shall submit substantial evidence to the ADD or Environmental Designee and applicable resource agencies which demonstrates whether or not mitigation measures such as noise walls are necessary between March 15 and September 15 as follows:

I. If this evidence indicates the potential is high for least Bell's vireo to be present based on historical records or site conditions, then condition A.III shall be adhered to as specified above.

II. If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.

BR-11 SOUTHWESTERN WILLOW FLYCATCHER (Federally Endangered)

Prior to the Precon Meeting, the ADD or Environmental Designee shall verify that the following Project requirements regarding the southwestern willow flycatcher are shown on the construction plans:

No clearing, grubbing, or other construction activities shall occur between May 1 and September 1, the breeding season of the southwestern willow flycatcher, until the following requirements have been met to the satisfaction of the ADD Environmental Designee:

A. A QB (possessing a valid Endangered Species Act Section 10(a)(l)(A) Recovery Permit) shall survey those wetland areas that would be subject to construction noise levels exceeding 60 dB(A) hourly average for the presence of the southwestern willow flycatcher. Surveys for this species shall be conducted pursuant to the protocol survey guidelines established by the USFWS within the breeding season prior to the commencement of any construction. If the southwestern willow flycatcher is present, then the following in conditions must be met:

I. Between May 1 and September 1, no clearing, grubbing, or grading of occupied southwestern willow flycatcher habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a QB; AND

II. Between May 1 and September 1, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB(A) hourly average at the edge of occupied southwestern willow flycatcher habitat. An analysis showing that noise generated by construction activities would not exceed 60 dB(A) hourly average at the edge of occupied habitat must be completed by a Qualified Acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the ADD or Environmental Designee at least two weeks prior to the commencement of construction activities. Prior to the commencement of construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a QB; or

III. At least two weeks prior to the commencement of any construction activities, under the direction of a Qualified Acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise

levels resulting from construction activities will not exceed 60 dB(A) hourly average at the edge of habitat occupied by the southwestern willow flycatcher. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring* shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the Qualified Acoustician or QB, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (September 1).

* Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the ADD or Environmental Designee, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

B. If southwestern willow flycatcher are not detected during the protocol survey, the qualified biologist shall submit substantial evidence to the ADD or Environmental Designee and applicable resource agencies which demonstrates whether or not mitigation measures such as noise wall are necessary between May 1 and September 1 as follows:

I. If this evidence indicates the potential is high for southwestern willow flycatcher to be present based on historical records or site conditions, then condition A.III shall be adhered to as specified above.

II. If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.

Historical Resources

HR-1 Prior to Permit Issuance or Bid Opening/Bid Award

A. Entitlements Plan Check

1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring have been noted on the appropriate construction documents. The requirement for monitoring will be determined prior to the Precon Meeting, based on the construction technique to be implemented in alluvial areas along the San Diego River (i.e., whether the selected construction technique would return spoil to the surface for evaluation).

B. Letters of Qualification have been submitted to ADD
   1. Prior to Bid Award, the applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the Project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego Historical Resources Guidelines (HRG). If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training with certification documentation.
   2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the Project.
   3. Prior to the start of work, the applicant must obtain approval from MMC for any personnel changes associated with the monitoring program.

HR-2 Prior to Start of Construction

A. Verification of Records Search
   1. The PI shall provide verification to MMC that a site specific records search (1/4 mile radius) has been completed. Verification includes, but is not limited to a copy of a confirmation letter from South Coast Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
   2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.
   3. The PI may submit a detailed letter to MMC requesting a reduction to the ¼ mile radius.

B. PI Shall Attend Precon Meetings
   1. Prior to beginning any work that requires monitoring; the applicant shall arrange a Precon Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist and Native American monitor shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Construction Manager and/or Grading Contractor.
      a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.

C. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects)
   The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the archaeological monitoring program.
   1. Identify Areas to be Monitored
      a. Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) based on the appropriate construction documents (reduced to 11x17) to MMC for approval identifying

the areas to be monitored including the delineation of grading/excavation limits.

b. The AME shall be based on the results of a site specific records search as well as information regarding the age of existing pipelines, laterals and associated appurtenances and/or any known soil conditions (native or formation).

c. MMC shall notify the PI that the AME has been approved.

2. When Monitoring Will Occur

a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.

b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as age of existing pipe to be replaced, depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present.

3. Approval of AME and Construction Schedule

After approval of the AME by MMC, the PI shall submit to MMC written authorization of the AME and Construction Schedule from the CM.

HR-3 During Construction

A. Monitor Shall be Present During Grading/Excavation/Trenching

1. The Archaeological monitor shall be present full-time during grading/excavation/trenching activities including, but not limited to mainline, laterals, jacking and receiving pits, services and all other appurtenances associated with underground utilities as identified on the AME and as authorized by the CM. The Native American monitor shall determine the extent of their presence during construction related activities based on the AME and provide that information to the PI and MMC. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the PME.**

2. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous trenching activities, presence of fossil formations, or when native soils are encountered may reduce or increase the potential for resources to be present.

3. The monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVRs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process
   1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.
   2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
   3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.

C. Determination of Significance
   1. The PI and Native American monitor shall evaluate the significance of the resource. If Human Remains are involved, protocol in HR 1-4 below shall be followed.
      a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required.
      b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) and obtain written approval of the program from MMC, CM and RE. ADRP and any mitigation must be approved by MMC, RE and/or CM before ground disturbing activities in the area of discovery will be allowed to resume.
      c. If the resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required.

HR-4 Discovery of Human Remains

If human remains are discovered, work shall halt in that area and the following procedures as set forth in the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:

A. Notification
   1. The Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS).
   2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone.

B. Isolate discovery site
   1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenience of the remains.
   2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenience.

3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin.

C. If Human Remains **ARE** determined to be Native American
   1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, **ONLY** the Medical Examiner can make this call.
   2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information.
   3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with the California Public Resource and Health & Safety Codes.
   4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods.
   5. Disposition of Native American Human Remains shall be determined between the MLD and the PI, IF:
      a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being notified by the Commission; OR;
      b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner.
      c. To protect these sites, the landowner shall do one or more of the following:
         (1) Record the site with the NAHC;
         (2) Record an open space or conservation easement; or
         (3) Record a document with the County.
      d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to Mitigation Measure HR-4.A.5.c., above.

D. If Human Remains are **NOT** Native American
   1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial.
   2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98).
   3. If the remains are of historic origin, they shall be appropriately removed and conveyed to the Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS, the applicant department and/or Real Estate Assets Department (READ) and the Museum of Man.

HR-5 Night and/or Weekend Work

A. If night and/or weekend work is included in the contract
   1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Precon Meeting.
   2. The following procedures shall be followed.
      a. No Discoveries
         In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVR and submit to MMC via fax by 8:00 a.m. of the next business day.
      b. Discoveries
         All discoveries shall be processed and documented using the existing procedures detailed in Mitigation Measure HR-3 - During Construction, and Mitigation Measure HR-4 – Discovery of Human Remains.
      c. Potentially Significant Discoveries
         If the PI determines that a potentially significant discovery has been made, the procedures detailed under Mitigation Measure HR-3 - During Construction shall be followed.
      d. The PI shall immediately contact the RE and MMC, or by 8:00 a.m. of the next business day to report and discuss the findings as indicated in Mitigation Measure HR-3.B, unless other specific arrangements have been made.

B. If night and/or weekend work becomes necessary during the course of construction
   1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
   2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

HR-6 Post Construction

A. Submittal of Draft Monitoring Report
   1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Historical Resources Guidelines (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC via the RE for review and approval within 90 days following the completion of monitoring,
      a. For significant archaeological resources encountered during monitoring, the Archaeological Data Recovery Program shall be included in the Draft Monitoring Report.
      b. Recording Sites with State of California Department of Parks and Recreation
         The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Monitoring Report.

2. MMC shall return the Draft Monitoring Report to the PI via the RE for revision or, for preparation of the Final Report.
3. The PI shall submit revised Draft Monitoring Report to MMC via the RE for approval.
4. MMC shall provide written verification to the PI of the approved report.
5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Artifacts
1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued
2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.

C. Curation of artifacts: Accession Agreement and Acceptance Verification
1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this Project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable.
2. The PI shall submit the Accession Agreement and catalogue record(s) to the RE or BI, as appropriate for donor signature with a copy submitted to MMC.
3. The RE or BI, as appropriate shall obtain signature on the Accession Agreement and shall return to PI with copy submitted to MMC.
4. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

D. Final Monitoring Report(s)
1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC of the approved report.
2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

Paleontological Resources

PR-1 Prior to Permit Issuance or Bid Opening/Bid Award

A. Entitlements Plan Check
1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate construction documents.

B. Letters of Qualification have been submitted to ADD
   1. Prior to Bid Award, the applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the Project and the names of all persons involved in the paleontological monitoring program, as defined in the City of San Diego Paleontology Guidelines.
   2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the Project.
   3. Prior to the start of work, the applicant shall obtain approval from MMC for any personnel changes associated with the monitoring program.

PR-2 Prior to Start of Construction

A. Verification of Records Search
   1. The PI shall provide verification to MMC that a site specific records search has been completed. Verification includes, but is not limited to a copy of a confirmation letter from San Diego Natural History Museum, other institution or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
   2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.

B. PI Shall Attend Precon Meetings
   1. Prior to beginning any work that requires monitoring, the Applicant shall arrange a Precon Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified paleontologist shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the Construction Manager and/or Grading Contractor.
      a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.
   2. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects)
      The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the paleontological monitoring program.
   3. Identify Areas to be Monitored
      a. Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate construction documents (reduced to 11x17) to MMC for approval identifying the areas to be monitored including the delineation of grading/excavation limits. Monitoring shall begin at depths below 10 feet from existing grade or as determined by the PI in consultation with City staff. The determination shall be based on site specific records search data which supports monitoring at depths less than 10 feet.
      b. The PME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).

c. MMC shall notify the PI that the PME has been approved.

4. When Monitoring Will Occur
   a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
   b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as depth of excavation and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present.
5. Approval of PME and Construction Schedule
   After approval of the PME by MMC, the PI shall submit to MMC written authorization of the PME and Construction Schedule from the CM.

PR-3 During Construction

A. Monitor Shall be Present During Grading/Excavation/Trenching
   1. The monitor shall be present full-time during grading/excavation/trenching activities including, but not limited to mainline, laterals, jacking and receiving pits, services and all other appurtenances associated with underground utilities as identified on the PME and as authorized by the CM that could result in impacts to formations with high and/or moderate resource sensitivity. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances, OSHA safety requirements may necessitate modification of the PME.**
   2. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as trenching activities that do not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.
   3. The monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVRs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process
   1. In the event of a discovery, the Paleontological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.
   2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
   3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.

C. Determination of Significance
   1. The PI shall evaluate the significance of the resource.
      a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI.
      b. If the resource is significant, the PI shall submit a Paleontological Recovery Program (PRP) and obtain written approval of the program from MMC, MC and/or RE. PRP and any mitigation must be approved by MMC, RE and/or CM before ground disturbing activities in the area of discovery will be allowed to resume.
      c. If the resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils) the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The Paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered.
      d. The PI shall submit a letter to MMC indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.

PR-4 Night and/or Weekend Work

A. If night and/or weekend work is included in the contract
   1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Precon Meeting.
   2. The following procedures shall be followed.
      a. No Discoveries
         In the event that no discoveries were encountered during night and/or weekend work, The PI shall record the information on the CSVR and submit to MMC via the RE via fax by 8:00 a.m. on the next business day.
      b. Discoveries
         All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction.
      c. Potentially Significant Discoveries
         If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.
      d. The PI shall immediately contact the RE and MMC, or by 8:00 a.m. on the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.

B. If night and/or weekend work becomes necessary during the course of construction
   1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
   2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

PR-5 Post Construction

A. Preparation and Submittal of Draft Monitoring Report
   1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Paleontological Guidelines which describes the results, analysis, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to MMC via the RE for review and approval within 90 days following the completion of monitoring,
      a. For significant paleontological resources encountered during monitoring, the Paleontological Recovery Program shall be included in the Draft Monitoring Report.
      b. Recording Sites with the San Diego Natural History Museum
         The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report.
   2. MMC shall return the Draft Monitoring Report to the PI via the RE for revision or, for preparation of the Final Report.
   3. The PI shall submit revised Draft Monitoring Report to MMC via the RE for approval.
   4. MMC shall provide written verification to the PI of the approved report.
   5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Fossil Remains
   1. The PI shall be responsible for ensuring that all fossil remains collected are cleaned and catalogued.

C. Curation of artifacts: Deed of Gift and Acceptance Verification
   1. The PI shall be responsible for ensuring that all fossil remains associated with the monitoring for this Project are permanently curated with an appropriate institution.
   2. The PI shall submit the Deed of Gift and catalogue record(s) to the RE or BI, as appropriate for donor signature with a copy submitted to MMC.
   3. The RE or BI, as appropriate shall obtain signature on the Deed of Gift and shall return to PI with copy submitted to MMC.
   4. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

D. Final Monitoring Report(s)
   1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC of the approved report.

2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

Noise

N-1 If vibratory pile installation equipment is proposed to be used within 500 feet of a residence, the contractor shall baffle the equipment and/or reduce the number of hours per day the equipment is in operation to achieve a 12-hour noise level of 75 dBA L_{eq} or less at the closest home. Concurrent with the commencement of vibratory pile installation, noise monitoring shall be conducted at the property line of the nearest home to ensure that noise levels do not exceed 75 dBA L_{eq}. If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician, then the associated activities shall cease until such time that adequate noise attenuation is achieved.

N-2 Based on final nighttime construction specifications, a qualified acoustician shall prepare and submit to the City Manager (or designee) specifications of appropriate noise attenuation measures to reduce noise impacts at the first floor of residences in the vicinity of construction activities to 65 dBA L_{eq} or less. The submittal shall include the results of coordination with residents to determine whether they agree to having a temporary wall placed at the edge of their property. All nighttime noise attenuation measures agreed to by the residents and specified by the City Manager shall be implemented during the construction period.

Air Quality

AQ-1 Ten percent of the Project construction fleet shall use any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters and/or CARB certified Tier I, II or III equipment.

Public Facilities and Services

PF-1 The Project shall implement a Waste Management Plan, which would minimize the Project's solid waste impact and ensure compliance with applicable policies and regulations. The plan shall address demolition and construction phases of the Project, as applicable. Measures may include reducing waste disposal and/or implementing compensatory measures, such as use of materials with post-consumer content. The plan must be approved by the City's Environmental Services Department.

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CHAPTER 13.0

REFERENCES

13.0 REFERENCES

Affinis

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CHAPTER 14.0

LIST OF PREPARERS

14.0 LIST OF PREPARERS

The City of San Diego's Environmental Analysis Section completed this EIR under the direction of the Development Services Environmental Review Manager. This EIR represents the independent analysis required by Section 21082.1 of the California Public Resources Code. The following persons participated in preparation of the EIR and its associated technical studies:

City of San Diego

Development Services Department

- Myra Herrmann, Senior Planner
- Gary Geiler, Senior Planner
- Elizabeth Shearer-Nguyen, Associate Planner
- Reynard Abalos, Associate Planner
- Patrick Thomas, Assistant Engineer - Geology
- Victoria Huffman, Associate Engineer - Traffic
- Thomas Bui, Assistant Engineer - Civil
- Labib Qasem, Senior Engineer - Traffic

Engineering and Capital Projects Department

- Mark Koll, Project Manager
- Carrie Purcell, Senior Planner
- Roman Anissi, Associate Planner
- Jeanette De Angelis, Senior Planner
- Abi Palaseyed, Supervising Engineer
- Elena Kelman, Assistant Project Engineer
- David Li, Assistant Project Engineer

City Planning and Community Investment Department

- Brian Schoenfisch, Senior Planner
- Kristen Forburger, Associate Planner
- Jeff Harkness, Park Designer

Water Department

- Melvin Tsang, Engineer
- Mahmood Kashavarzi, Engineer

Metropolitan Wastewater Department

- Mehdi Rastakhiz, Engineer

HELIX Environmental Planning, Inc. (EIR, NES, and Management)

- Lisa K. Capper, Principal
- Andrea Bitterling, Senior Project Manager
- Dennis R. Marcin, Senior Environmental Specialist
- Melyssa Duggan, Project Manager
- Melissa J. Whittemore, Project Manager
- Dawna De Mars, Environmental Planner
- Lara Costantino, Environmental Planner
- Stacy Gomez, Environmental Planner
- Charles Terry, Group Manager - Acoustics and Vibration
- Amy Hoffman, Project Landscape Architect
- Derek Langsford, Biology Surveys Group Manager
- W. Larry Sward, Senior Scientist
- Sarichia (Seekey) Cacciatore, Project Manager
- Shelby Howard, Restoration Biology and Monitoring Group Manager
- Stacy Nigro, Biologist
- Deborah Leonard, Biologist
- Sally Trnka, Biologist
- Kathy Pettigrew, Biologist
- Scott Taylor, Biologist
- Brian D. Parker, Biologist
- Patrick McNicholas, Biologist
- Justin Palmer, GIS Manager
- Elizabeth Venz, GIS Specialist
- Rene Beight, Document Coordinator

Owens Biological Consulting (Coastal California gnatcatcher and least Bell's vireo surveys [part of NES])

- Renee Owens, Biologist
- Antonette Gutierrez, Biologist
- Geoffrey Rogers, Biologist
- Adam Koltz, Biologist

Dokken Engineering (Project Engineers, San Diego River Location Hydraulic Study, Preliminary Water Resources Report, Storm Water Data Report and Hazardous Waste Initial Site Assessment)

- Chris Johnson, Consultant Project Manager
- Gerard Lumabas, Consultant Project Engineer
- Don Bloodworth, Consultant Project Engineer
- Brian Eremita, Consultant Assistant Engineer
- Vanessa Hobson, Consultant Assistant Engineer
- Orland Mott, Consultant Assistant Engineer

Affinis Environmental Services (Archaeological Resources Inventory and Historic Resource Research Report)

- Mary Robbins-Wade, Director of Cultural Resources

Estrada Land Planning (Visual Impact Assessment)

- Vicky Estrada; Registered Landscape Architect
- Scott Molentin, Registered Landscape Architect

Linscott, Law & Greenspan, Engineers (Traffic Evaluation Report and Traffic Evaluation Report - Addendum)

- Lisa Carr, Transportation Planner I
- Walter Musial, Consultant Project Manager
- John Keating, Project Engineer

Ninyo & Moore (Soil and Geologic Reconnaissance)

- Thomas C. Gray, Chief Engineering Geologist

Pacific Noise Control (Acoustical Assessment Report)

- Mike Komula, Principal

Scientific Resources Associated (Air Quality Technical Report)

- Valorie Thompson, Principal

Southern California Soil & Testing, Inc. (Geotechnical Design Report, Structure Foundation Design Report, Geologic Review and Report of Environmental Site Assessment for Aerially Deposited Lead)

- John R. High, Chief Engineering Geologist

T.Y. Lin International (Bridge Studies)

- Joe Tognoli, Project Engineer
- Roya Golchoobian, Project Engineer

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APPENDIX A

SCOPING LETTER, NOTICE OF PREPARATION, NOTICE OF SCOPING MEETING AND RESPONSES

Notice of Preparation of Draft EIR

Public Notice of the Preparation of a Draft Program Environmental Impact Report and Public Notice of Scoping Meeting

Comment Letters:

- Governor's Office of Planning and Research, State Clearinghouse and Planning Unit
- San Diego Gas and Electric
- San Diego County Archaeological Society, Inc.
- Native American Heritage Commission
- California Department of Toxic Substances Control
- California Department of Fish and Game
- U.S. Fish and Wildlife Service
- Randy Berkman, River Valley Preservation Project

Public Scoping Meeting

- Sign-in Sheet
- Comment Letter
- Transcript of Proceedings

THE CITY OF SAN DIEGO

DEVELOPMENT SERVICES DEPARTMENT
Date of Notice: November 4, 2005
PUBLIC NOTICE OF THE PREPARATION OF A DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT AND PUBLIC NOTICE OF A SCOPING MEETING
JO: 119440

PUBLIC NOTICE: The City of San Diego will be the Lead Agency and will prepare a Program Environmental Impact Report (PEIR) in compliance with the California Environmental Quality Act (CEQA). This Notice of Preparation of a Program Environmental Impact Report and Scoping Meeting was publicly noticed and distributed on November 4, 2005.

SCOPING MEETING: **A scoping meeting will be held by the City of San Diego Land Development Review Division on Monday, November 28, 2005, from 4:30 to 7:30 pm at the Mission Valley Library, 2123 Fenton Parkway, San Diego, CA, 92108.** Verbal and written comments regarding the scope and alternatives of the proposed Environmental Impact Report (EIR) will be accepted at the meeting. Written comments may also be sent to Elizabeth Shearer-Nguyen, City of San Diego Development Services Center, 1222 First Avenue, MS 501, San Diego, CA 92101, or e-mailed to eshearernguyenl@sandiego.gov referencing Project Number 51612 in the subject line within 30 days of the receipt of this notice. A draft PEIR incorporating public input will then be prepared and distributed for public review and comment.

PROJECT No. 72782 **SCH No.** *Pending*

COMMUNITY PLAN AREA: Mission Valley **COUNCIL DISTRICT**: 6

SUBJECT: **STATE ROUTE 163/FRIARS ROAD INTERCHANGE**: CITY COUNCIL APPROVAL FOR A SITE DEVELOPMENT PERMIT to widen the Friars Road Bridge over State Route (SR) 163 from 6 to 10 lanes which includes the addition of sidewalks along both sides of the bridge; replacement of the existing northbound to eastbound diamond off-ramp to Friars Road (southeast quadrant) with a flopped partial cloverleaf configuration ramp in the northeast quadrant of the interchange and vacation of the existing northbound to eastbound diamond off-ramp; widening of the existing northbound to westbound loop off-ramp from one lane to two lanes to accommodate traffic accessing both eastbound and westbound Friars Road; widening of the existing northbound off-ramp from one lane to two lanes, with a four-lane terminus; removal of the exisiting free-right turn lane from the northbound SR 163 off-ramp to westbound Friars Road; removal of the free-right access from the southbound SR 163 off-ramp to eastbound Friars Road; widening of the existing northbound diamond on-ramp to SR 163 from one lane to two lanes to accommodate increased traffic volumes; addition of a southbound auxiliary lane from Genesee Avenue southerly, which become collector/distributor lanes prior to crossing the Friars Road bridge/future Hazard Center Drive extension traversing under the elevated San Diego Trolley line, then bridging the San Diego River merging with Interstate 8 West/Hotel Circle North; and removal of the exisiting westbound to southbound elongated loop on-ramp (northwest quadrant) from westbound Friars Road to the southbound SR 163. The project will retain the five-foot Class II bike lanes along eastbound and westbound Friars Road and may include the following roadway improvements: traffic signals, street lighting, medians, curb and gutter, sidewalks, pedestrian walkways and other associated amenities. Various portions of the project alignment are within the Mission Valley, Linda Vista, and the Serra Mesa Community Planning areas.

Applicant: City of San Diego Engineering and Capital Projects Department

Recommended Finding: Pursuant to Section 15060 (d) of the CEQA Guidelines, it appears that the proposed project may result in significant environmental impacts in the following areas: Air Quality, Biological Resources, Geologic Conditions, Historical Resources, Hydrology, Land Use, Noise, Paleontological Resources, Public Utilities, Transportation/Circulation, Aesthetics/Neighborhood Character/Visual Effects, and Water Quality.

Availability in Alternative Format: To request the City's letter to the applicant detailing the required scope of work (EIR Scoping Letter) in alternative format, call the Development Services Department at (619) 446-5460 immediately to ensure availability. This information is ALSO available in alternative formats for persons with disabilities. To request this notice in alternative format, call (619) 446-5446 or (800) 735-2929 (TEXT TELEPHONE).

Additional Information: For environmental review information, contact Elizabeth Shearer-Nguyen at (619) 446-5369. For information regarding public meetings/hearings on this project, contact the Project Manager, Morris Dye, at (619) 446-5201. This notice was published in the San Diego Union Tribune and the San Diego Transcript, and placed on the City of San Diego website (http://clerkdoc.sannet.gov/Website/publicnotice/pubnotceqa.html) and distributed on November 4, 2005.

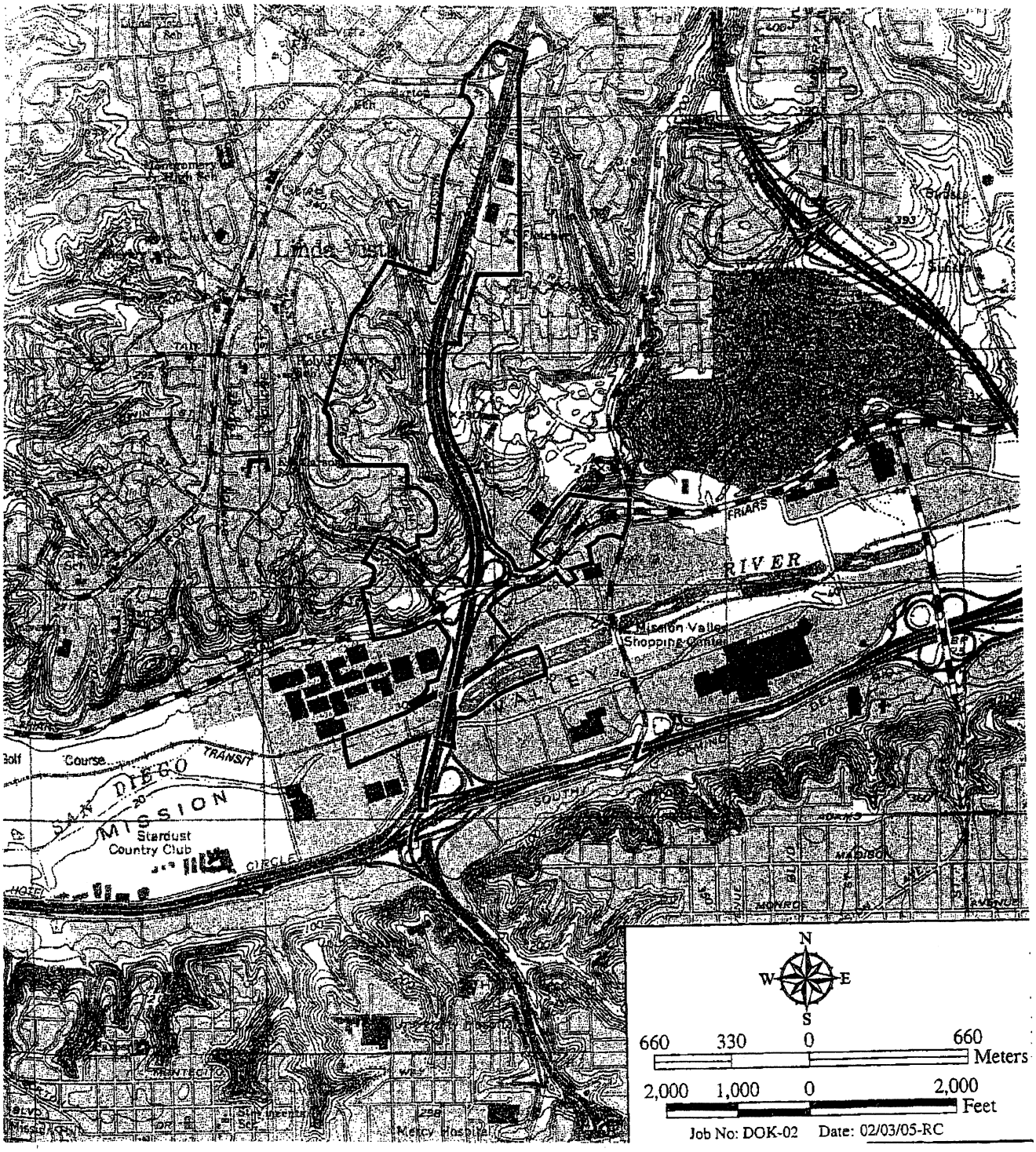
Robert J. Manis, Assistant Deputy Director
Development Services Department

Vicinity Map

Environmental Analysis Section - Project No. 72782

CITY OF SAN DIEGO · DEVELOPMENT SERVICES

Figure 1



Location Map

Environmental Analysis Section Project No. 72782

CITY OF SAN DIEGO · DEVELOPMENT SERVICES

Figure

2

Attachments: Scoping Letter
Figure 1: Vicinity Map
Figure 2: Location Map

Distribution:

Federal Government
United States of Transportation (2)
United States Environmental Protection Agency (19)
United States Fish & Wildlife Service (23)
United States Army Corps of Engineers (26)

State Government
Caltrans Planning (31)
California Dept. of Fish & Game (32)
California Environmental Protection Agency (37A)
California Department of Parks and Recreation, Office of Historic Preservation (41)
Resources Agency (43)
CA Regional Water Quality Control Board (44)
State Clearinghouse (46)
California Air Resources Board (49)
Native American Heritage Commission (56)
California Department of Highway Patrol (58)

County Government
Air Pollution Control District (65)
Department of Environmental Health (MS D-561)

City of San Diego
Mayor's Office, MS 11A
Councilmember Peters, MS 10A
Council District 2 Office, MS 10A
Councilmember Atkins, MS 10A
Councilmember Young, MS 10A
Councilmember Maienschein, MS 10A
Councilmember Frye, MS 10A
Councilmember Madaffer, MS 10A
Council District 8 Office, MS 10A
Transportation Development (78, 78A)
Fire and Life Safety Services (79)
Environmental Services Department (80)
Mission Valley Library (81)
Library (81)
Park and Recreation Board (83)
Police Research and Analysis (84)

Police Research and Analysis (84)
Real Estate Assets Department (85)
Engineering and Capital Projects (86)
Historical Resources Board (87)
Park & Recreation Dept. (89)
Community Forest Advisory Board (90)
Wetland Advisory Board (91A)
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Chris Johnson, Dokken Engineering

THE CITY OF SAN DIEGO

November 4, 2005

Mark Koll
City of San Diego
Engineering and Capital Projects
1010 Second Avenue, Suite 1100, MS 611
San Diego, CA 92101

SUBJECT: Scope of Work for a draft Environmental Impact Report/Environmental Assessment (EIR/EA) for the State Route 163-Friars Road Widening Project (Project No.72782) SCH No. *Pending*

Dear Mr. Koll:

The Environmental Analysis Section (EAS) of the Land Development Review Division (LDR) has conducted an Initial Study for the Costa State Route 163-Friars Road Widening project and has determined that the proposed project may have significant effects on the environment. Because the project requires federal funding and the need for an ACOE Individual 404 permit, a joint Environmental Impact Report/Environmental Assessment (EIR/EA) will be prepared to satisfy the requirements of the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The ACOE Individual 404 permit also triggers a requirement for implementation of the NEPA/404 Integration Process for Surface Transportation Projects in Arizona, California, and Nevada. The FHWA is the lead for the 404 Integration process, which will be facilitated by Caltrans. A Section 106 Consultation for historical resources will also be required.

The City of San Diego is the Lead Agency under CEQA for preparation of the EIR/EA. The FHWA is the Lead Agency under NEPA, with Caltrans acting as FHWA's agent providing oversight. A minimum 45-day public review period will be provided for the draft EIR/EA.

Required discretionary actions include City of San Diego approval of a Site Development Permit; U.S. Army Corps of Engineers (ACOE) approval of an Individual 404 Permit; California Department of Fish and Game (CDGF) approval of a 1600 et seq, Streambed Alteration Agreement; Regional Water Quality Control Board (RWQCB) issuance of a 401 Water Quality Certification, Federal Highways Administration (FHWA) approval of the programmatic Section 4(f) Evaluation. FHWA approval of the project is required because federal Highway Bridge Replacement Rehabilitation (HBRR) funds are being requested for bridge construction.

The purpose of this letter is to identify the issues to be specifically addressed in the EIR/EA. Because there is a difference in the way the determination of "significance" is dealt with in CEQA versus NEPA, the EIR/EA should be prepared generally in accordance with the City's "Format for Environmental Impact Report Guidelines", except that any discussion of the significance of impacts should be provided in a separate chapter entitled "CEQA Significance". The issues to be addressed are discussed below. A Notice of Preparation (NOP) is being distributed with this letter (attached) to Responsible Agencies and others who may have an interest in the project. Changes or additions to this scope of work may be required as a result of input received in response to the NOP.

In conformance with the Integrated NEPA/404 Process, a letter must be prepared to develop preliminary agreements from the ACOE, EPA, U.S. Fish and Wildlife Service (USFWS), Caltrans, and FHWA on the overall project purpose and need, criteria for alternative selection, project alternatives to be evaluated in the environmental document, and level of agency involvement. The document's Purpose and Need statement must have written concurrence from the NEPA/404 signatories.

Each section and issue area of the EIR/EA should provide a descriptive analysis of the project followed by a comprehensive evaluation. The Draft EIR/EA should also include sufficient graphics and tables to provide a complete description of all major project features.

Please note that several of the reports required on the following pages must be prepared in conformance with FHWA, Caltrans, and City of San Diego guidelines. The methodologies specified by such guidelines may vary from agency to agency. If discrepancies arise from the directions provided in each agency's guidelines, please consult with EAS to ensure that the reports meet both CEQA and NEPA standards.

I. INTRODUCTION

Introduce the project with a brief discussion on the intended use and purpose of the EIR. Provide an explanation of why it is necessary to implement the project. Provide projected time lines for the start and completion of the project. Describe and/or incorporate by

reference any previously certified environmental documents that address the project site. Briefly describe areas where the proposed project is in compliance or non-compliance with assumptions and mitigation contained in these previously certified documents.

II. PROJECT DESCRIPTION

Discuss the need for, and goals of, the project. A clear, precise description of the project goals is an important tool in defining project alternatives which would avoid or substantially reduce potentially significant impacts. Describe all discretionary actions necessary to implement the project, including all permits and approvals required from federal, state, or other regulatory agencies. Describe the major project features, including grading (cut and fill) and relocation of existing facilities. Describe any off-site activities necessary to construct the proposed project, including excavation within the river channel (such as for borings, new bridge pylons, etc.) transitions on intersecting roads, traffic control plans including provision for alternative emergency access to reduce potential short-term effects on police, fire, or emergency medical access during construction, construction phasing, and construction staging areas. Provide a background discussion of the project design planning and summarize the initial public outreach program.

III. ENVIRONMENAL SETTING

Describe the precise location of the project and present it on a detailed topographic map and regional map. Provide a local and regional description of the environmental setting of the project, as well as the zoning and land use designations along the project alignment and its contiguous properties, area topography, drainage characteristics and vegetation. Include any applicable land use plans and overlay zones that affect the project alignment, such as City's MSCP/MHPA, the San Diego River Open space Preserve and the Mission Valley, Serra Mesa, and Linda Vista Community Plans. A description of other utilities that may be present on or in close proximity to the project alignment and maintenance access points should be discussed as well. Describe existing energy supplies and energy use patterns in the region. This section should also provide a brief description of the location of nearest police and fire stations.

IV. ENVIRONMENTAL ISSUES

The potential for significant environmental impacts must be thoroughly analyzed and mitigation measures identified that would avoid or substantially lessen any such significant impacts. The EIR/EA must represent the independent analysis of the City of San Diego as Lead Agency; therefore, all impact analysis must be based on the City's current "Significance Determination Thresholds" (Attached).

Below are key environmental issue areas that have been identified for this Project, within which the issue statements must be addressed individually. Discussion of each issue statement should include an explanation of the existing Project site conditions, impact analysis, significance determination, and appropriate mitigation. The impact analysis should address potential direct, indirect, and cumulative impacts that could be created through implementation of the proposed Project and its alternatives. Please note, technical analysis should be cross referenced in the environmental sections of the EIS/EA where appropriate.

LAND USE

Issue 1: **How would the proposed project implement the goals, objectives, and recommendations of the City of San Diego Progress Guide and General Plan, and the City's adopted community plans and existing policies? Would the project be compatible with the surrounding existing and future planned land uses in the project vicinity?**

Discuss how the project accomplishes or fails to implement the goals and objectives of the General Plan, the Mission Valley Community Plan, Serra Mesa Community Plan, the Linda Vista Community Plan and/or appropriate planning documents and policies for the San Diego River Valley area. Include the issues of grading, erosion and siltation, and transportation. Assess the compatibility of the project with existing, planned, and proposed land uses in the surrounding communities. Identify conflicts with existing residences, businesses, or other land uses during project construction and operation. Identify any conflicts with established recreational, educational, religious, or scientific uses of the project area.

Issue 2: **Would the project result in a conflict with the purpose and intent of any current planning process or adopted environmental plans or policies in the area?**

The portion of the project location is within the boundaries of the focused planning area for the proposed San Diego River Park Master Plan. Evaluate the project's consistency with the goals and objectives for the planning area by the City of San Diego.

Issue 3: **Would the proposed project result in a conflict with the purpose and intent of the Environmentally Sensitive Lands (ESL) Regulations, Historical Resources Regulations, and the Stormwater Regulations of the Land Development Code (LDC)?**

Upland vegetation, wetlands, and sensitive wildlife would be directly and/or indirectly affected by the proposed project. Impacts to these resources are evaluated through the CEQA process, and through review of the project's consistency with the Environmentally Sensitive Lands (ESL) Regulations, the City's Biological Guidelines and the MSCP Subarea Plan. Provide an analysis of the project's conformance with ESL specifically as it relates to on-site and off-site wetlands and the floodplain and/or floodway of the San Diego River. Note that the cumulative loss of wetlands is considered significant and unmitigated by the City of San Diego. In addition, compliance with Council Policy 600-14 prohibits development within areas of special flood hazard except under certain circumstances and should be addressed in the EIR/EA, if applicable. Any required approval of findings for alternative compliance should be fully addressed in this section. The land use section should include address conformance with the Historical Resource Regulations

Discuss the project's conformance to City of San Diego design standards for features such as lane configuration, road design speed, sighting distance, and road grade.

Issue 4: Would the proposed project affect recreational activities or plans for recreational areas on adjacent properties?

According to Title 23 (Highways) of the Code of Federal Regulation, the FHWA must not approve a project that "uses" land from a significant publicly owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site unless a determination is made that there is not a feasible and prudent alternative to the use of the land, and the action includes all possible planning to minimize harm to the property resulting from such use.

A portion of the project is within the San Diego River Open Space Preserve, which extend east and west of SR 163. A Section 4(f) evaluation must be prepared if the project alignment would result in a permanent incorporation into the transportation facility; temporary occupancy during construction; or indirect impacts. Early coordination with FHWA is required to identify any "use" of 4(f) resources and determine the appropriate level of evaluation and the level of review required (i.e., Department of the Interior or FHWA). The evaluation should also address the project's consistency with regional conservation efforts (see Issue 5 below). The 4(f) evaluation should be summarized in the text of the EIR/EA and included as an appendix.

The land use section of the EIR/EA should include an impact assessment and mitigation measures for recreational impacts. Identify where construction or operation of the project could disrupt existing or planned recreational uses for an extended period of time (i.e., for

more than three months), and where the potential for enhancement of recreational opportunities exists (e.g., coordinating with the City's Park and Recreation Department and San Diego River Conservancy).

Issue 5: How is the project consistent with the region's Multiple Species Conservation Program (MSCP) and the City of San Diego Subarea Plan?

Portions of the project alignment are within and/or adjacent to land identified in the City's MSCP Subarea Plan as Multiple Habitat Planning Area (MHPA). Is the project consistent with the specific guidelines for the Northern Area? Would any MSCP Subarea Plan-identified wildlife corridors be affected by project implementation? How would those portions of the alignment adjacent to the MHPA comply with the Urban Area Land Use Adjacency Guidelines in terms of land use, drainage, toxic substances, lighting, noise barriers, and invasive plant species? This section should identify any special conditions of coverage that may apply to the species affected by the project (a brief summary only is needed in the Land Use section). Refer the reader to the Biological Resources section of the EIR/EA for a detailed biological assessment. Describe the incorporation of applicable planning and land use adjacency guidelines into the project design. Identify project specific management measures, if included in the project's mitigation proposal (e.g., lighting, signage, etc.). Summarize and refer to the Biological Resources section of the EIR/EA for a full discussion of mitigation measures for impacts to vegetation communities and covered species. The analysis should address potential impact to the preservation of designated or proposed open space areas and wildlife corridors.

TRAFFIC/CIRCULATION

Issue 1: What direct and cumulative impacts would this project have on traffic circulation, traffic volume, and road capacity in the vicinity?

A draft traffic study for the project is currently being reviewed by City staff. This analysis should be included as an appendix and will form the basis of the traffic impact analysis section of the EIR/EA. This evaluation should consider impacts to existing roadways and intersections from: 1) additional, temporary construction traffic; 2) lane closures and road damage during construction; and 3) increased traffic from project operation. Evaluate existing, construction, and near-term traffic scenarios with the project implemented, and horizon year (2030) conditions with the project. The section should include an analysis of the potential short-term effects on police, fire, or emergency medical access during construction. This section should include alternative routes for emergency access during construction (e.g., traffic control plan). In addition, include a

discussion of potential cumulative impacts associated with other existing current or future projects.

Issue 2: **What direct and cumulative impacts would the project have on the safety of pedestrians, bicyclists, and motorists using facilities in the area crossed by the road during construction of the road and bridge, and during operation of the completed project?**

Address the construction phasing and traffic control concepts for the project and measures that would be taken to safely route pedestrians and bicyclists and during construction. Analyze the project features that would be provided to enhance the safety of these users after the project is completed.

HYDROLOGY/WATER QUALITY

Issue 1: **How would the proposed project affect the hydrology of the San Diego River? What features have been incorporated to protect the project components and surrounding land uses from inundation during a 100-year flood? What drainage facilities are proposed to control runoff?**

Issue 2: **Would the project, when considered in combination with past, current, and future projects in the San Diego River watershed, result in cumulative significant impacts on hydrology and water quality of the San Diego River?**

Issue 3; **To what extent would the construction and ultimate development of the project affect the water quality of the San Diego River, as well as the ground water supply?**

HYDROLOGY

Hydrology deals with the properties, distribution, and circulation of surface water, ground water, and atmospheric water. The quantity of water which flows in a creek or river is calculated based on historic climatic conditions combined with the watershed characteristics. The slope and shape of the watershed, soil properties, recharge area, and relief features are all watershed characteristics that influence the quantity of surface flows. Therefore as land is developed, impervious area is increased, thereby increasing runoff. A portion of the project lies within the floodplain/floodway of the San Diego River. Provide a hydrology study which describes how the project would affect the

velocity, water surface elevations, and flood patterns of the 100-year flood both upstream and downstream of the project alignment. The study should be included in the appendices and summarized in the body of the EIR/EA. Discuss drainage effects from the wider road, interstate and bridge, and identify any additional facilities proposed to handle increased runoff. Include details such as location, ownership, and maintenance responsibilities. Discuss the requirement for an Executive Order 11988 Floodplain Finding and, if appropriate, the requirement to obtain a LOMR from FEMA.

Include a discussion of natural and beneficial floodplain values. Discuss the consistency of the project with the regulatory floodway. Evaluate and discuss practicable alternatives if it has been determined that there is a significant encroachment. In addition, compliance with Council Policy 600-14 prohibits development within areas of special flood hazard except under certain circumstances and should be addressed in the EIR/EA, if applicable.

WATER QUALITY

Water quality is affected by sedimentation caused by erosion, by urban runoff, carrying contaminants, and by direct discharge of pollutants (point-source pollution). As land is developed or redeveloped, the impervious surfaces send an increased volume of runoff containing oils, heavy metals, pesticides, fertilizers and other contaminants (non-point source pollution) into adjacent watersheds. Degradation of water quality could impact human health as well as wildlife systems. Sedimentation can cause impediments to stream flow. In addition, oxygen availability is affected by sedimentation, which can significantly influence aquatic and riparian habitats. Discuss the creation of additional impervious surfaces along the wider road, interstate and bridge, and resulting urban runoff or concentration of urban pollutants from a wider road, and interstate that would carry additional traffic. Discuss the potential for pollution from irrigation runoff with dissolved fertilizers and pesticides along the road landscaped parkway. Compliance with the City's Stormwater Standards is generally considered to preclude water quality impacts. The Storm Water Standards are available online at http://www.sandiego.gov/development-services/news/pdf/stormwatermanual.pdf.

Discuss the creation of additional impervious surfaces along the wider road, interstate and bridge, and resulting urban runoff or concentration of urban pollutants from a wider road, and interstate that would carry additional traffic. Discuss the potential for pollution from irrigation runoff with dissolved fertilizers and pesticides along the road landscaped parkway. Address the potential for construction-related and long-term erosion and/or siltation. Discuss Best Management Practices that would be incorporated into the construction plans to protect the river from water quality impairment during construction of the interstate, road and bridge, especially during dredging operations. Address

cumulative impacts, and note that cumulative downstream water quality impacts are considered significant and unmitigated by the City of San Diego.

BIOLOGICAL RESOURCES

Issue 1: Would the proposed project result in impacts to important habitat or to sensitive upland and/or animal species?

Both upland and wetland biological resources would be affected by project implementation. Provide a detailed biological technical report, prepared by a qualified biologist in accordance with the City of San Diego's *"Biology Guidelines"* and Caltrans *"Guidance for Consultants - Procedures for Completing the Natural Environmental Study and Related Biological Reports."* The report should be included in the appendices and summarized in the environmental analysis section of the EIR/EA. The report should discuss the biological resources present on the site, including habitat type, predominant plant and animal species, known and expected sensitive, rare, proposed threatened or endangered species, and narrow endemic species as defined by the City of San Diego, CDFG, and the USFWS. Provide information for Caltrans to solicit the USFWS endangered, threatened, and proposed species list. Provide a wetland delineation for affected wetland and waters areas. Identify jurisdictional areas of the CDFG and the ACOE for affected wetland habitats. Discuss the requirement for an Executive Order 11990 Wetlands Finding.

Associated with the proposed widening, an analysis should be included with respect to significant direct, indirect and cumulatively significant impacts to wetlands in accordance with the City's Significance Determination Thresholds and Biology Guidelines. The City of San Diego ESL regulations require that impacts to wetlands be avoided. Unavoidable impacts should be minimized to the maximum extent practicable. As part of the project-specific environmental review pursuant to CEQA, all unavoidable wetland impacts (both temporary and permanent) need to be analyzed and mitigated in accordance with Table 2 (Biology Guidelines). Mitigation should be based on the type of wetland habitat impacted by the project and should prevent any net loss of wetland functions and values of the impacted wetland.

Conduct a habitat evaluation for the Belding's savannah sparrow, least Bell's vireo, the Southwestern willow flycatcher and the California gnatcatcher. Conduct focused surveys, as appropriate, for federally listed endangered species. If field surveys confirm the presence of a listed species, informal consultation will be initiated with USFWS and the transportation engineer from FHWA, and will be facilitated by Caltrans. If formal consultation with the USFWS is required, a draft Biological Assessment will be

submitted to Caltrans for review. Caltrans will submit the final Biological Assessment to FHWA, and FHWA will request formal consultation pursuant to Section 7 of the Endangered Species Act with the USFWS.

The analysis should include pre- and post-construction impacts on biological resources within the MHPA and any federally endangered species (e.g. Belding's savannah sparrow, least Bell's vireo, the Southwestern willow flycatcher and the California gnatcatcher). Should noise levels exceed 60dB (A) hourly average during the breeding season, applicable noise attenuation measures would be required for the project during construction, or construction activities would have to cease until the end of the breeding season.

The report should contain a 200-foot scale vegetation map showing existing habitats and areas which support or could support sensitive species. The EIR/EA should describe the significance of the resources. Address the potential for indirect and cumulative impacts to any resources within, adjacent to, or downstream from the project area. Such impacts may include construction noise, lighting, and increased traffic noise.

The mitigation section should propose measures to avoid any identified impacts or reduce them to below a level of significance. Mitigation ratios for impacts to upland species and wetlands should be in accordance with those specified in the enclosed Biology Guidelines.

Issue 2: Would the proposed project interfere with the movement of any resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors?

The project proposes to construct additional support pylons for SR 163 which could potentially impact the San Diego River, possibly hindering the flow of water and creating a wider river upstream and downstream of the bridge. Identify and discuss potential impacts to MSCP-designated wildlife corridors and the movement of fish and wildlife through this area and under the bridge (east-west movement) as a result of this widening.

Issue 3: Would the project affect the long-term conservation of biological resources?

Portions of the project area are within the City's Urban Area MHPA. The EIR/EA should address whether the project would affect the maintenance and enhancement of biological diversity in the region and the conservation of viable populations of endangered, threatened, and key sensitive species and their habitats. Discuss any potential lighting

impacts that might occur to existing on-site or off-site habitat. Appropriate Land Use Adjacency Guidelines from the City of San Diego MSCP Subarea Plan should be referenced here and included as mitigation measures in the Land Use Section of the EIR/EA.

HISTORICAL RESOURCES

Issue 1: How would the proposed project affect historic and prehistoric resources in the Area of Potential Effect (APE)?

San Diego County is known for intense and diverse prehistoric occupation and important archaeological resources. The county has been inhabited by various cultural groups spanning 10,000 years or more. Camp sites, villages, and artifacts have been recorded along the coast from Del Mar to Tijuana. Provide a Historic Property Survey Report and a historical resources technical report. All studies must be prepared by a qualified archaeologist, and must be consistent with the California Office of Historic Preservation's "Archaeological Resource Management Reports (ARMR): Recommended Contents and Format" and Caltrans "Guidance for Consultants - Procedures for the Protection of Historic Properties: The Section 106 Process" (1991). The report should include the results of the initial archaeological site survey and literature review already conducted for the proposed road widening area. Provide appropriate graphics, including a map of the APE. Complete additional field surveys, as appropriate, to address the potential direct, indirect, and cumulative impacts of all project components. Any newly discovered sites should be recorded at the South Coastal Information Center at San Diego State University. For sites that are expected to be impacted with project implementation, a testing program should be conducted to determine site significance in accordance with CEQA and City's criteria pursuant to the Historical Resources Regulations and Guidelines. All sites within the project APE should be evaluated for eligibility to the City's Historical Resources Board Register and the California Register. In addition, because of the federal involvement in the project, all sites must also be evaluated for eligibility to the National Register of Historic Places, pursuant to Section 106 of the National Historic Preservation Act.

Include the report as an appendix and provide the records search results under separate cover as a confidential appendix. The EIR/EA should summarize the results of the report and discuss the need for a research design and data recovery program to mitigate impacts to sites that are determined to be significant and would be directly impacted with project implementation. Discuss measures to be implemented during construction to avoid, minimize, and mitigate impacts to important archaeological sites such as site preservation, site capping and/or archaeological monitoring.

The bridge over the San Diego River was built over 45 years ago, and is therefore, potentially historically significant as defined by CEQA. Substantial modification or demolition of significant historic structures would be considered a significant environmental impact under CEQA. Therefore, in addition to the above archaeological studies, a historic architectural survey report should be prepared for the bridge ad any other associated buildings, structures or objects that would be affected by project implementation. The evaluation should be conducted by a qualified historian or architectural historian and should include the following components:

- consideration of the age, location, context, association with important persons or events, uniqueness and structural integrity of the bridge;
- the names of the architect, builder, and the year built, along with information regarding any significant contributions they made to the area;
- a brief analysis of the historical integrity of the immediate neighborhood and evaluation of any indirect impact the loss of the structure may have on the historical integrity of the surrounding neighborhood; and
- consideration of the possibility of the site containing buried historical resources associated with the structure;

Please note that the above-referenced Section 106 process must be initiated before the draft environmental document may be released for public review. At a minimum, a Preliminary Finding of Effect must be made. The finding can be made only after the technical studies have been submitted to and reviewed by Caltrans, the State Historic Preservation Officer, and FHWA. This process may take approximately four months.

Issue 2: How would the proposed project affect resources with Native American values?

Native American notification and consultation must be conducted to determine if Traditional Cultural Properties or sacred sites are present within the APE and could be impacted with implementation of the proposed project. The Historical Resources report should include the results of the consultation process and incorporate specific recommendations for the testing, data recovery, and/or monitoring programs. Pursuant to City Guidelines, a Native American monitor is required. Evaluate the potential significance of impacts to any resources of Native American concern, and provide mitigation measures for a any significant impacts.

GEOLOGY/SEISMICITY/SOILS

Issue 1: How would the proposed project affect or be affected by geologic, seismic, and soils conditions (including contamination)?

According to the City of San Diego's Seismic Safety Study (Map Nos. 21 and 26), the project site is assigned geologic hazard ratings of 31 (high potential, shallow groundwater major drainages, hydraulic fills); 32 (low potential for liquefaction, fluctuating groundwater, minor drainages); 52 (other level areas, gently sloping to steep terrain, favorable geologic structure, low risk); and 53 (level or sloping terrain, unfavorable geologic structure and low to moderate risk potential). Provide a geologic reconnaissance in conformance with the City of San Diego's "Technical Guidelines for Geotechnical Reports." Include the report as an appendix and summarize the information in the body of the EIR/EA. Describe the geologic and subsurface conditions in the project area. Describe the general setting in terms of existing topography, geology (surface and subsurface), tectonics, and soil types. Assess possible impacts to the project from geologic hazards and unfavorable soil conditions. The constraint discussion should include issues such as the potential for liquefaction, ground shaking, slope stability, and rockfall hazards. Document known seismic parameters for the project alignment. Any need for blasting should also be identified, if such measures are anticipated. Any secondary impacts due to soils/geology mitigation (e.g., excavation of unsuitable soils) should also be addressed. Address potential erosion during construction and after implementation of the project, particularly for the river and road slopes. Provide mitigation, as appropriate, that would reduce the potential for future adverse impacts resulting from on-site soils and geologic hazards.

PALEONTOLOGICAL RESOURCES

Issue 1: How would the proposed project affect paleontological resources?

The project alignment is underlain by Alluvium and Slopewash undifferentiated, Artificial Fill, Stadium Conglomerate, Mission Valley Formation and Lindavista Formation. According to the City's "Paleontological Resources Guidelines (July 2002), both the Alluvium and Slopewash undifferentiated and the Artificial Fill have low sensitivity levels and monitoring would not be required. However, both the Stadium Conglomerate and Mission Valley Formations are categorized as having high resource sensitivity; whereas the Lindavista Formation has a moderate resource sensitivity level.

The Stadium Conglomerate is the lowermost formation of the Poway Group and is made up of three distinctive units. Both the upper and lower conglomerate units are located within the Mission Valley area, whereas, the Cypress Canyon Unit is located further north. Fossil foraminifers and marine mollusks have been collected from the upper member conglomerate. The upper member is largely non-marine in the eastern part of its outcrop area. It has been noted that marine fossil remains occur near the base of the lower member. The majority of the fossils recovered from the lower member were found in either claystone rip-rap or in the sandy matrix characteristic of certain channel-fill deposits in this rock unit.

The marine strata of the Mission Valley Formation have produced abundant and generally well-preserved remains of marine micro-fossils, macro-invertebrates, and vertebrates. Fluvial strata of the Mission Valley Formation have produced well-preserved examples of petrified wood and fairly large and diverse assemblages of fossil land mammals including opossums, insectivores, bats, primates, rodents, artiodactyls, and perissodactyls. The co-occurrence in the Mission Valley Formation of land mammal assemblages with assemblages of marine micro-fossils, mollusks, and invertebrates is extremely important as it allows for the direct correlation of terrestrial and marine fauna time scales. The Mission Valley Formation represents one of the few instances in North America where such comparisons are possible.

The Linda Vista Formation represents a marine and/or non-marine terrace deposit of early Pleistocene age (approximately .5 - 1.5 million years ago). Typical exposures of the formation consist of rust-red, coarse-grained, pebbly sandstones ands pebble conglomerates with locally common deposits of green claystone. This formation has an average thickness of about 20-30 feet and is thought to be deposited under fluvial, Aeolian, and shallow nearshore marine conditions. These deposits accumulated on a flat, wave-cut platform during a period of dropping sea levels. The Linda Vista Formation has produced remains of nearshore marine invertebrates including clams, scallops, snails, barnacles, and sand dollars, as well as sparse remains of sharks and baleen whales.

Using the City of San Diego's Paleontological Guidelines discuss the potential for project grading activities to impact fossil resources and identify mitigation measures for any significant impacts.

AESTHETICS/NEIGHBORHOOD CHARACTER/VISUAL QUALITY

Issue 1: **How would the project affect the visual quality of the area, especially with regard to views from public roadways and public open space?**

The project could potentially alter the visual landscape along State Route 163, Friars Road and the San Diego River. State Route 163 would be wider and require retaining walls which exceed the City's Significance Thresholds. The EIR/EA should include a graphic analysis in conformance with the FHWA's "Visual Assessment Guidelines." Include visual simulations of key visual impact points. Address the amount of contrast the project would have with the existing visual quality, view quality, landform quality, and community character. Include a discussion of visual impacts to users of the San Diego River within the MHPA. Describe compatibility of the lighting, landscaping, and other aesthetic themes that would be provided along the road and on the bridge with the existing character of the area surrounding the project alignment. Describe measures to mitigate any potentially significant direct and/or cumulative visual impacts.

NOISE

Issue 1: Would the surrounding uses experience noise levels that would exceed City of San Diego and Caltrans standards due to implementation of the project?

Future traffic in the project alignment may expose sensitive receptors to noise levels in excess of allowable limits. Provide an acoustical analysis in conformance with the City of San Diego's "Acoustical Report Guidelines" and Caltrans "Noise Protocol." The noise analysis should be included in the appendices and summarized in the body of the EIR/EA. Include the following scenarios in the acoustical analysis: noise from construction of various project components (road, bridge, river widening) and noise from current and future traffic and surrounding land uses. Describe the allowable noise level limits for construction activities and operation of the facilities. Identify surrounding land uses that could be impacted in the short term and the long term, including any sensitive receptors. Where there is a potential for the project to exceed allowable limits, recommend measures to reduce the impact.

In addition the noise analysis should also address potential construction and post construction noise impacts on biological resources within the MHPA and any federally endangered species (e.g. Belding's savannah sparrow, least Bell's vireo, the Southwestern willow flycatcher and the California gnatcatcher). Should noise levels exceed 60dB (A) hourly average during the breeding season, applicable noise attenuation measures would be required for the project during construction, or construction activities would have to cease until the end of the breeding season. Any mitigation measures required would be identified under the Land Use MHPA discussion of the EIR/EA.

AIR QUALITY

Issue 1: Would the proposed project affect the ability of the San Diego region to meet federal, state, and local air quality regulations?

The EIR should describe the project's climatological; setting within the San Diego Air basin and the basin's current attainment levels for State and Federal Ambient Air Quality Standards. It should discuss both potential stationary and non-stationary air emissions sources related to the project, and particularly vehicle emission sources. A discussion of potential dust generation during construction should also be addressed within this section of the document, together with any proposed dust suppression measures that would avoid or lessen dust related impacts to sensitive receptors within the project area.

Provide an air quality analysis that estimates project combustion emissions from construction equipment and construction vehicles; dust emissions from earthwork during construction; carbon monoxide emissions during construction (CO hot spots); and emissions from operation of the road and bridge. Prepare a discussion of Transportation Conformity of the project, as required by FHWA.

The air quality analysis should be prepared and included as an appendix and summarized in the body of the EIR/EA. The air quality analysis should discuss the project's impact on the ability of the San Diego Air Basin to meet regional air quality strategies. Discuss any short, long-term, and cumulative impacts the project may have on regional air quality, including construction and transportation-related sources of air pollutants. Discuss the potential impact from the increase in vehicle trips to RAQS, and the overall air quality impacts from such trips, and any proposed mitigation measures.

UTILITIES

Issue 1: Would the proposal result in a need for new systems, or require substantial alterations to existing facilities, including the following power/energy, natural gas, communications systems, water, sewer, or storm water drainage and solid waste disposal.

The effects of the proposed project on the above utilities should be assessed in the EIR/EA for proposed on and off-site improvements required to serve the project, as well as the phasing of such improvements. Also, discuss the project's construction effects on the City's ability to handle solid waste. Discuss the project's construction and operational effects on the City's ability to handle solid waste. According to Assembly Bill 939, the City of San Diego is required to divert at least 50 percent of its solid waste

from landfill disposal through source reduction, recycling, and composting by 2000. The project includes the demolition of exisiting concrete roadways, therefore the applicant is required to prepare a solid waste generation/disposal plan which addresses demolition, construction and the occupancy phases of the project.

If other potentially significant issue areas arise during detailed environmental investigation of the project, consultation with this division is required to determine if these other areas need to be addressed in the EIR/EA. Should the project description be amended, an additional scope of work may be required. Furthermore, as the project design progresses and supplementary information becomes available, the EIR/EA may need to be expanded to include additional issue areas.

Mitigation measures should be clearly identified and discussed and their effectiveness assessed in each issue section of the EIR/EA. In addition, a monitoring and reporting program for each mitigation measure must be included. At a minimum, this program should identify: 1) the department responsible for the monitoring; 2) the monitoring and reporting schedule; and 3) the completion requirements. Mitigation measures and the monitoring and reporting program for each impact should also be contained (verbatim) in a separate, stand-alone document to be paper clipped to the back of the EIR/EA. When appropriate, EAS staff will provide the applicant with specific mitigation Monitoring and Reporting Program (MMRPs) to be incorporated into the Biological, Historical, and Paleontological sections of the EIR/EA.

A separate section of the EIR/EA should include a brief discussion of why certain areas were not considered to be potentially significant.

III. GROWTH INDUCEMENT

Evaluate the project potential to foster substantially increased economic or population growth, or the construction of additional housing in the surrounding area, either directly, indirectly, or cumulatively, based on the following questions:

- Are the road,bridge, and interchange improvements critical infrastructure in the chain of factors that support growth?
- What aspects of the project could remove obstacles to population growth?
- Would the project add an amenity that could accelerate growth in the vicinity?

IV. CUMULATIVE EFFECTS

Discuss the cumulative effects of the project in a separate section. The document should address the cumulative impacts of this project in combination with other planned and existing projects in the surrounding area. The discussion should address the potential cumulative effects related to land use, traffic/circulation, hydrology/water quality, biological resources, historical resources, paleontological resources, visual quality/landform alteration, and air quality.

V. MANDATORY DISCUSSION AREAS

In accordance with CEQA Guidelines Section 15126, the EIR/EA must include a discussion of the following issue areas:

a. The relationship between local short-term uses of man's environment and the maintenance and enhancement of long term production.

b. Any significant irreversible environmental changes which would be involved in the proposed action should it be implemented.

VI. ALTERNATIVES

The EIR/EA should place major attention on reasonable alternatives which avoid or mitigate the project's significant impacts. These alternatives should be identified and discussed in detail, and should address all significant impacts. The alternatives analysis should be conducted in sufficient graphic and narrative detail to clearly assess the relative level of impacts and feasibility. Preceding the detailed alternatives analysis should be a section entitled "Alternatives Considered but Rejected." This section should include a discussion of preliminary alternatives that were considered but not analyzed in detail. The reason for rejection should be explained.

At a minimum, the following alternatives should be considered in the detailed alternative analysis.

A. No Project Alternative

The No Project Alternative should discuss the existing conditions of the project alignment at the time of the Notice of Preparation is published, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved. This alternative should compare the environmental effects of the

Project site remaining in its existing state (or in what would reasonably be expected to occur on-site) against environmental effects that would occur if the Project were approved. Should the No Project Alternative prove to be the environmentally preferred alternative, then according to CEQA, another environmentally preferred alternative must be identified for the Project.

B. Community Plan Consistency Alternative

Discuss a project that implements the recommendations outlined within the Transportation Element of the Mission Valley Community Plan. The Plan recommends improvements to the SR 163 and Friars Road interchanges, improvements Ulric Street, as well as other necessary amenities to improve circulation. This alternative should take into consideration that the Mission Valley Community Plan is currently being updated and the recommendations within the Transportation Element may be revised. Include a conceptual graphic reflecting the alternative. Identify and quantify the impacts that would be avoided/reduced under this alternative. Discuss this alternative in relation to the project goals and objectives.

C. Separate Southbound SR 163 Bypass Lane/Friars Road Flyover Alternative

Discuss a bypass/flyover concept which separates southbound traffic for connections to westbound Interstate 8/Hotel Circle North traffic. Include a conceptual graphic reflecting the alternative. Identify and quantify the impacts that would be avoided and/or reduced under this alternative. Discuss this alternative in relation to the project goals and objects.

If, during the environmental analysis process, other alternatives become apparent which would mitigate potential impacts, these should be discussed with EAS staff prior to including them in the EIR/EA. It is important to emphasize that the alternatives section of the EIR/EA should constitute a major part of the report. The timely processing of the environmental review will likely be dependent on the thoroughness of effort exhibited in the alternatives analysis.

The EIR/EA should be prepared in draft form by a consultant of your choice, based upon the scope of work determined by this office. It is important to note that timely processing of your project will be contingent in large part upon your selection of a well-qualified consultant. Prior to starting work on the EIR/EA, a meeting between the consultant and EAS will be required to discuss and clarify the scope of work.

Please contact Elizabeth Shearer-Nguyen of this office at (619) 446-5369 if you have any questions about the scope of the analysis presented in this letter or the environmental processing of the proposed project.

Sincerely,

Robert J. Manis, Assistant Deputy Director
Environmental Analysis Section
Development Services Department

Attachments: Figure 1 (Vicinity Map)
Figure 2 (Location Map)
City of San Diego Significance Determination Thresholds

cc: Morris Dye, Development Project Manager
Eileen Lower, Senior Environmental Planner
EAS Seniors
Lisa Capper, Helix Environmental
Environmental File

Comment Letters

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Arnold Schwarzenegger
Governor

Sean Walsh
Director

Notice of Preparation

November 7, 2005

To: Reviewing Agencies

Re: State Route 163 - Friars Road Widening
SCH# 2005111032

Attached for your review and comment is the Notice of Preparation (NOP) for the State Route 163 - Friars Road Widening draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Elizabeth Shearer-Nguyen
City of San Diego
1222 First Avenue, MS-501
San Diego, CA 92101

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

J. Drienen

for Scott Morgan
Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2005111032
Project Title State Route 163 - Friars Road Widening
Lead Agency San Diego, City of

Type NOP Notice of Preparation

Description The widening of the Friars Road Bridge over State Route 163 from 6 to 10 lanes which includes the addition of sidewalks along both sides of the bridge; replacement of the existing northbound to eastbound diamond off-ramp to Friar Road (southeast quadrant) with a flopped partial cloverleaf configuration ramp in the northeast quadrant of the interchange and vacation of the existing northbound to eastbound diamond off-ramp; widening of the existing northbound to westbound loop off-ramp from one lane to two lanes to accommodate traffic accessing both eastbound and westbound Friars Road; widening of the existing northbound off-ramp from one lane to two lanes, with a four-lane terminus; removal of the existing free-right turn lane from the northbound SR 163 off-ramp to westbound Friars Road; removal of the free-right access from the southbound SR 163 off-ramp to eastbound addition of a southbound auxiliary lane from Genesee Avenue southerly, which become collector / distributor lanes prior to crossing the Friars Road bridge/ future Hazard Center Drive extension traversing under the elevated San Diego Trolley line, then bridging the San Diego River merging with Interstate 8 West/Hotel Circle North; and removal of the existing westbound to southbound elongated loop on-ramp (northwest quadrant) from westbound Friars Road to the southbound SR 163.

Lead Agency Contact

Name Elizabeth Shearer-Nguyen
Agency City of San Diego
Phone 619.446.5369 **Fax**
email
Address 1222 First Avenue, MS-501
City San Diego **State** CA **Zip** 92101

Project Location

County San Diego
City
Region
Cross Streets Mission Center Road, Fashion Valley Rd, I-8, Genesse Ave.
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways I-8, SR 163, I-5
Airports
Railways
Waterways San Diego River, San Diego Bay
Schools
Land Use OF-1-1; MVPD-MV-CR; MVPD-MV-CO; Mission Valley Heights Specific Plan; RS-1-7; RM-2-5

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Flood Plain/Flooding; Geologic/Seismic; Noise; Recreation/Parks; Solid Waste; Vegetation; Traffic/Circulation; Water Quality; Wetland/Riparian; Wildlife; Cumulative Effects

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Reviewing Agencies Resources Agency; California Coastal Commission; Department of Conservation; California Highway Patrol; Caltrans, District 11; Office of Historic Preservation; Department of Water Resources; Department of Parks and Recreation; Department of Fish and Game, Region 5; Native American Heritage Commission; State Lands Commission; Regional Water Quality Control Board, Region 9

Note: Blanks in data fields result from insufficient information provided by lead agency.

Document Details Report
State Clearinghouse Data Base

Date Received 11/07/2005 ***Start of Review*** 11/07/2005 ***End of Review*** 12/06/2005

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

County: San Diego

SCH# 2005111058

Resources Agency

- [x] **Resources Agency**
  Nadell Gayou
- [ ] **Dept. of Boating & Waterways**
  David Johnson
- [x] **California Coastal Commission**
  Elizabeth A. Fuchs
- [ ] **Colorado River Board**
  Gerald R. Zimmerman
- [x] **Dept. of Conservation**
  Roseanne Taylor
- [ ] **California Energy Commission**
  Roger Johnson
- [ ] **Dept. of Forestry & Fire Protection**
  Allen Robertson
- [x] **Office of Historic Preservation**
  Wayne Donaldson
- [x] **Dept of Parks & Recreation**
  Environmental Stewardship Section
- [ ] **Reclamation Board**
  DeeDee Jones
- [ ] **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- [x] **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou
- [ ] _____
  Conservancy

Fish and Game

- [ ] **Depart. of Fish & Game**
  Scott Flint
  Environmental Services Division
- [ ] **Fish & Game Region 1**
  Donald Koch
- [ ] **Fish & Game Region 2**
  Banky Curtis
- [ ] **Fish & Game Region 3**
  Robert Floerke
- [ ] **Fish & Game Region 4**
  Mike Mulligan
- [x] **Fish & Game Region 5**
  Don Chadwick
  Habitat Conservation Program
- [ ] **Fish & Game Region 6**
  Gabrina Gatchel
  Habitat Conservation Program
- [ ] **Fish & Game Region 6 I/M**
  Tammy Allen
  Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Game M**
  George Isaac
  Marine Region

Other Departments

- [ ] **Food & Agriculture**
  Steve Shaffer
  Dept. of Food and Agriculture
- [ ] **Depart. of General Services**
  Public School Construction
- [ ] **Dept. of General Services**
  Robert Sleppy
  Environmental Services Section
- [ ] **Dept. of Health Services**
  Veronica Rameriz
  Dept. of Health/Drinking Water

Independent Commissions,Boards

- [ ] **Delta Protection Commission**
  Debby Eddy
- [ ] **Office of Emergency Services**
  Dennis Castrillo
- [ ] **Governor's Office of Planning & Research**
  State Clearinghouse
- [x] **Native American Heritage Comm.**
  Debbie Treadway
- [ ] **Public Utilities Commission**
  Ken Lewis
- [x] **State Lands Commission**
  Jean Sarino
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Business, Trans & Housing

- [ ] **Caltrans - Division of Aeronautics**
  Sandy Hesnard
- [ ] **Caltrans - Planning**
  Terri Pencovic
- [x] **California Highway Patrol**
  John Olejnik
  Office of Special Projects
- [ ] **Housing & Community Development**
  Lisa Nichols
  Housing Policy Division

Dept. of Transportation

- [ ] **Caltrans, District 1**
  Rex Jackman
- [ ] **Caltrans, District 2**
  Marcelino Gonzalez
- [ ] **Caltrans, District 3**
  Katherine Eastham
- [ ] **Caltrans, District 4**
  Tim Sable
- [ ] **Caltrans, District 5**
  David Murray
- [ ] **Caltrans, District 6**
  Marc Birnbaum
- [ ] **Caltrans, District 7**
  Cheryl J. Powell
- [ ] **Caltrans, District 8**
  Dan Kopulsky
- [ ] **Caltrans, District 9**
  Gayle Rosander
- [ ] **Caltrans, District 10**
  Tom Dumas
- [x] **Caltrans, District 11**
  Mario Orso
- [ ] **Caltrans, District 12**
  Bob Joseph

Cal EPA

Air Resources Board

- [ ] Airport Projects
  Jim Lerner
  - [ ] Transportation Projects
    Kurt Karperos
  - [ ] Industrial Projects
    Mike Tollstrup
- [ ] **California Integrated Waste Management Board**
  Sue O'Leary
- [ ] **State Water Resources Control Board**
  Jim Hockenberry
  Division of Financial Assistance
- [ ] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] **State Water Resouces Control Board**
  Steven Herrera
  Division of Water Rights
- [ ] **Dept. of Toxic Substances Control**
  CEQA Tracking Center
- [ ] **Department of Pesticide Regulation**

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- [ ] **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] **RWQCB 3**
  Central Coast Region (3)
- [ ] **RWQCB 4**
  Jonathan Bishop
  Los Angeles Region (4)
- [ ] **RWQCB 5S**
  Central Valley Region (5)
  - [ ] **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - [ ] **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
- [ ] **RWQCB 6**
  Lahontan Region (6)
  - [ ] **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- [ ] **RWQCB 7**
  Colorado River Basin Region (7)
- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [x] **RWQCB 9**
  San Diego Region (9)

- [ ] **Other** _____

Last Updated on 08/10/05

San Diego Gas & Electric
8335 Century Park Court
San Diego, CA 92123

SDGE

A Sempra Energy® utility

December 5, 2005

Ms. Elizabeth Shearer-Nguyen
City of San Diego
Development Services Center
1222 First Avenue MS 501
San Diego CA 92101

RE: Notice of Preparation for State Route 163/Friars Road Interchange, Project No. 72782

Dear Elizabeth:

San Diego Gas and Electric Company (SDG&E) is responding to a Notice of Preparation (NOP) for the State Route 163/Friars Road Interchange (Project) Programmatic Environmental Impact Report (PEIR).

SDG&E has both overhead electric transmission facilities and underground natural gas transmission line facilities in the Project area. These facilities include

- Two 230kV (kilovolt) overhead, electric transmission line circuits TL230280 and TL23027
- One 138kV overhead electric transmission line circuit TL13810
- One 69kV overhead electric transmission line circuit TL670
- An underground 20-inch diameter, high pressure natural gas transmission main

These facilities generally cross the project area in a northeasterly direction approximately in the vicinity of Murray Canyon Road. A map is attached showing the approximate location of these facilities. In addition, SDG&E also has various underground utility vaults in portions of Friars Road that may require adjustment or relocation as a result of the Project's interchange improvements.

Retaining access to SDG&E's existing rights-of-way (R/W) and/or easements and the electric transmission circuits, natural gas transmission line and

associated underground vaults during and after the construction of the Project is critical to ensuring the continued maintenance, repair, upgrade, relocation or construction of SDG&E's electrical and natural gas transmission facilities within those ROW and easements. The PEIR for the Project should address, where applicable, the potential effects of the Project regarding:

Electric transmission

- Any proposed relocations of existing SDG&E electrical transmission facilities within right-of-way (R/W), franchise positions, and/or easements required for the Project.

- Proposed grading for the Project occurring within the SDG&E electric transmission R/W and/or easements or in the proximity of the existing electric transmission facilities.

- Proposed encroachments of the Project into R/W and/or easements and their potential impacts on existing SDG&E access road networks, including public or private roads.

- Increased drainage flow in R/W and/or easements as a result of the proposed Project.

- Any changes to aboveground clearances of existing overhead electrical transmission lines and the improved Route 163 roadbed resulting from grading required for the Project.

- Any relocations or adjustments of existing underground utility vaults resulting from the construction of the Project.

Any grading for the Project within or adjacent to SDG&E's existing electric transmission lines, R/W and/or easements should consider information contained in SDG&E's "Guide for Encroachment on Transmission Rights-of-Way". Copies of the guide can be obtained upon request. SDG&E typically requires the issuance of a Letter of Permission to Grade for grading within SDG&E R/W and/or easements. Encroachments or secondary uses, such as landscaping in SDG&E R/W and/or easements, typically require issuance of a Right of Way Use Agreement.

Natural gas transmission line

- Will the Project require any adjustments or relocations of the existing 20-inch gas transmission line?

- Will the Project change the earth cover over the existing gas transmission line or affect the minimum cover required over the line?

- Will the Project increase the potential for any differential settling or disturbance to the line resulting from construction activities, or the long-term vehicular use of the Route 163 roadway?

- Will the Project affect SDG&E's future ability to access the gas transmission line for the purpose of operation, repair, replacement or maintenance of the gas transmission line?

- Will the project affect SDG&E's ability to access and keep secure other equipment and facilities such as valve stations, blow-offs, cathodic protection (CP) test stations or communications equipment supporting the operation and maintenance of the natural gas line?

SDG&E Land Management will need to review the grading plans for the Project and issue a Letter of Permission to grade prior to any grading over the gas transmission line or within the easement for the line. In its decision to issue the Permission to Grade Letter, SDG&E Land Management will consider the potential for effects as noted above.

SDG&E appreciates the opportunity to comment of the NOP, and encourages the city to include an adequate analysis of any natural gas and electric utility relocations in the PEIR. If an adequate description of the utility relocations is provided in the PEIR, SDG&E may able to take advantage of certain permit exemptions contained in the California Public Utilities Commission (CPUC) General Orders. Where such exemptions can be claimed by SDG&E, the city would be able to avoid delays to the Project caused by a separate and potentially lengthy CPUC permitting process for the relocations.

If you have any questions please call me at (858) 637-3709 or Brenda Chilvers of SDG&E Land Management at (858) 654-1270.

Sincerely

Mark Chomyn

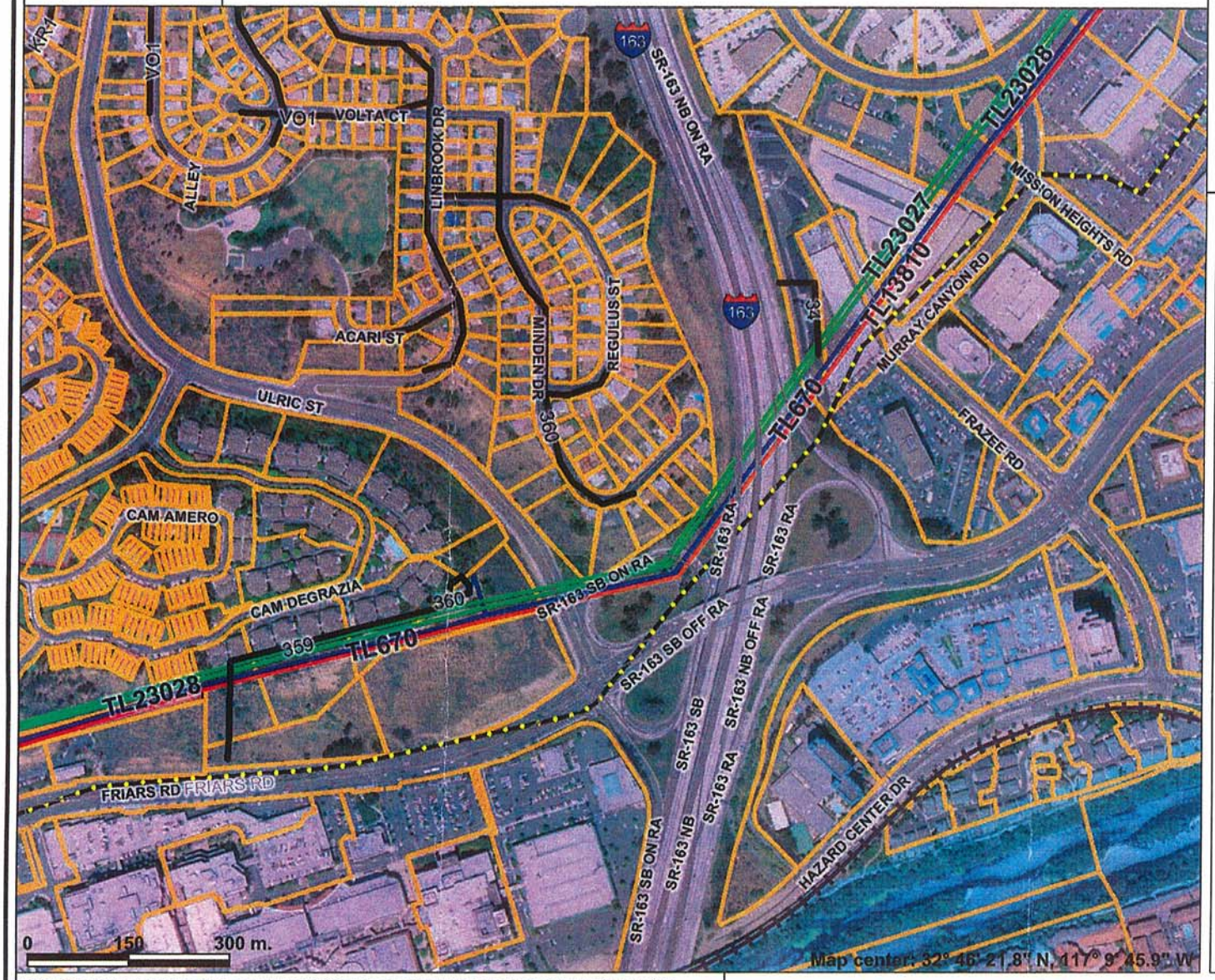
Mark Chomyn
Land Planning Supervisor
SDG&E

Cc: Brenda Chilvers, SDG&E Land Management
Curtis Criss, SDG&E Gas Distribution Systems Protection Supervisor
Brett Peterson, SDG&E Gas Distribution Technical Supervisor
Dennis Gerschoffer, SDG&E Customer Project Planner

Att: Electric and gas transmission line location map

LAND SERVICES GIS
http://gis.sempra.com

Route 163 Improvements NOP



Legend

- Circuits
- Freeway
- Highway
- Major Roads
- Road Centerlines
- Orange County Roads
- Railroad
- Gas Transmission
- Transmission Tielines
- 138kV
- 230kV
- 500kV
- 69kV
- District Boundary
- SD County Parcels
- SDG&E Fee Property
- Lease
- NONE
- Owned
- Sold
- Lakes
- True Color 2004

N

Scale: 1:8,776

SDG&E is providing this map to you as a courtesy, SDG&E does not represent that the information contained herein is accurate. SDG&E disclaims all warranties, express or implied, including the warranty of fitness for a particular purpose. You are solely responsible for selecting this map to use and you are solely responsible for any consequences resulting from your use. Reproduction, duplication, or modification of this map is not allowed without permission from Land Services GIS.

San Diego County Archaeological Society, Inc.

Environmental Review Committee

13 November 2005

To: Ms. Elizabeth Shearer-Nguyen
Land Development Review Division
Planning and Development Review Department
City of San Diego
1222 First Avenue, Mail Station 501
San Diego, California 92101

Subject: Notice of Preparation of a Draft Environmental Impact Report
State Route 163/Friars Road Interchange

Dear Ms. Shearer-Nguyen:

Thank you for the Notice of Preparation for the subject project, received by this Society earlier this month.

We are pleased to note the inclusion of historical resources in the list of subject areas to be addressed in the DEIR, and look forward to reviewing it during the upcoming public comment period. To that end, please include us in the distribution of the DEIR, and also provide us with a copy of the cultural resources technical report(s).

SDCAS appreciates being included in the City's environmental review process for this project.

Sincerely,

James W. Royle, Jr., Chairperson
Environmental Review Committee

cc: SDCAS President
File

P.O. Box 81106 • San Diego, CA 92138-1106 • (858) 538-0935

San Diego County
Archaeological Society
P.O. Box 81106
San Diego, CA 92138-1106

SAN DIEGO CA 921
14 NOV 05 PM 7 L

Ms. Elizabeth Shearer-Nguyen
Development Services Department
City of San Diego
1222 First Ave., Mail Station 501
San Diego, CA 92101

92101+4101

STATE OF CALIFORNIA Arnold Schwarzenegger *Governor*

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
(916) 657-5390 – Fax

November 21, 2005

Ms. Elizabeth Shearer-Nguyen
City of San Diego
1222 First Ave., MS-501
San Diego, CA 92101

Re: State Route 163 - Friars Road Widening
SCH# 2005111032

Dear Ms. Shearer-Nguyen:

Thank you for the opportunity to comment on the above-mentioned document. The Commission was able to perform a record search of its Sacred Lands File for the project area, which failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the Sacred Lands File does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Early consultation with tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Enclosed is a list of Native Americans individuals/organizations that may have knowledge of cultural resources in the project area. The Commission makes no recommendation of a single individual or group over another. Please contact all those listed; if they cannot supply you with specific information, they may be able to recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If you have not received a response within two weeks' time, we recommend that you follow-up with a telephone call to make sure that the information was received.

Lack of surface evidence of archeological resources does not preclude the existence of archeological resources. Lead agencies should consider avoidance, as defined in Section 15370 of the CEQA Guidelines, when significant cultural resources could be affected by a project. Provisions should also be included for accidentally discovered archeological resources during construction per California Environmental Quality Act (CEQA), Public Resources Code §15064.5 (f). Health and Safety Code §7050.5; and Public Resources Code §5097.98 mandate the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery and should be included in all environmental documents. If you have any questions, please contact me at (916) 653-6251.

Sincerely,

Carol Gaubatz
Program Analyst

Cc: State Clearinghouse

Native American Contacts
San Diego County
November 21, 2005

Clint Linton
P.O. Box 507 Diegueno/Kumeyaay
Santa Ysabel , CA 92070
(760) 803-5694
cjlinton73@aol.com

Inaja Band of Mission Indians
Rebecca Osuna, Spokesperson
309 S. Maple Street Diegueno
Escondido , CA 92025
inaja_cosmite@hotmail.com
(760) 737-7628
(760) 747-8568 Fax

Barona Group of the Capitan Grande
Rhonda Welch-Scalco, Chairperson
1095 Barona Road Diegueno
Lakeside , CA 92040
sue@barona.org
(619) 443-6612

Jamul Indian Village
Leon Acevedo, Chairperson
P.O. Box 612 Diegueno/Kumeyaay
Jamul , CA 91935
jamulrez@pacbell.net
(619) 669-4785
(619) 669-48178 - Fax

Barona Group of the Capitan Grande
ATTN: David Baron
1095 Barona Road Diegueno
Lakeside , CA 92040
(619) 443-6612

Kumeyaay Cultural Historic Committee
Ron Christman
56 Viejas Grade Road Diegueno/Kumeyaay
Alpine , CA 92001
(619) 445-0385

Barona Group of the Capitan Grande
ATTN: EPA Specialist
1095 Barona Road Diegueno
Lakeside , CA 92040
sue@barona.org
(619) 443-6612

Kumeyaay Cultural Repatriation Committee
Steve Banegas, Spokesperson
1095 Barona Road Diegueno/Kumeyaay
Lakeside , CA 92040
(619) 443-6612
(619) 443-0681 FAX

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resource assessment for the proposed State Route 163 - Friars Road Widening Project, SCH# 2005111032, San Diego County.

Native American Contacts
San Diego County
November 21, 2005

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas
PO Box 44 Diegueno - Kwaaymii
Julian , CA 92036
(619) 709-4207

Santa Ysabel Band of Diegueno Indians
Devon Reed Lomayesva, Esq, Tribal Attorney
PO Box 130 Diegueno
Santa Ysabel , CA 92070
(760) 765-0845
(760) 765-0320 Fax

Mesa Grande Band of Mission Indians
Mike Linton, Chairperson
P.O Box 270 Diegueno
Santa Ysabel , CA 92070
mesagrandeband@msn.com
(760) 782-3818
(760) 782-9092 Fax

Santa Ysabel Band of Diegueno Indians
Rodney Kephart, Environmental Coordinator
PO Box 130 Diegueno
Santa Ysabel , CA 92070
syirod@aol.com
(760) 765-0845

San Pasqual Band of Mission Indians
Allen E. Lawson, Chairperson
PO Box 365 Diegueno
Valley Center , CA 92082
(760) 749-3200
(760) 749-3876 Fax

Sycuan Band of Mission Indians
Danny Tucker, Chairperson
5459 Dehesa Road Diegueno/Kumeyaay
El Cajon , CA 92021
619 445-2613
619 445-1927 Fax

Santa Ysabel Band of Diegueno Indians
Johnny Hernandez, Spokesman
PO Box 130 Diegueno
Santa Ysabel , CA 92070
brandietaylor@yahoo.com
(760) 765-0845
(760) 765-0320 Fax

Viejas Band of Mission Indians
Anthony Pico, Chairperson
PO Box 908 Diegueno/Kumeyaay
Alpine , CA 91903
daguilar@viejas-nsn.gov
(619) 445-3810
(619) 445-5337 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resource assessment for the proposed State Route 163 - Friars Road Widening Project, SCH# 2005111032, San Diego County.

State of California
Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

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Department of Toxic Substances Control

Alan C. Lloyd, Ph.D.
Agency Secretary
Cal/EPA

5796 Corporate Avenue
Cypress, California 90630

Arnold Schwarzenegger
Governor

December 12, 2005

Ms. Elizabeth Shearer-Nguyen
City of San Diego Development Services Center
1222 First Avenue, MS501
San Diego, California 92101

INITIAL STUDY AND NEGATIVE DECLARATION (ND) FOR THE STATE ROUTE 163/FRIARS ROAD INTERCHANGE PROJECT (SCH# Pending)
Dear Ms. Shearer-Nguyen:

The Department of Toxic Substances Control (DTSC) has received your submitted document for the above-mentioned project. As stated in your document: "The proposed project consists of development to widen the Friars Road Bridge over State Route(SR) 163 from 6 to 10 lanes which includes the addition of sidewalks along both sides of the bridge." Based on the review of the submitted document DTSC has comments as follows:

1) The ND should identify and determine whether current or historic uses at the project site may have resulted in any release of hazardous wastes/substances.

2) The document states that the ND would identify any known or potentially contaminated sites within the proposed project area. For all identified sites, the ND should evaluate whether conditions at the site may pose a threat to human health or the environment. A Phase I Assessment may be sufficient to identify these sites. Following are the databases of some of the regulatory agencies:

   - National Priorities List (NPL): A list maintained by the United States Environmental Protection Agency (U.S.EPA).

   - Site Mitigation Program Property Database (formerly CalSites): A Database primarily used by the California Department of Toxic Substances Control.

   - Resource Conservation and Recovery Information System (RCRIS): A database of RCRA facilities that is maintained by U.S. EPA.

- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS): A database of CERCLA sites that is maintained by U.S.EPA.

- Solid Waste Information System (SWIS): A database provided by the California Integrated Waste Management Board which consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations.

- Leaking Underground Storage Tanks (LUST) / Spills, Leaks, Investigations and Cleanups (SLIC): A list that is maintained by Regional Water Quality Control Boards.

- Local Counties and Cities maintain lists for hazardous substances cleanup sites and leaking underground storage tanks.

- The United States Army Corps of Engineers, 911 Wilshire Boulevard, Los Angeles, California, 90017, (213) 452-3908, maintains a list of Formerly Used Defense Sites (FUDS).

3) The ND should identify the mechanism to initiate any required investigation and/or remediation for any site that may be contaminated, and the government agency to provide appropriate regulatory oversight. If hazardous materials or wastes were stored at the site, an environmental assessment should be conducted to determine if a release has occurred. If so, further studies should be carried out to delineate the nature and extent of the contamination, and the potential threat to public health and/or the environment should be evaluated. It may be necessary to determine if an expedited response action is required to reduce existing or potential threats to public health or the environment. If no immediate threat exists, the final remedy should be implemented in compliance with state regulations and policies.

4) The project construction may require soil excavation and soil filling in certain areas. Appropriate sampling is required prior to disposal of the excavated soil. If the soil is contaminated, properly dispose of it rather than placing it in another location. Land Disposal Restrictions (LDRs) may be applicable to these soils. Also, if the project proposes to import soil to backfill the areas excavated, proper sampling should be conducted to make sure that the imported soil is free of contamination.

5) Human health and the environment of sensitive receptors should be protected during the construction or demolition activities. A study of the site overseen by the appropriate government agency might have to be conducted to determine if there are, have been, or will be, any releases of hazardous materials that may pose a risk to human health or the environment.

6) If during construction/demolition of the project, soil and/or groundwater contamination is suspected, construction/demolition in the area should cease and appropriate health and safety procedures should be implemented. If it is determined that contaminated soil and/or groundwater exist, the ND should identify how any required investigation and/or remediation will be conducted, and the appropriate government agency to provide regulatory oversight.

If you have any questions regarding this letter, please contact Mr. Al Shami, Project Manager, at (714) 484-5472.

Sincerely,

Greg Holmes
Unit Chief
Southern California Cleanup
Operations Branch - Cypress Office

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044

Mr. Guenther W. Moskat, Chief
Planning and Environmental Analysis Section
CEQA Tracking Center
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

CEQA #1268

State of California - The Resources Agency ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF FISH AND GAME
http://www.dfg.ca.gov
4949 Viewridge Avenue
San Diego, CA 92123
(858) 467-4201

December 2, 2005

Ms. Elizabeth Shearer-Nguyen
City of San Diego
1222 First Street
San Diego, CA 92101

Notice of Preparation of a Draft Program Environmental Impact Report for the State Route 163 – Friars Road Widening, in the City of San Diego, County of San Diego
SCH# 2005111032

Dear Ms. Shearer-Nguyen:

The California Department of Fish and Game (Department) has reviewed the above-referenced Notice of Preparation (NOP). The City of San Diego has an approved Subarea Plan and Implementing Agreement under the Natural Community Conservation Planning program. The DEIR for the proposed project must ensure and verify that all requirements and conditions of the Subarea Plan and Implementing Agreement are met. The DEIR should also address biological issues that are not addressed in the Subarea Plan and Implementing Agreement, such as specific impacts to and mitigation requirements for wetlands or sensitive species and habitats that are not covered by the Subarea Plan and Implementing Agreement.

Issue areas in the DEIR that may be influenced by the Subarea Plan and Implementing Agreement include "Land Use," "Landform Alteration/Visual Quality," "Traffic/Circulation," "Biological Resources," "Drainage/Urban Runoff/Water Quality," "Noise," and "Cumulative Effects." In addition, the environmental document should describe why the proposed project, irrespective of other alternatives to the project, is consistent with and appropriate in the context of the Subarea Plan.

Thank you for the opportunity to comment. Please contact Pam Beare, at pbeare@dfg.ca.gov or (858) 467-4229, if you have questions regarding this letter.

Sincerely,

Michael J. Mulligan
Deputy Regional Manager

cc: State Clearinghouse

PB:pb
SR163FriarsRdWideningNOP.doc

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92011

In Reply Refer To:
FWS-SDG-3406.2

LAND DEVELOPMENT REVIEW
DEC 01 2005

DEC 05 2005

DEVELOPMENT SERVICES

Robert J. Manis
Assistant Deputy Director
Environmental Analysis Section
Development Services Department
City of San Diego
1222 First Avenue, MS 501
San Diego, CA 92101-4155

Subject: Notice of Preparation of Draft Environmental Impact Report/Environmental Assessment for the State Route 163 Friars Road Interchange Project in the City of San Diego, San Diego County, California

Dear Mr. Manis:

The U.S. Fish and Wildlife Service (Service) has reviewed your November 4, 2005, letter requesting comments on the City of San Diego's (City) decision to prepare an Environmental Impact Report/Environmental Assessment (EIS/EA) for the State Route (SR) 163 Friars Road Interchange Project (Project) in the City of San Diego, California. We received your request for comments on November 7, 2005. The proposed Project will: widen the Friars Road Bridge over SR 163 from six to ten lanes which includes the addition of sidewalks along both sides of the bridge; replace the existing northbound to eastbound diamond off-ramp to Friars Road (southeast quadrant) with a flopped partial cloverleaf configuration ramp in the northeast quadrant of the interchange, and vacate the existing northbound to eastbound diamond off-ramp; widen the existing northbound to westbound loop off-ramp from one lane to two lanes to accommodate traffic accessing both eastbound and westbound Friars Road; widen the existing northbound off-ramp from one lane to two lanes, with a four-lane terminus; remove the existing free-right turn lane from the northbound SR 163 off-ramp to eastbound Friars Road; widen the existing northbound diamond on-ramp to SR 163 from one lane to two lanes to accommodate increased traffic volumes; add a southbound auxiliary lane from Genesee Avenue southerly, which becomes a collector distributor lane prior to crossing the Friars Road bridge/future Hazard Center Drive extension traversing under the elevated San Diego Trolley line, then bridge the San Diego River merging with Interstate 8 West/Hotel Circle North; and remove the existing westbound to southbound elongated loop on-ramp (northwest quadrant) from westbound Friars Road to the southbound SR 163.

TAKE PRIDE® IN AMERICA

The primary concern and mandate of the Service is the protection of public fish and wildlife resources and their habitats. The Service has legal responsibility for the welfare of migratory birds, anadromous fish, and endangered animals and plants occurring in the United States. These comments have been prepared under the authority, and in accordance with the provisions, of the National Environmental Policy Act (NEPA, 2 U.S.C. § 4321 et seq.) Endangered Species Act (ESA, 16 U.S.C. 1531-1544, as amended), and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) mandating Department of Interior concerns for environmental values.

Among the wildlife and plant species that the proposed project may affect are the State and federally endangered least Bell's vireo (*Vireo bellii pusillus*: vireo), light-footed clapper rail (*Rallus longirostris levipes*: clapper rail), and San Diego ambrosia (*Ambrosia pumilla*); the federally threatened and State Species of Concern coastal California gnatcatcher (*Polioptila californica californica*: gnatcatcher); and the federally threatened San Diego thornmint (*Acanthomintha ilicifolia*).

The proposed Project is adjacent to and will directly impact the San Diego River which is designated as a Multiple Habitat Planning Area (MHPA) under the City's Multiple Species Conservation Program (MSCP), and coastal sage scrub (CSS) habitat adjacent to the Project and occupied by the gnatcatcher. In 2005, a small group of clapper rails were released in the lower San Diego River. The 2003 fires in San Diego County impacted a number of areas occupied by the vireo that could move into the habitat within the San Diego River and adjacent to the proposed Project area. San Diego ambrosia and San Diego thornmint have the potential to occur in the project area. In addition to direct impacts, indirect impacts to the San Diego River and the CSS adjacent to the proposed Project from noise, fugitive dust, and water pollution should be avoided and minimized by employing best management practices (BMPs).

The Service has been working closely with the City and Caltrans to develop a project that minimizes impacts to federally listed species. Through this collaborative effort, the City has modified the proposed Project to avoid and minimize impacts to the gnatcatcher. The Service has recommended that vireo surveys be conducted prior to construction to determine whether vireo have moved into the area post 2003 fires. Since the clapper rail has been released into the lower San Diego River and there is suitable habitat (emergent wetlands) within the action area, the Service recommends conducting a habitat assessment of the emergent wetlands and protocol level clapper rail surveys to determine whether the clapper rail has or could move into the proposed Project area prior to construction. Surveys should also be conducted for San Diego thornmint and San Diego ambrosia.

The DEIR/EA should identify and thoroughly discuss all project-related potential edge effects and propose measures to avoid or minimize them. Edge effects are defined as undesirable anthropogenic disturbances beyond urban boundaries into potential reserve habitat (Kelly and Rotenberry 1993). Edge effects, such as disturbance by humans and non-native predators (pets), exotic ants, trampling, noise, and lighting, and decreases in avian productivity (Andren and

Angelstam 1988), are all documented effects that have negative impacts on sensitive biological resources in southern California. These edge effects can penetrate up to 200 meters from the actual reserve boundary. Surrounding natural habitat could be permanently destroyed by human or domestic animal encroachment, trampling, bushwhacking, and frequent fires; therefore, development and open space configurations should minimize adverse edge effects (Soulé 1991). We are particularly concerned about biological effects from construction noise, and construction and operational light, glare, and hydrological changes.

Regarding artificial night lighting, illumination of riparian corridors by night lighting has the potential to adversely affect birds. Physiological, developmental, and behavioral effects of light intensity, wavelength, and photoperiod on bird species are well-documented. In the wild, urban lighting is associated with early daily initiation of avian song activity (Bergen and Abs 1997). Avian species are known to place their nests significantly farther from motorway lights than from unlighted controls (de Molenar et al, 2000). Placement of nests away from lighted areas implies that part of the home range is rendered less suitable for nesting by artificial light. If potential nest sites are limited within the bird's home range, reduction in available sites associated with artificial night lighting may cause the bird to use a suboptimal nest site that is more vulnerable to predation, cowbird parasitism, or extremes of weather. We recommend that no additional lighting be added to the SR 163 and associated infrastructure within the vicinity of both upland and wetland sensitive habitats, and if possible that existing lighting within such areas be removed.

As to noise, the DEIR/EA should propose and fully describe methods to attenuate project-related construction and operational noise levels in excess of ambient levels at the edge of sensitive habitats to avoid or minimize further degradation by noise of conditions for wildlife, particularly avian species.

The DEIR/EA should provide a detailed discussion of construction and post-construction structural BMPs. The discussion should identify the specific BMPs and their locations, include figures of the project area with an overlay of the development footprint and the locations of the BMPs (e.g., attenuation, and filtration), describe the maintenance (e.g., frequency, season, activities) that the City and Caltrans would conduct on the BMPs to ensure that they function as intended. The quantification of habitat loss, if any, should include the loss resulting from the BMPs. The BMPs should be designed to obviate the need for riprap or other attenuation measures within sensitive habitat.

Your November 4, 2005, letter states that this Project will go through the NEPA/404 Integration Process for Surface Transportation Projects in Arizona, California, and Nevada (NEPA/404 Integration Process). Based on our understanding of the proposed Project, less than five acres of jurisdictional wetlands and waters of the U.S. will be impacted by project construction. The threshold for initiating the NEPA/404 Integration Process is five acres of impacts to jurisdictional wetlands and waters of the U.S. Therefore, the project would not meet the threshold and the NEPA 404/Integration Process is not necessary.

In addition, the Service recommends the DEIR/EA also include the following information and/or address the following issues.

1. A complete discussion of the purpose and need for, and description of, the proposed project, including all staging areas and access routes to the construction and staging areas.

2. A complete list and assessment of the flora and fauna within and adjacent to the project area, with particular emphasis upon identifying State or federally listed rare, threatened, endangered, or proposed candidate species, California Species of Special Concern and/or State Protected or Fully Protected species, and any locally unique species and sensitive habitats. Specifically, the DEIR/EA should include:

   a. A thorough assessment of Rare Natural Communities on site and within the area of impact.

   b. A current inventory of the biological resources associated with each habitat type on site and within the area of impact.

   c. Detailed discussions, including both qualitative and quantitative analyses, of the potentially affected listed and sensitive species (fish, wildlife, plants), and their habitats on the proposed project site, area of impact, and alternative sites, including information pertaining to their local status and distribution.

   d. 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.

   e. An inventory of rare, threatened, and endangered species on site and within the area of impact.

   f. Discussions regarding seasonal variations in use by sensitive species of the project site as well as the area of impact on those species.

3. A thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources. All facets of the project should be included in this assessment. Specifically, the DEIR/EA should provide:

   a. Specific acreage and descriptions of the types of wetlands, coastal sage scrub, and other sensitive habitats that will or may be affected by the proposed project or project alternatives. Maps and tables should be used to summarize such information.

   b. The anticipated or real impacts of the project on the listed and sensitive species and habitats. As to plants species, all plants included on CNPS' List 1B and List 2 meet the definitions of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections

2062 and 2067 (California Endangered Species Act) of the California Department Fish and Game Code and are eligible for listing.

c. 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.

d. A discussion of potential conflicts resulting from wildlife-human interactions, potential adverse impacts from lighting, noise, vibration, human activity, changes in drainage patterns, polluted runoff, hazardous materials spills, soil erosion and/or sedimentation, with mitigation measures proposed to alleviate such impacts, must be included.

e. If applicable, the document should include an analysis of the effect that the project may have on completion and implementation of regional and/or subregional conservation programs.

f. An analysis of cumulative effects. General and specific plans, and past, present, and anticipated future projects, should be analyzed concerning their impacts on similar plant communities and wildlife habitats.

4. Mitigation measures for adverse project-related impacts on sensitive plants, animals, and habitats. Measures to fully avoid and otherwise protect Rare Natural Communities from project-related impacts should be included in the DEIR/EA.

Mitigation measures should emphasize avoidance, and where avoidance is infeasible, reduction of project impacts. For unavoidable impacts, off-site mitigation through acquisition and preservation of the affected habitats in perpetuity should be addressed. The Service generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts on rare, threatened, or endangered species. Studies have shown that these efforts are experimental in nature and largely unsuccessful.

Include measures to perpetually protect the targeted habitat values where preservation and/or restoration are proposed. The objective should be to offset the project-induced qualitative and quantitative losses of wildlife habitat values. Issues that should be addressed include restrictions on access, proposed land dedications, monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc. Plans for restoration and revegetation should be prepared by persons with expertise in southern California ecosystems and native plant revegetation techniques. Each plan should include, at a minimum: (a) the location of the mitigation site; (b) the plant species to be used; (c) a schematic depicting the mitigation area; (d) time of year

that planting will occur; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the entity(ies) that will guarantee achieving the success criteria and provide for conservation of the mitigation site in perpetuity.

5. Descriptions and analyses of a range of alternatives to ensure that alternatives to the proposed project are fully considered and evaluated. The analyses must include alternatives that avoid or otherwise reduce impacts to sensitive biological resources. Specific alternative locations should be evaluated in areas of lower resource sensitivity where appropriate.

6. If the proposed project has the potential to "take" any federally listed species, either directly or indirectly (i.e., foraging, reduction in habitat) over the life of the project, "take" authorization will need to be obtained from the Service through section 7 of the Act.

   a. An analysis and discussion demonstrating that: 1) each impact has been minimized and fully mitigated, 2) all mitigation measures are capable of successful implementation, and 3) adequate funding is ensured for implementation, and for monitoring compliance with, and effectiveness of, the mitigation measures.

   b. The analysis of the impacts of the taking must include all impacts on the species.

   c. An evaluation of the impacts that includes a discussion of the potential to jeopardize the continued existence of the species. This shall include consideration of the species' capability to survive and reproduce, and any adverse impacts of the taking on those abilities in light of: 1) known population trends, 2) known threats to the species, and 3) reasonably foreseeable impacts on the species from other related projects and activities.

If you have any questions or concerns about this comment letter, please contact John DiGregoria of my staff at (760) 431-9440 extension 208.

Sincerely,

for

Therese O'Rourke
Assistant Field Supervisor

Literature Cited

Andren, H. and P. Angelstam. 1988. Elevated predation rates as an edge effect in habitat islands: experimental evidence. Ecology 64: 1057-1068.

Bergen, F. and M. Abs. 1997. Etho-ecological study of the singing activity of the blue tit (Parus caeruleus), great tit (Parus major) and chaffinch (Fringilla coelebs). Journal fur Ornithologie 138(4):451-467

de Molenar, J. G., D. A. Jonkers, and M. E. Sanders. 2000. Road illumination and nature. III. Local influence of road lights on a black-tailed godwit (Limosa l. limosa) population. Report prepared for Directorate-General of Public Works and Water Management, by Alterra, Green World Research. Wageningen, Netherlands

Kelly, P. A. and J. T. Rotenberry. 1993. Buffer zones for ecological reserves in California. In J. E. Keeley, ed. Interface Between Ecology and Land Development in California. Southern California Academy of Sciences, Los Angeles.

Soulé, Michael E. 1991. Land use planning and wildlife maintenance. *Journal of the American Planning Association*, Vol. 57, No. 3, Summer 1991. American Planning Association, Chicago, Illinois.

From: Randy Berkman [jrb223@hotmail.com]
Sent: Sunday, November 27, 2005 2:13 PM
To: eshearernguyen@sandiego.gov
Cc: savewetlands@cox.net; peugh@cox.net; tmullaney@aol.com; davidapott@aol.com
Subject: SR 163 Bridge widening: Project 72782 EIR scoping comments

Does any part of Friars Rd. now have 10 lanes? If not, why propose 10 lanes here? The EIR scoping Public Notice lists City of San Diego as applicant (Engineering and Capital Projects Department). What role, does Caltrans have?

I count 9 parts to the plan as stated on Public Notice:

1. Widen Friars Rd. bridge over SR 163 from 6 to 10 lanes 2. Replace north to east bound diamond off ramp with flopped partial cloverleaf 3. Widen existing north to west bound offramp from one to two lanes 4. Widen existing north bound offramp from 1 to 2 lanes 5. Remove existing right turn lane from Northbound SR 163 off-ramp 6. Widen existing northbound on ramp to sR 163 from 1 to 2 lanes 7. Remove existing free-right turn lane from north bound SR 163 off-ramp to westbound Friars Rd.
8. Add a southbound auziliary lane from Genesee Ave. southerly 9. Remove existing westbound to southbound loop on-ramp from westbound Friars to southbound SR 163

If this is not the most confusing project description I've ever heard, it's right up there. I realize that all the cloverleafs and loops contribute to this confusion. Will analysis assume a "build all 9 elements" or a scenario which builds only some of the 9 elements?
To analyze all the permutations of building some of the 9 elements would be unfeasible since there'd be far too many options--a "yes-no" to 9 elements in various combinations.

Please review an 8 lane widening option for the bridge. What about an option that would widen the bridge northward--away from the river? Also, which part of the 9 elements causes the impacts to floodway, wetlands or other habitat? Withut knowing this, it will be very difficult to make informed comments.

How much is this expected to cost--for each of 9 elements? Who pays? Will residential and commercial properties in the area (Fashion Valley, Fashion Walk condos, Hazard Center, etc.) be paying any part of this and if so how much? If not, why not? Is development of Quarry Falls assumed for this project? How many trips are assumed? If Quarry Falls is not built, would the need for this project be reduced? Would Quarry Falls be required to contribute to costs of the project? How much?

What is current LOS for ramps and streets of the project? I know that Friars Rd. is LOS F in this area. Does this project assume buildout of the Stardust (aka Riverwalk) golf course? If so, how many trips are assumed?
If that does not build out, would the need for this project be reduced? Is development on the stadium site assumed by this project? If so, how many trips are assumed?

thank you for answering these questions.
Randy Berkman

Public Scoping Meeting

Sign-in Sheet
Comment Letter
Transcript of Proceedings

SIGN IN SHEET

for the

STATE ROUTE 163/FRIARS ROAD INTERCHANGE PROJECT
ENVIRONMENTAL IMPACT REPORT SCOPING MEETING
Monday, November 28, 2005

Name (please print)	Address (please print)
WAYNE BAMFORD	RADIO22@GMAIL.COM
DON KNOELL	DKNOELL@AOL.COM
SANDY DUNCAN	SANDYDUNCAN@SOLMAIL.COM
GAIL THOMPSON	GAILT@CTS.COM
Janay Kruger	Janay-Kruger@MSN.COM
BOB DOHERTY	rdoherty@simon.com
MARCO SESSA	MARCO@SUBPROP.COM
NAT COHEN	[illegible]
GAIL COLE	2576 JEWETT ST. 92111
Lisa Gonzalez	202 C St #10-A 92101
Cindy & Paul Moore	8826 Gnatboro St SD 92123
PHILIP TAYLOR	San Diego, CA 92108 8555 Station Village Ln #3148
Kevin Harvey	Caltrans
TOM SUDBERRY	tom@subprop.com
Arnold Torma	2251 San Diego Ave KATS Okitsu & Assoc.
JIM REYNOLDS	733 8TH AVE SAN DIEGO CA 92101

CITY OF SAN DIEGO

DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL ANALYSIS SECTION (EAS)

PUBLIC SCOPING MEETING

This meeting is held pursuant to the *California Public Resources Code Section 21083.9 et seq.*, and is provided to give the public and interested parties an opportunity to submit comments regarding the potential environmental impacts of the proposed project. This information will be used to develop the scope and content of the proposed environmental document for the project action to be described at this meeting. Please record your comments in the space provided below and submit this form to City staff at the conclusion of the meeting. Thank You.

Project 163/FRIARS RD INTERCHANGE **Date** 11-28-05

Comments

I went to the Mission Valley library at 4:30, and had an enjoyable time, looking at the display, and talking to the engineers, and other city employees. I live above/overlooking that interchange.

As I am a Board Member of the Linda Vista Planning, I had to leave (along with 20 others) for our 6 PM monthly meeting. Wish we could have stayed for the formal presentation. — OVER —

Name SANDY DUNCAN **Signature** [signature]

Address 7250 ACARI ST
SAN DIEGO 92111

Use back of sheet if additional space is necessary.

Written comments may be mailed to Elizabeth Shearer-Nguyen, City of San Diego, 1222 First Avenue,

Linda Vista is greatly affected by what happens in Mission Valley -

Please include us in future meetings and presentations.

Thank You —

Sd

* * * * * * * * * *

CITY OF SAN DIEGO

PUBLIC SCOPING MEETING

REGARDING PREPARATION OF A DRAFT PROGRAM

ENVIRONMENTAL IMPACT REPORT

State Route 163/Friars Road Interchange

Project No. 72782

* * * * * * * * *

ORIGINAL

On Monday, November 28, 2005

At 5:30 p.m.

Mission Valley Library

2123 Fenton Parkway

San Diego, California

* * * * * * * * * *

Reporter's Transcript of Proceedings

* * * * * * * * * *

Sheri L. Somers, CSR

Sheri L. Somers, CSR
Certificate No. 9734

Ph: 619•829•8463
Fax: 619•435•6348
E-mail: somerscsr@aol.com

826 Orange Avenue
Suite 376
Coronado, California 92118

SAN DIEGO, CA, MONDAY, NOVEMBER 28, 2005, 5:30 P.M.

MS. SHEARER-NGUYEN: Good evening. Can everybody hear me?

Thank you for attending and welcome to the scoping meeting for the Environmental Impact Report, EIR, for the State Route 163/Friars Road Interchange project. My name is Elizabeth Shearer-Nguyen. I'm the environmental analyst for the project for the City of San Diego's Environmental Analysis Section of the Development Services Department, and I'm here tonight with Eileen Lower, who is a senior planner.

This meeting is referred to as an EIR scoping meeting, and the purpose is to help define the scope of work for the EIR. This meeting is required by the California Environmental Quality Act, CEQA, for projects which may have statewide, regional or area-wide environmental impacts.

The City's environmental review staff has determined that this project meets these thresholds and thereby scheduled this meeting to gather public input prior to preparing the project's environmental document.

We, as environmental review staff, are required by the City's municipal code to provide the public and the

decision-makers with independently prepared environmental documents which disclose impacts to the physical environment. This information is used by the decision-makers as part of the deliberating process in approving or denying the project. The environmental document in itself does not approve or deny -- or recommend approval or denial of the project.

A few comments about the meeting, how it will be conducted. First a brief description of the project by the project applicant will take place, and then we will open the meeting for the public comment. The meeting is designed to get as much public input as possible on areas that need to be addressed in the EIR in the time allocated for this meeting. A court reporter is present to transcribe your verbal comments, and therefore each speaker is asked to introduce themselves, state their address and complete their comments within the three minutes allotted, and please speak slowly when you state your name and your address, please.

The entire meeting will last two hours and it will end at 7:30. The library closes at 7:45, so respectfully we ask that we try to keep it in the permitted -- time allotted.

Please refrain from trying to conduct a debate on the merits of the project at this meeting, for this is

not the purpose of this meeting. Tonight is to only focus on the comments on those environmental impacts that you would like to see thoroughly analyzed in the EIR.

Lastly, David Li from the City's Engineering & Capital Projects Department will be acting as the moderator and keeping time for the duration of the meeting, and I respectfully request that you end your comments when notified by David when your time is up. We'll hold up a little 30 minutes -- sorry -- 30 seconds -- that you have 30 seconds remaining and we'd appreciate it -- there's also some lights, but I don't know if you can see them from here, but he will let you know.

I appreciate and thank you for your patience. I'll now introduce Kris Shackelford, who is from the City of San Diego's Engineering & Capital Projects Department.

MS. SHACKELFORD: Thank you, Elizabeth.

Again, my name is Kris Shackelford and I'm the City civil engineer with the Transportation Engineering Division. I'm pleased to see so many of you here tonight taking time off from your busy schedule to come and comment on our project. Before we go into the technical details, I kind of want to give a little bit of a background as far as how we've gotten to this point. This project originally started off with improvements on

Friars Road, and as many of you are aware of the congestion and the safety problems that we have related to the 163, and so the project became a collaboration between the City of San Diego and Caltrans, and the City of San Diego being the lead agency.

I want to introduce the different folks that's on the team that have been working diligently on the project. Start off with Sam Amen from Caltrans, he's the design manager. And Kevin Hovey, he's the person that's going to be handling the NEPA document. We also have Chris Johnson, who is the project manager from Dokken Engineering. Don Bloodworth is the project engineer from Dokken. We have Walter from Linscott, Law & Greenspan. He's been working on the traffic studies and the traffic issues. And then we have a couple folks from Helix, right? Over there.

So anyhow, what the team has been doing to get to this point, they have been working together, collaborating, and looking into 18 different combinations of alternatives that hopefully will solve the problem that exists today, as well as to plan for the future in the Mission Valley area as far as at this location. Out of these 18 different combinations of alternatives, it's kind of gotten narrowed down to the one that you see behind us today as being the preferred alternative. I will turn it

over for Chris to kind of go over a little bit more as far as the scope of the project and as far as the limit of where this extends to.

Chris?

MR. JOHNSON: Kris, could you help me pull this forward a little bit. It's kind of in the shadows a little bit.

Okay. As Kris mentioned before, my name is Chris Johnson. I am the project manager for Dokken Engineering. Dokken was hired by the City about two years ago to work on the project, and I can tell you that it's always interested me to find a way to solve some of the issues out there at the interchange. I've been driving it for over 20 years, and we all know that it's a very difficult spot in terms of congestion and safety.

As Kris mentioned, the project was started by the City really to alleviate the issues on Friars Road related to the high number of vehicles that are going back and forth there through the Fashion Valley mall and Hazard Center and all the new development that's occurred down there over the past 10 or 15 years. So we took a look at Friars Road, and we also looked at some of the traffic signal issues in there related to the congestion and started from that point, and then decided that it would be in the interest of the entire region really to solve all

of the issues related to this particular location in the City of San Diego.

We have some serious safety issues out there that we've worked very hard to try to alleviate. The first and foremost safety issue that we have, as I'm sure you're all aware, is the weaving issue that we have from the traffic that's getting on from Friars Road in various different directions weaving across the freeway as you're trying to go southbound on 163 or I-8 eastbound with the traffic that wants to go westbound on I-8 and get onto Hotel Circle. So we took a real hard look at that particular location.

In addition, we wanted to solve some of the issues related to the weaving underneath the bridge at this location as people get off the freeway and on the freeway using the old cloverleaf geometrics that were popular in the 1960's. As I'm sure you know, we have a lot of queuing in this area here, especially during the holiday season. So we wanted to take a look at that area there. So we had a weaving issue here, a weaving issue here, and then finally as pedestrians and bicyclists go through this area here, we have a lot of free-right movements on the intersections, and it's very difficult to drive your bike or walk through this particular location because you're looking everywhere all the time to make

sure you're not going to get run over. So we wanted to make sure that the intersections worked in a more safe manner and we've taken some of those free-right moves away -- in fact most of the free-right moves away, and kind of lined them up to the intersections here so we can get a better flow of pedestrians and bicyclists through the area.

So we looked very closely at safety, we looked at some of the congestion issues on Friars Road, and we've developed this alternative, which we all Alternative 13, the preferred alternative, as Kris mentioned.

I'll give you a bit of an orientation here. You can see that all of the red of the job represents improvements along the various segments of the job. So you see that we take Friars Road and we widen it out to ten lanes, add signals, coordinate the signals, and so forth. We also reconfigured some of the on-ramps that take care of some of these weaving issues, and if you'd like to talk to me about that after the meeting, we can go through that in more detail.

Also of importance are some of the very large queues that we have getting off on the holiday season, trying to use Friars Road from the southbound direction. So we addressed that. We've addressed this weave down here by splitting this traffic out early, moving it over

and underneath the bridge and over onto a new bridge so that we can eliminate any conflicts in this area here.

So I think it's a very good design that we've come up with here, and I'm certainly available at the end of our discussion here to talk about some of the issues and the traffic study that's been done, and so forth.

So with that, Elizabeth?

MS. SHEARER-NGUYEN: Yes.

MR. JOHNSON: Thank you.

MS. SHEARER-NGUYEN: So with that, what we'd like to do is if you'd like to either speak or provide written comment, you can provide written comment and just drop them off in the little black boxes, and a copy is being held up there by our own Vana White and -- or if you'd like to provide longer comment and there's not enough room on the documents that have been provided, they can be mailed back to my attention.

But if you'd like to speak, please raise your hand and we'd like to form a line, and if you could come up to the mike here and please say your name and address for the court reporter, and we'll proceed from that with the three-minute time allotted for this.

No speakers?

MR. TAYLOR: I want to speak, but could I have somebody go first. I have a bunch of questions.

1 MS. LOWER: This is not a question-and-answer period
2 for us. Our sole purpose here tonight is to gather public
3 input regarding the environmental issues to be addressed
4 in the environmental impact report. If you have questions
5 about the project, Chris has indicated he's happy to talk
6 with you.
7 MS. SHEARER-NGUYEN: Thank you, Eileen.
8 MR. TAYLOR: Philip Taylor, 8555 Station Village
9 Lane, No. 3148, San Diego, 92108.
10 The questions that I have is on the traffic
11 projections on Friars Road, did you take in the future use
12 of the traffic generated if Qualcomm stadium is built into
13 6,000 additional residential units and how will that
14 affect the level of service? I assume that you took
15 Quarry Falls into effect in your traffic projections, but
16 did you take in the other ones?
17 Because of the level of service that I see every
18 day going in here, I was curious if a feasibility had been
19 done on the Ulric/Friars interchange to put some
20 overpasses to reduce the level of service there.
21 Also the same thing at Frazee/Friars, going into
22 Hazard Center. What would the effect of the interchanges
23 do to the level of service anticipated here?
24 Also the right turn lane for Friars, if you have
25 a right turn lane as exists coming off 163, will that

improve the level of service versus the stop light that's in there, which I think it would.

And the third one is, is it more beneficial and how much would the traffic be improved by purchasing The Container Store so that you would have better access in and out in there, and that should improve the level of service.

These are the only five items that I'm concerned about. Thank you.

MS. SHEARER-NGUYEN: Thank you. Anyone else? If not, we could segue -- just come right up, sir. Thank you.

MR. KNOELL: Don Knoell from Serra Mesa. This is a nearby community. My -- this looks like a pretty good project, but my main concern was the backup on Mission Center Road, which doesn't show on these drawings, but particularly in the Christmas traffic and holiday traffic, there's quite a few there and how this -- how is all this going to be influenced by that, particularly with this -- this particular intersection there, which is one of the busiest ones there where it all backs up, and the entrance from Mission Center Road goes right into that intersection and what's that going to do to the traffic on Mission Center Road because there's a lot more development going on in that area.

That's the only question I have.

MS. SHEARER-NGUYEN: Thank you. Anyone else? If not, we can segue into Chris's offer to answer questions. And if someone would like to make a public comment, just let me know and we can let the court reporter know.

Okay. Then this will close the public comment period. Thank you.

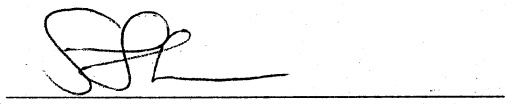
(The Public Scoping Meeting ended at 5:49 p.m.)

STATE OF CALIFORNIA)
: ss.
COUNTY OF SAN DIEGO)

I, Sheri L. Somers, a Certified Shorthand Reporter, Certificate No. 9734, in the State of California, do hereby certify that the foregoing proceeding was taken before me at the time and place herein named; that said proceeding was reported by me in shorthand and then transcribed through computer-aided transcription, and the foregoing pages contain a true record of the testimony of said proceeding.

I do further certify that I am a disinterested person and am in no way interested in the outcome of this action, or connected with or related to any of the parties in this action or their respective counsel.

IN WITNESS WHEREOF, I have hereunto set my hand on this 12th day of December, 2005.



Sheri L. Somers, CSR