

Golden Valley Road Bridge

LOS ANGELES COUNTY, CALIFORNIA

Environmental Assessment



**Prepared by the
State of California
Department of Transportation and
City of Santa Clarita**

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

March 2008



Construct the Golden Valley Road Bridge over the Santa Clara River,
Connecting Golden Valley Road to Newhall Ranch Road

ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to: 42 USC 4332(2)(C)

THE STATE OF CALIFORNIA
Department of Transportation

CITY OF SANTA CLARITA

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March 21, 2008
Date of Approval


Ron Kosinski
Deputy Director for Environmental Planning
District 7
California Department of Transportation



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Chapter 1

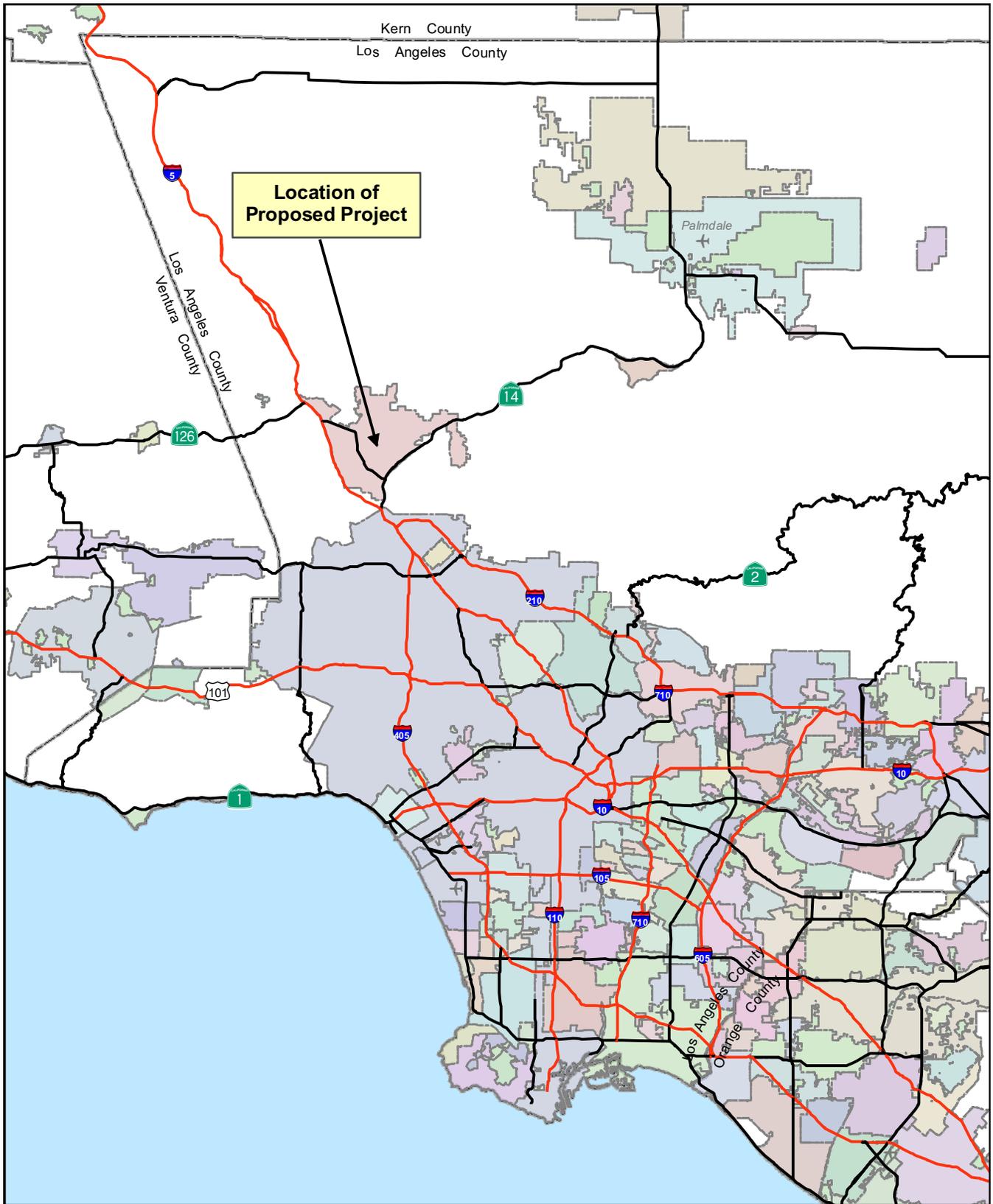
Proposed Project

1.1 INTRODUCTION

The City of Santa Clarita, with oversight from the California Department of Transportation (Caltrans), under NEPA delegation responsibilities pursuant to 23 U.S.C. 327, is proposing to construct a 1,100-foot-long Golden Valley Road bridge over the Santa Clara River. The project is located within Santa Clarita in Los Angeles County, California (Figure 1-1). The Golden Valley Road Bridge Project (Federal Project Number LA0B103) is located east of the recently extended Newhall Ranch Road and north of Soledad Canyon Road (Figure 1-2). The proposed bridge would connect Newhall Ranch Road and Soledad Canyon Road.

The proposed project conforms to both the RTP and the RTIP. It is included in *Destination 2030: 2004 Regional Transportation Improvement Program (RTP) Appendix I, Project Lists*, on page I-31 and the *Final Adopted 2006 Regional Transportation Improvement Program (RTIP)* on page 32, of the Los Angeles County Local Highways Section as Santa Clarita project LA0B103 - Construct Golden Valley Road from Soledad Canyon to Newhall Ranch Road. 0 to 6 lanes. Less than 0.5 miles - includes bridge over Santa Clara River (SCAG 2006a). Both the RTP and RTIP were approved by federal agencies on October 2, 2006, and the USDOT adopted a Clean Air Act conformity determination for the RTIP on that date (USDOT 2006).

The project has already received CEQA clearance as part of the Riverpark housing development, the City Council of Santa Clarita certifying the Final Environmental Impact Report (FEIR) SCH #2002091081, including the mitigation monitoring and reporting program, and adopting a statement of overriding considerations on May 24, 2005. Caltrans reviewed the FEIS and sent notice to the City on March 15, 2007, finding the document to be consistent with the proposed bridge project under assessment within this NEPA document. Caltrans concurred with the cities' level of documentation under CEQA and is responsible for NEPA determination.



Source: California Geospatial Information Library, 2003-2005

Figure 1-1
Regional Location Map



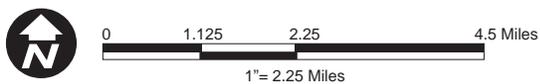
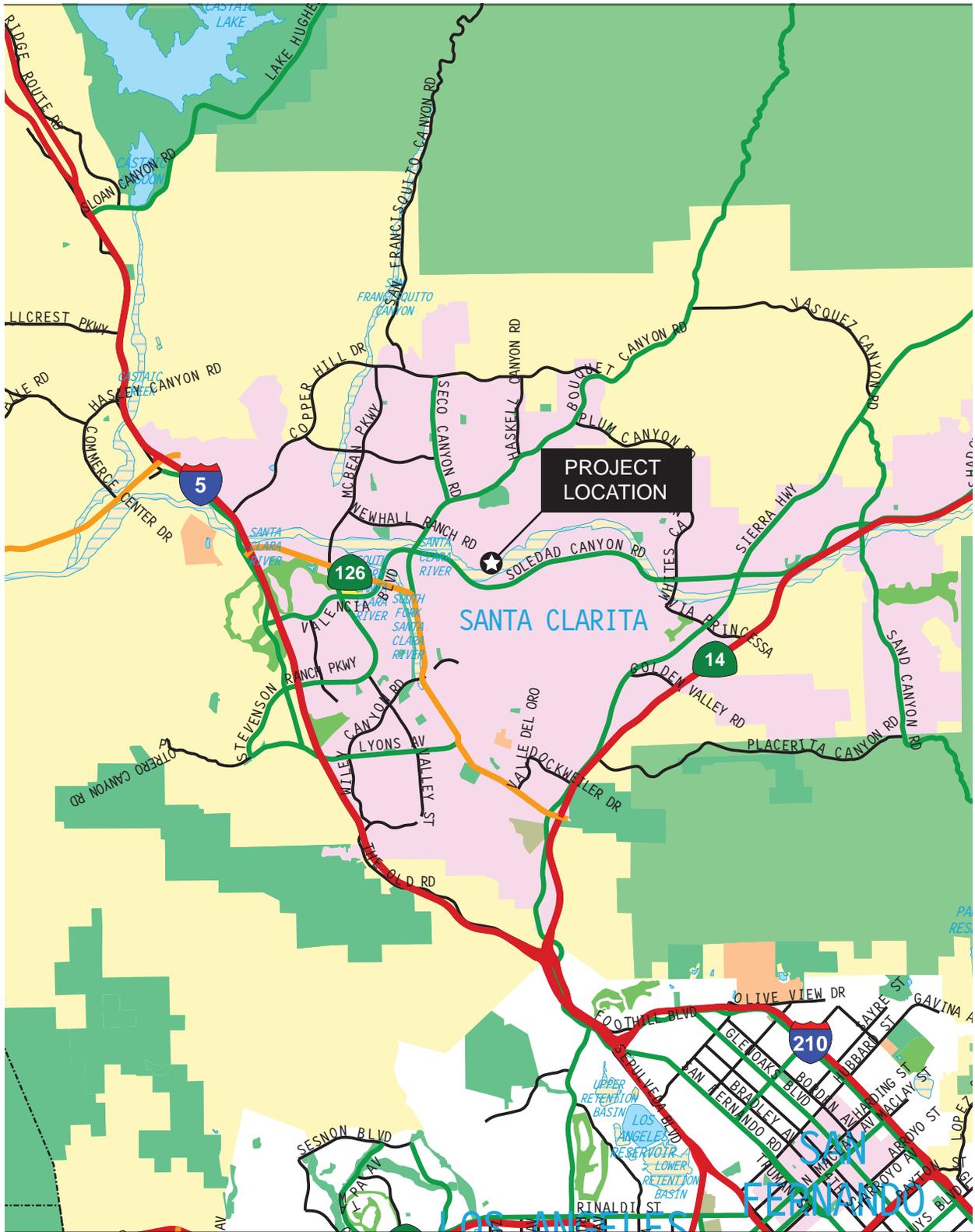


Figure 1-2
Vicinity Map

1.2 PROJECT BACKGROUND

Project Location

The proposed Golden Valley Road Bridge Project is located entirely within the City of Santa Clarita and would entail the construction of a bridge structure over the Santa Clara River. The bridge would connect Soledad Canyon Road and the newly extended Newhall Ranch Road (Figure 1-3). The northern terminus of the proposed action would be the easternmost extent of Newhall Ranch Road, which is currently under construction to the northwest of the project site. Grading for the majority of Newhall Ranch Road is complete and construction is anticipated to conclude between October 2007 and April 2008. The southern terminus of the proposed action would lie at the northernmost extent of the Golden Valley Road/Soledad Canyon Road interchange, which was recently completed and was opened for public access in late 2005. Construction of the Golden Valley Road bridge would take approximately 18 months.

Although the majority of the surrounding land is currently vacant, the area will be developed in the future. Newhall Land Company constructed Riverpark, a residential and commercial development of over 1,000 dwelling units and 16,000 square feet of commercial space. Riverpark is located immediately northwest of the proposed bridge. Additionally, an existing mobile home park is located southwest of the project site, and utility lines run roughly north-south, parallel to the bridge alignment and separating the bridge from a mixed commercial/industrial development to the west.

Project History

The trend of past growth in Santa Clarita is anticipated to continue into the foreseeable future. According to the U.S. Census Bureau, the current population of Santa Clarita is 168,253 residents. The Southern California Association of Governments (SCAG) projects that the population will increase to 231,846 by 2030. The number of households is likewise anticipated to increase from 50,887 in 2004 to 82,806 by 2030, an average annual growth rate of 2.09 percent. This compares to average annual growth rates for the



Source: City of Santa Clarita 2002, 2005; FEMA 2006

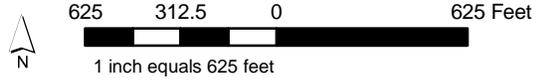


Figure 1-3
Project Location Map

County of Los Angeles and SCAG region as a whole of 1.04 and 1.40 percent, respectively (SCAG 2004).

Current traffic demand in the project area meets or exceeds roadway capacity for many of the arterial roadways. Traffic demand is anticipated to increase over the next few years and a number of intersections would be expected to deteriorate to unacceptable LOS in the long term.

The proposed project is the construction of a bridge structure over the Santa Clara River which is one of six components planned or under construction that would comprise, along with previously completed roadway segments, what is known as the Cross Valley Connector (CVC). The CVC is an 8.5-mile roadway through Santa Clarita that would provide a cross-town connection between Interstate 5 (I-5) and State Route 14 (SR 14). The CVC segments and their status as of August 2007 are identified below and shown in Figure 1-4.

- I-5/State Route 126 (SR 126) interchange improvements – complete.
- Newhall Ranch Road from I-5 to Copper Hill Drive/Rye Canyon Road – complete; processing closeout with Caltrans Local Assistance.
- Newhall Ranch Road from Bouquet Canyon Road to north of the Santa Clara River – under construction.
- Golden Valley Road Bridge over Santa Clara River – the proposed action and the subject of this Environmental Assessment (EA).
- Golden Valley Road/Soledad Canyon Road interchange – complete, processing closeout with Caltrans Local Assistance.
- Golden Valley Road from SR 14 to Sierra Highway – complete.
- SR 14/Golden Valley Road bridge – planned bridge widening over SR 14 to be conducted by developer as condition of project approval, estimated design by spring 2008 and construction by the end of 2008.

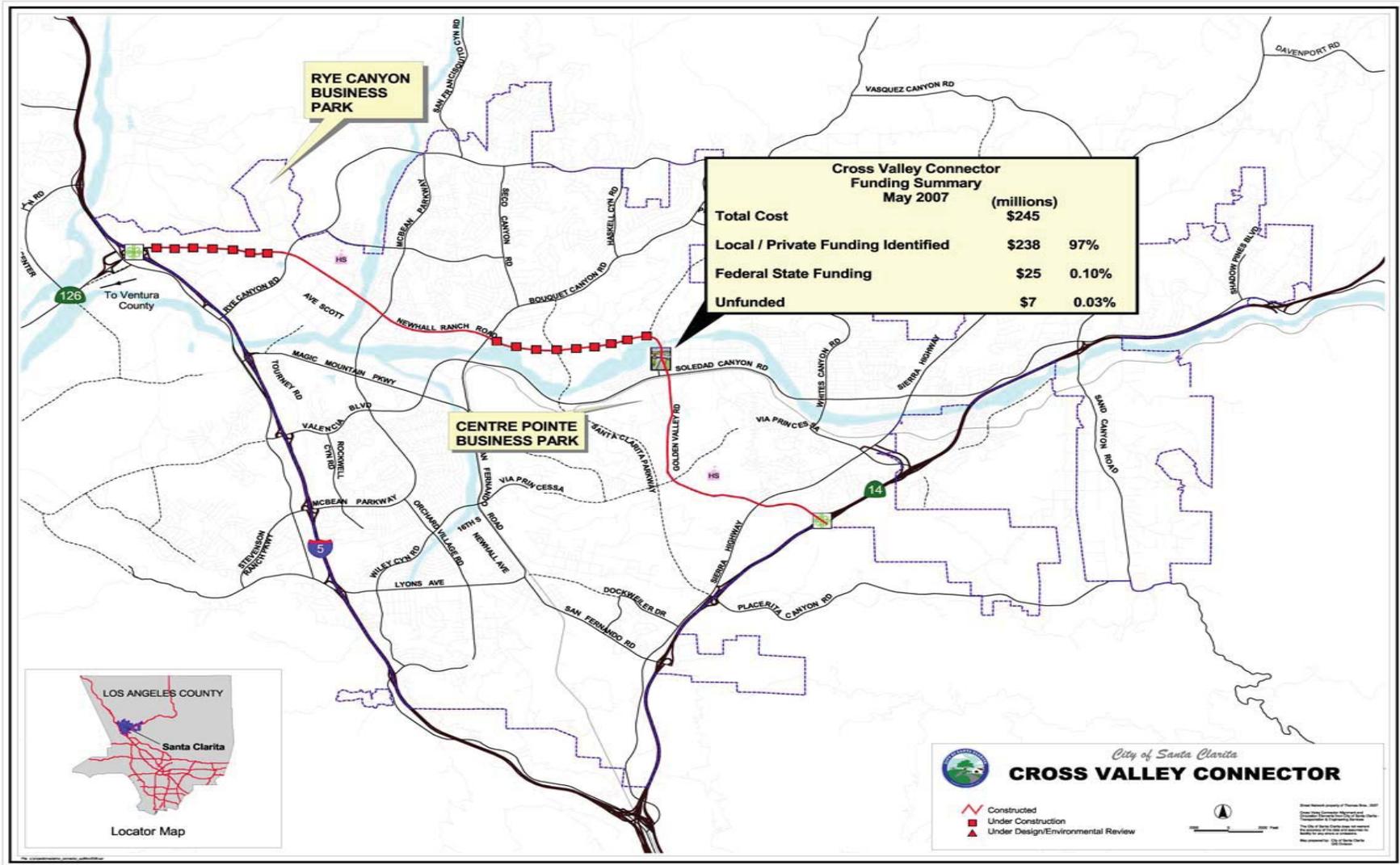


Figure 1-4
Cross Valley Connector Components

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Golden Valley Road Bridge
City of Santa Clarita

The need for a CVC between I-5 and SR 14 has been identified in traffic studies since before the incorporation of Santa Clarita. In the 1980s, Caltrans studied the extension and realignment of SR 126 as the Cross Valley Freeway/Highway or Expressway. The Caltrans studies were the subject of much discussion between the City and various community-interest and neighborhood groups. As a result, some alignments for the road were rejected based on this public input, and the freeway concept was ultimately rejected by the City. However, the Caltrans study and other studies proved valuable over the years in determining feasible alignments across Santa Clarita for the CVC.

1.3 PROJECT PURPOSE AND NEED

Purpose

The purpose of the proposed project is to reduce traffic congestion along Soledad Canyon Road and Bouquet Canyon Road as an integral component of the CVC Corridor. The project would provide an alternative east-west route through Santa Clarita, eliminating out-of-direction travel and improving interregional travel through increased east-west connectivity. The completion of the proposed bridge and the CVC project would accomplish these objectives.

- Complete the missing segment to an additional east-west transportation corridor across the Santa Clara River by adding a bridge as specified in the City of Santa Clarita's General Plan;
- Improve local access to commercial and industrial areas within Santa Clarita and provide congestion relief in order to improve traffic flow;
- Reduce out-of-direction travel and improve interregional travel by improving east-west mobility.

Need

The proposed Golden Valley Road Bridge Project is needed to complete a critical segment of the CVC Corridor, which is included in the Santa Clarita General Plan (General Plan) Circulation Element. The CVC is planned to be an arterial east-west route

through the Santa Clarita Valley that would increase regional capacity by connecting I-5/SR 126 in the west to SR 14 in the east. These proposed and planned features would improve patterns of circulation, movement of people and goods, and access control in the area. They would also have an important role in relieving congestion and accommodating the rate of population and employment growth being experienced in the Valley. The current east-west routes over the Santa Clara River currently have insufficient capacity for existing and forecasted traffic. The Final Traffic Report for the Golden Valley Road and Newhall Ranch Road projects is dated May 5, 2005. The existing traffic data was analyzed and Year 2005 traffic volumes were generated. Year 2030 traffic forecasts were developed by reviewing existing and future traffic demand forecasts. Traffic performance is classified by Level of Service (LOS), designated as LOS A through LOS F and are described in Table 1-1. At signalized intersections, LOS A is defined as optimal conditions with little congestion; LOS F is defined as failure, when incoming traffic exceeds the capacity of the intersection. The City has identified LOS D or better as acceptable.

**Table 1-1
Street Segment Level of Service Threshold Descriptions**

Level of Service	Technical Descriptors
A	Highest quality of service. Free traffic flow, low volumes and densities. Little or no restriction on maneuverability or speed. No delays.
B	Stable traffic flow, speed becoming slightly restricted. Low restriction on maneuverability. No delays.
C	Stable traffic flow, but less freedom to select speed, change lanes, or pass. Density increasing. Minimal delays.
D	Approaching unstable flow. Speeds tolerable, but subject to sudden and considerable variation. Less maneuverability and driver comfort. Minimal delays.
E	Unstable traffic flow with rapidly fluctuating speeds and flow rates. Short headways, low maneuverability, and low driver comfort. Significant delays.
F	Forced traffic flow. Speed and flow may drop to zero with high densities. Considerable delays.

Source: Caltrans 2007

Present Traffic

Under present (2005) traffic conditions, one of the analyzed intersections in the project vicinity operates at unacceptable conditions. As shown in Table 1-2, the Bouquet Canyon Road/San Fernando Road/Soledad Canyon Road/Valencia Boulevard intersection operates at LOS F during the PM peak hour.

**Table 1-2
Level of Service Calculations – Existing Conditions**

Intersection	Weekday AM Peak Hour	Weekday PM Peak Hour
	V/C – LOS	V/C – LOS
Bouquet Canyon Road/Newhall Ranch Road	0.880 D	0.830 D
Bouquet Canyon Road/San Fernando Road/Soledad Canyon Road/Valencia Boulevard	0.760 C	1.040 F

Source: Katz, Okitzu & Associates 2005

Traffic Forecasts for No Build and Build Alternatives

The proposed bridge would provide a connection between the extended Newhall Ranch Road and Golden Valley Road. The No Build and Build traffic analyses demonstrate the redistribution of east-west traffic and the reductions in roadway volumes and intersection congestion.

Traffic Volumes

At present, east-west travel through the project vicinity occurs on Bouquet Canyon Road, northwest of Newhall Ranch Road, and on Soledad Canyon Road, south of Newhall Ranch Road. Table 1-3 summarizes existing and future traffic volumes for No Build and Build scenarios. Implementation of the proposed project would allow through travel on Newhall Ranch Road, resulting in reduced traffic volumes and improved intersection performance on Bouquet Canyon and Soledad Canyon Roads. Peak hour traffic volume reductions on Bouquet Canyon Road would range from approximately 6 to 21 percent; reductions on Soledad Canyon Road would range from approximately 15 to 39 percent; see Table 1-1.

**Table 1-3
No Build and Build Roadway Volumes**

Roadway Segment	Direction	Existing Traffic Volume (2005) (vehicles/hour)	Future Traffic Volume Without Project (2030) (vehicles/hour)	Future Traffic Volume With Project (2030) (vehicles/hour)	Approximate Percentage Reduction in Volume
AM peak hour					
Bouquet Canyon Rd.					
Newhall Ranch Rd. to Santa Clarita Pkwy.	WB	3,200	2,800 to 3,400	2,400 to 3,200	6 to 14 %
	EB	1,000	1,200 to 1,300	1,100 to 1,200	8%
East of Santa Clarita Pkwy.	WB	n/a	3,900	3,300	15%
	EB	n/a	1,200	1,100	8%
Soledad Canyon Rd.					
San Fernando Rd. to Santa Clarita Pkwy.	WB	2,700	2,500 to 2,600	2,000 to 2,200	15 to 20 %
	EB	1,500	1,300	800 to 900	31 to 39 %
East of Santa Clarita Pkwy.	WB	n/a	2,700	2,300	15%
	EB	n/a	1,700	1,100	35%
PM peak hour					
Bouquet Canyon Rd.					
Newhall Ranch Rd. to Santa Clarita Pkwy.	WB	1,700	1900	1,600	16%
	EB	3,400	2800 to 3,500	2,200 to 3,100	11 to 21 %
East of Santa Clarita Pkwy.	WB	n/a	2,100	1,800	14%
	EB	n/a	3,800	3,300	13%
Soledad Canyon Rd.					
San Fernando Rd. to Santa Clarita Pkwy.	WB	2,000	1,700 to 2,100	1,200 to 1,300	29 to 38 %
	EB	2,700	2,700	2,100 to 2,200	19 to 22 %
East of Santa Clarita Pkwy.	WB	n/a	2,500	1,600	36%
	EB	n/a	3,100	2,400	23%

Traffic volumes rounded to the nearest hundred.
Source: KOA 2005

Intersection Performance

Future conditions are based upon Year 2030 No Build and Build scenarios (see Table 1-4 and Table 1-5). Under No Build conditions, the Bouquet Canyon/Santa Clarita Parkway intersection would operate at LOS E in the PM peak hour, and the Bouquet Canyon Road/San Fernando Road/Soledad Canyon Road/Valencia Boulevard intersection would operate at LOS E or F during both peak hours. With implementation of the project and reduction of volumes on Bouquet Canyon Road and Soledad Canyon Road, both of these intersections would operate at an acceptable LOS D or better.

**Table 1-4
Level of Service Calculations – No Build Conditions (Year 2030)**

Intersection	Weekday AM Peak Hour	Weekday PM Peak Hour
	V/C – LOS	V/C – LOS
Bouquet Canyon Road/Santa Clarita Parkway	0.810 D	09.60 E
Bouquet Canyon Road/Newhall Ranch Road	0.880 D	0.810 D
Santa Clarita Parkway/South of Soledad Canyon Road (Grade Separated)	0.610 B	0.730 C
Soledad Canyon Road/East of Santa Clarita Parkway (Grade Separated)	0.640 B	0.860 D
Soledad Canyon Road/Santa Clarita Parkway (at grade)	0.820 D	0.850 D
Bouquet Canyon Road/San Fernando Road/Soledad Canyon Road/Valencia Boulevard	0.920 E	1.070 F

Source: Katz, Okitsu & Associates 2005

**Table 1-5
Level of Service Calculations – With Proposed Action (Year 2030)**

Intersection	Weekday AM Peak Hour	Weekday PM Peak Hour
	V/C – LOS	V/C – LOS
Bouquet Canyon Road/Santa Clarita Parkway	0.720 C	0.870 D
Bouquet Canyon Road/Newhall Ranch Road	0.840 D	0.830 D
Santa Clarita Parkway/Newhall Ranch Road	0.750 C	0.800 C
Golden Valley Road/Newhall Ranch Road	0.590 A	0.940 E
Santa Clarita Parkway/South of Soledad Canyon Road (Grade Separated)	0.510 A	0.630 B
Soledad Canyon Road/East of Santa Clarita Parkway (Grade Separated)	0.540 A	0.690 B
Soledad Canyon Road/Santa Clarita Parkway (at grade)	0.820 D	0.740 C
Soledad Canyon Road/Valley Center Drive	0.720 C	0.640 B
Golden Valley Road/Valley Center Drive	0.640 B	0.580 A
Bouquet Canyon Road/San Fernando Road/Soledad Canyon Road/Valencia Boulevard	0.790 C	0.900 D

Source: Katz, Okitsu & Associates 2005

1.4 PROJECT ALTERNATIVES

Two alternatives are under consideration in this document: the Build Alternative (Alternative 1) and the No Build Alternative (Alternative 2). The No Build Alternative is required by NEPA. The environmental effects associated with the No Build Alternative are discussed in Chapter 2 of this document. Project approval or selection of the No Build Alternative will not be made until after the full evaluation of environmental impacts, full consideration of public hearing comments, and approval of this document.

Alternative 1 – Build Alternative

The City of Santa Clarita, with oversight from Caltrans, is proposing to construct a 1,100-foot-long bridge over the Santa Clara River. The proposed typical section of the bridge would include a six-lane roadway and sidewalk. A 16-foot median between the lanes would not be constructed as part of the project but may be constructed in the future. Two-way bicycle lanes would be provided on the outside edge of the western side of the bridge and connect to a bicycle route. The location and design of the bicycle lanes is consistent with all major thoroughfares in the City and part of a city-wide layout for bicycle paths. The total curb-to-curb width of the bridge would be approximately 80 feet with a total right-of-way (ROW) width of approximately 120 feet (see Figures 1-5 and 1-6). ROW needed would be donated by Newhall Land Company. The proposed bridge would have an architectural design for the exterior sides which reflects an image of an oak tree and rolling hills.

The proposed project would connect to Newhall Ranch Road, located northwest of the project site, and Golden Valley Road, south of the project site. Newhall Ranch Road is currently under construction by others and is not part of the proposed project. The proposed project would complete the CVC Corridor, a series of projects sponsored by the City to provide an east-west travel route connecting SR 14 and I-5 across the Santa Clarita Valley. As indicated in Figure 1-1, the northern terminus of the proposed project would be the easternmost extent of Newhall Ranch Road. Grading for the majority of Newhall Ranch Road is complete and construction is anticipated to be complete between October 2007 and April 2008. The southern terminus of the proposed project would lie at the northernmost extent of the Golden Valley Road/Soledad Canyon Ranch interchange, which has recently been completed but is not yet open for public access.

Alternative 2 – No Build Alternative

The No Build Alternative would mean that the proposed Golden Valley Road bridge would not be constructed, and the current local and regional circulation system would remain unimproved. Thus, the proposed alternate east-west route between Soledad

Canyon Road and Newhall Road would not be established, and an essential portion of the CVC Corridor would not be completed. In addition, a key link of the CVC Corridor from SR 14 to I-5, across the central Santa Clarita Valley, would not be established.

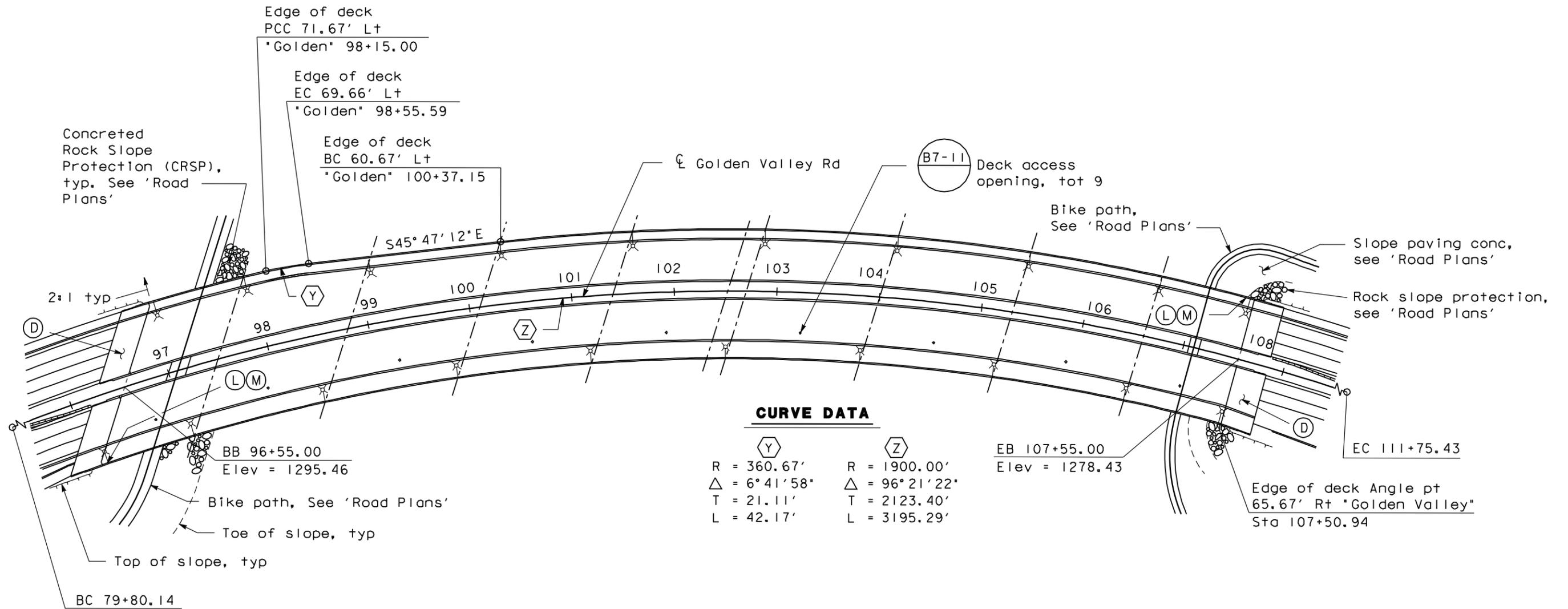
1.5 PERMITS AND APPROVALS NEEDED

Natural River Management Plan

On November 30, 1998, the Army Corps of Engineers (ACOE), California Department of Fish and Game (CDFG), and California Regional Water Quality Control Board (RWQCB) approved the Natural River Management Plan (NRMP) for the Santa Clara River. The NRMP is a long-term master plan that allows construction of various infrastructure improvements on lands adjacent to the Santa Clara River and portions of two of its tributaries. The NRMP covers the reaches of the Santa Clara River from Castaic Creek to 0.5 mile east of the Los Angeles Department of Water and Power Aqueduct. Portions of San Francisquito Creek and the Santa Clara River South Fork are also included in the NRMP. The proposed Golden Valley Road bridge would be located within a portion of the river subject to the NRMP, and the project is listed as one covered by the NRMP.

The NRMP and the corresponding certified Environmental Impact Statement/Environmental Impact Report (EIS/EIR)¹ analyze impacts associated with implementation of various infrastructure improvements (bank stabilization, roads, bridges, utility crossings, storm drain outlets, etc.) along and within portions of the Santa Clara River adjacent to Newhall Land Company properties, including the Riverpark project site.

¹ California Department of Fish and Game and U.S. Army Corps of Engineers, *Final Environmental Impact Statement/Environmental Impact Report 404 Permit and 1603 Streambed Alteration Agreement for Portions of the Santa Clara River and its Tributaries (1998)*



Source: Dokken Engineering 2007

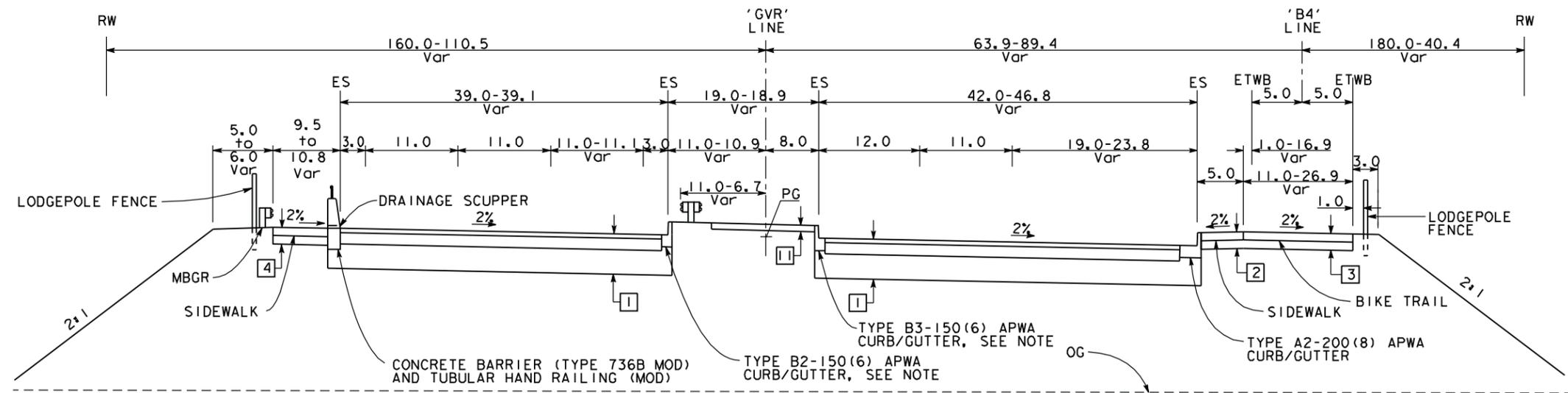
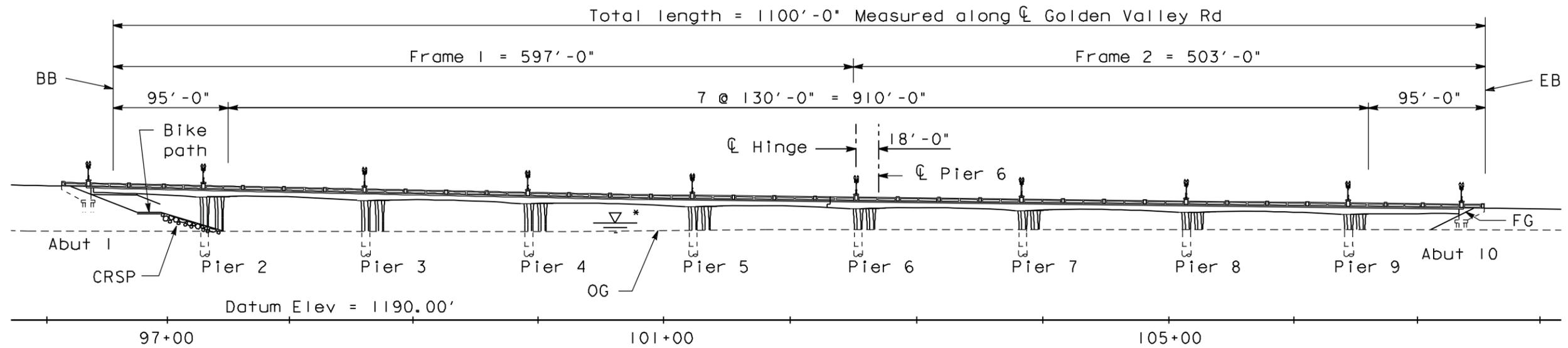


NOT TO SCALE

Golden Valley Road Bridge EA
City of Santa Clarita

Figure 1-5
Plan of the Proposed Bridge

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Source: Dokken Engineering 2007



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Golden Valley Road Bridge EA
City of Santa Clarita

Figure 1-6
Profile and Typical Section of the Proposed Bridge

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In connection with this approval, the following permits were issued by the following agencies:

- ACOE Permit No. 94-00504-BAH under Section 404 of the federal Clean Water Act. Section 404 of the federal Clean Water Act allows for certain activities that result in the discharge of fill or dredged materials into “waters of the U.S.” or, in this case, the Santa Clara River. Prior to issuing this permit, the ACOE had completed an endangered species consultation (pursuant to Section 7 of the Federal Endangered Species Act [FESA]) with the U.S. Fish and Wildlife Service (USFWS).
- CDFG 1603 Streambed Alteration Agreement No. 5-502-97 and Incidental Take Permit No. 2081-1998-49-5. The Streambed Alteration Agreement allows for activities that alter the “...natural flow or change the bed, channel, or bank of the river...” The Incidental Take Permit applies to all state listed species pursuant to Fish and Game Code Section 2081(b).
- RWQCB Los Angeles Region – Order No. 99-104 related to waste discharge associated with the improvements included in the NRMP.

In 2001, a southwestern arroyo toad (*Bufo californicus*) was discovered within the NRMP boundary – west of the confluence of San Francisquito Creek and the Santa Clara River, approximately 3 miles west of the proposed project. This necessitated additional consultation under Section 7 of the FESA with the ACOE and USFWS. Some areas of the Santa Clara River were excluded from this consultation, as they lacked the necessary habitat requirements for the arroyo toad. This consultation, along with the preparation of a Biological Opinion (dated November 15, 2002), resulted in modification of the 1998 ACOE Section 404 Permit (issued June 23, 2003) to include provisions for the protection of the arroyo toad in the affected NRMP area. A Biological Opinion is the document that states the opinion of the USFWS as to whether or not a proposed action is likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat.

Permits Required

To implement the proposed project, the City may need to comply with a variety of additional environmentally related federal and state regulatory and approval processes. In some instances, a finding or determination on the part of a reviewing agency concludes the process, while in other instances, an actual permit is issued. Because the NRMP EIR has been completed and certified, and the proposed project falls within the description of allowable projects per the NRMP, the City has already satisfied the provisions for Sections 404, 401, and 1600 permits from the ACOE, RWQCB, and CDFG, respectively, under the NRMP. The remaining regulatory processes the project would need to comply with are discussed below.

- **Executive Order 11990 – Protection of Wetlands** – The Golden Valley Road bridge would affect wetlands in the Santa Clara River. Consequently, it would be necessary to make a finding that (1) there is no practicable alternative to construction, and (2) that the proposed action includes all practicable measures to minimize impacts to wetlands resulting from such use.
- **General Bridge Act – Regulation of Bridges Crossing Navigable Waters** – The proposed action would entail construction of a bridge crossing a navigable waterway. As such, a Bridge Permit must be applied for and obtained from the U.S. Coast Guard.
- **Executive Order 11988 – Floodplain Management** – As the project involves encroachment in a floodplain, current procedures require that a floodplain finding be made to comply with Executive Order 11988. The finding must be attached to the final environmental documentation. The construction of the proposed bridge would encroach upon and increase the elevation of the existing floodplain immediately upstream of the proposed bridge; however, the increase would not exceed the Federal Emergency Management Agency (FEMA) 100-year floodplain boundary. Section 2.6 describes floodplain effects in greater detail.

Although typically needed for such projects, a Section 7 consultation under the FESA would not be needed for the proposed bridge. As the federal lead agency for the Golden

Valley Road Bridge, Caltrans must ensure that project implementation "...is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of the habitat of such species." No federally endangered species were identified through biological surveys; consequently, a Section 7 consultation would not be required. Letters, summarizing the survey efforts and results, were forwarded to the USFWS in November 2006. Copies of this correspondence are included in Appendix A.

1.6 RELATED PROJECTS AND CUMULATIVE DEVELOPMENT

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

A definition of cumulative impacts under NEPA can be found in 40 CFR, Section 1508.7 of the Council on Environmental Quality Regulations. Table 1-6 includes projects in the vicinity of the proposed project that are planned, approved, or being constructed.

**Table 1-6
Related Projects in the Vicinity of the Proposed Project**

No.	Project Name	Location	Description	Status
1	Riverpark	Adjacent to Newhall Ranch Road, east of Bouquet Canyon Road	1,089 dwelling units and 16,000 square feet of commercial development	Rough grading
2	Gate King Industrial Park	South of San Fernando Road between Pine Street and Sierra Highway	Subdivision of 584 acres into 88 industrial lots for 4.2 million square feet of industrial building and dedication of 239 acres of open space to the City	Approved
3	West Creek		2,545 dwelling units, 180,000 square feet of commercial retail, 10-acre elementary school, 6.4 acres of recreational facilities	County development; in progress
4	Golden Valley Ranch	Southwest of Santa Clarita, east of SR 14 and north of Placerita Canyon Road	1,311 acres of planned community – 488 single-family, 2 commercial lots, 1 school lot, and 1 fire station site	In progress; fine grading and construction
5	Porta Bella or Whitaker-Bermite (partial)	South of Soledad Canyon Road, east of Circle J Ranch area	2,911 dwelling units and 92 acres of commercial development on 996 total acres	Approved
6	Tesoro del Valle	North of Copper Hill Drive, west of McBean Parkway	1,791 dwelling units, 10-acre commercial center, and elementary school	County development
7	Synergy Ermine Street	West of Ermine Street, east of Riverpark site and north of the Santa Clara River	116.71-acre residential site/ 499 residential units, YMCA site, and school site	Approved by City Council
8	Valencia Town Center	East of McBean Parkway, north of Valencia Boulevard, south of Magic Mountain Parkway and west of Citrus Street	540,000-square-foot expansion of existing shopping mall	In entitlement review
9	Soledad Marketplace	West of Golden Valley Road and south of Golden Triangle Road	100,000-square-foot commercial shopping center	Under construction
10	Bridgeport Marketplace	Northeast corner of Newhall Ranch Road and McBean Parkway	130,000-square-foot commercial shopping center	Under construction
11	Soledad Townhomes	North side of Soledad Canyon between Bouquet Valley Road and Golden Valley Road	409 attached multi-family condominiums and 10,000 square feet of commercial development	Approved
12	Henry Mayo Newhall Memorial Hospital	23845 and 23929 McBean Parkway	Addition of 694,659 square feet to the medical campus	Planning/EIR preparation

No.	Project Name	Location	Description	Status
13	Downtown Newhall Specific Plan	Downtown Newhall		Approved and adopted
14	The Master's College	21726 Placerita Canyon Road	Master plan for future development of campus	Planning/EIR preparation
15	Valuzat Residential project	Northwest corner of Golden Valley Road and Sierra Highway	Subdivision for nine single-family homes	Planning preparation

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Chapter 2

Affected Environment, Environmental Consequences, and Mitigation

As part of the scoping and environmental analysis conducted for the action, the environmental issues described in Table 2.0-1 were considered but no adverse effects were identified. Consequently, there is no further discussion regarding these issues in this document.

**Table 2.0-1
Environmental Issues Excluded from Further Evaluation**

Issue Area	Reason for Exclusion
Farmlands/Agricultural Lands	In accordance with the requirements of the Farmland Protection Policy Act (1981) for actions involving a federal action, a Farmland Conversion Impact Rating Form (Form AD-1006) was submitted to the Natural Resource Conservation Service (NRCS). Based on the most recent survey of important farmlands for the County of Los Angeles, the NRCS concluded that no areas of prime farmland, farmland of statewide importance, unique farmland, or farmland of local importance are located within the limits of the proposed bridge. As Santa Clarita is becoming more urbanized, agriculture is not expected within the bridge area or vicinity in the future.
Cultural Resources	The Historic Property Survey Report for the Cross Valley Connector Project, which was prepared in 2005 (EDAW 2005) and approved by the California Department of Transportation in April 2005, identified the Area of Potential Effects (APE) for this action as the area within which it is anticipated that bridge construction and staging would be confined. The report found no cultural resources in the APE.
Paleontology	There are no known paleontological sites in the vicinity of the proposed action. Given the degree of disturbance from the meandering river course, the likelihood of paleontological resources would be minimal.
Noise	A noise analysis screening for the Golden Road Valley Road Bridge in August 2006 (EDAW 2006d). The screening showed no potentially impacted noise receivers adjacent to or near the action area. Therefore, no further analysis was necessary.

Chapter 2 is divided into three broad topics, discussing the human, physical, and biological environment. These topics are evaluated under the following headings:

Human Environment	Physical Environment	Biological Resources
<ul style="list-style-type: none">• Land Use• Community Impacts• Utilities/Emergency Services• Traffic and Transportation, Pedestrian and Bicycle Facilities• Visual/Aesthetics	<ul style="list-style-type: none">• Hydrology and Floodplain• Water Quality and Stormwater Runoff• Geology/Soils/Seismic/Topography• Hazardous Waste and Materials• Air Quality	<ul style="list-style-type: none">• Natural Communities• Wetlands and Waters of the U.S.• Plant Species• Animal Species• Threatened and Endangered Species• Invasive Species

For each environmental issue in Chapter 2, the analysis and discussion is organized into four subsections as described below:

- *Regulatory Setting* – This subsection provides a summary of the federal, state, and local regulatory parameters pertinent to each topic area.
- *Affected Environment* – This subsection describes the physical environmental conditions in the vicinity of the proposed action. The environmental setting establishes the baseline conditions, which determines whether specific action-related impacts are adverse.
- *Environmental Effects* – This subsection provides detailed information on the environmental effects of the proposed action during construction and operations phases, and analyzes the level of significance of the proposed action’s effects.
- *Avoidance, Minimization, and/or Mitigation Measures* – This subsection identifies potentially feasible avoidance, minimization, and/or mitigation measures that would avoid or substantially reduce adverse action-related impacts.

HUMAN ENVIRONMENT

2.1 LAND USE

2.1.1 Regulatory Setting

City of Santa Clarita General Plan

The General Plan, adopted on June 26, 1991, provides the framework for development in Santa Clarita. The Land Use and Circulation Elements are particularly relevant to the proposed action and are discussed below.

Land Use

The Land Use Element of the General Plan designates the locations of commercial, industrial, and residential uses throughout the City. It also provides policy statements that guide the appropriate development of infrastructure and public services and facilities to support the individual communities within the City, including Newhall, Valencia, Saugus, Canyon Country, Placerita Canyon, and Castaic. The proposed Golden Valley Road Bridge Project is located in the communities of Canyon Country and Newhall. Land uses are described in several categories: Residential, Commercial, Industrial, Public Facilities, Park, Open Space, College, Oil and Mining, and Vacant.

The Land Use Element provides the City's policy regarding long-range and immediate considerations regarding future development. Several policy statements from this element are relevant to the proposed action, including the following.

Policy 1.8: Encourage the concept of traffic mitigation agreements that provide a variety of transportation options including but not limited to automobiles, transit, commuter trains, light rail, and bicycle pathways.

Policy 2.11: Provide for the reservation of adequate land to meet projected institutional and infrastructure needs.

Policy 2.12: Promote the retention of open space to preserve significant ridgelines, to provide land use buffers, and to provide for both public safety and oak tree preservation.

Policy 5.2: Ensure that new development, grading, and landscaping are sensitive to the natural topography and major landforms in the planning area.

Policy 5.3: New development must be sensitive to the significant ecological areas (SEAs) through utilization of creative site planning techniques to avoid and minimize disturbance of these and other sensitive areas.

Policy 5.6: Preserve and protect oak and mature specimen size trees and other endangered indigenous plant and animal communities, from excessive and incompatible development.

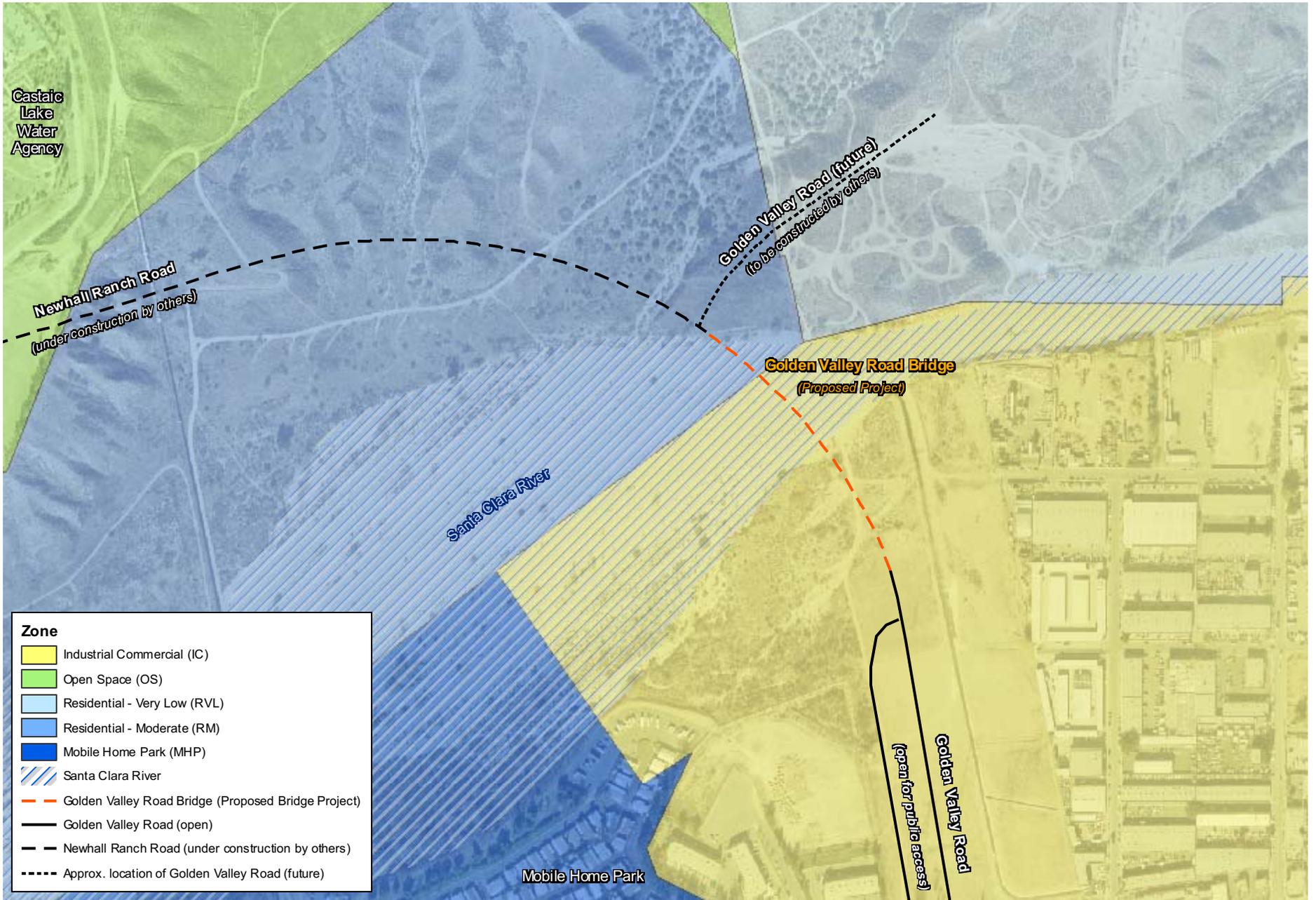
Policy 5.8: Preserve and protect designated wildlife corridors from undue encroachment and disruption.

Two specific land use designations partially cover the proposed project area, including an SEA and a Potential Wildland Fire Hazard Area. These are discussed below.

Santa Clarita Municipal and Unified Development Code (MUDC)

The Santa Clarita MUDC is another vehicle by which land use and development are regulated throughout the City through the use of ordinances and zones covering specific areas of land. This development code is the means by which the general plan policies, including the land use and circulation policies outlined above, are implemented.

Figure 2.1-1 indicates current zoning within and surrounding the proposed project site. The northern 260 feet of the proposed bridge would be located in a Residential Moderate zone, which permits attached dwellings, such as duplexes, triplexes, and fourplexes with densities of up to 11.0 dwelling units per acre, and mobile home parks. The southern 850 feet of the proposed bridge is in an Industrial Commercial zone. This zone permits a



Source: City of Santa Clarita, 2002, 2005

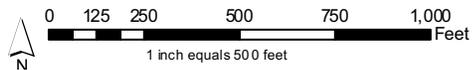


Figure 2.1-1
Surrounding Land Use Zones

limited range of low patronage commercial uses, quasi-industrial, and light industry (MUDC §17.11.020).

Northeast of the bridge site, a Residential Very Low zone encourages large custom single-family homes with a maximum density of one dwelling unit per gross acre, with the intention of retaining the rural character of a number of neighborhoods (MUDC §17.11.020). Southwest of the bridge site lies a Mobile Home Park zone (MUDC §17.16.010), which encourages the creation of new mobile home parks and the preservation of existing mobile home parks. Farther west and north, an Open Space zone is designated to promote open space for recreational use and the protection of natural resources, and to protect areas of fire, geologic, seismic, or flood hazard by restricting intensive development (MUDC §17.11.020). The Open Space zone permits low density and temporary accommodation, horticulture, and recreational facilities.

Significant Ecological Area (SEA)

The County of Los Angeles General Plan (County of Los Angeles 1993) provides guidelines for the future resource allocation across the county. The document provides the regulatory framework for SEAs, a designation that provides protection in conjunction with the Land Use and Open Space Elements of the County's General Plan. The Santa Clara River is designated as a natural wild river, as identified in SEA Number 23 by the County of Los Angeles. A portion of the Santa Clara River is designated as Open Space in the City's General Plan. However, the areas within the river and adjacent to the proposed bridge are not open to the public. No other recreation/open space areas are designated in the vicinity of the proposed project.

Wildland Fire Hazard Area

The Santa Clarita General Plan Safety Element designates the project site as a Potential Wildland Fire Hazard Area. Wildfire potential depends upon several factors, including topography, vegetation, and climate. Topography can affect the spread of fires, as well as the ability to fight fires, with fires in steeply sloped areas generally spreading more quickly. Native vegetation such as chaparral and sage provide highly flammable fuel that

allows fire to spread easily. These plant species naturally regenerate after a fire, making periodic wildfires a normal cycle of the ecology of these areas. Since the proposed bridge is located in an area adjacent to hillsides and characterized by substantial amounts of native vegetation, wildfire is a substantial concern.

Circulation

A Caltrans study to extend SR 126 as a limited access eight-lane expressway through the Valley prompted the City to evaluate the General Plan's Circulation Element. In 1992, the City Council rejected two proposed alignments for SR 126 and directed that this roadway be removed from the General Plan (City 1997a, p. C-29). A number of studies and public meetings were conducted between 1992 and 1997, concluding that a new east-west route through the Santa Clarita Valley would be needed to avoid the deterioration of traffic conditions to unacceptable LOS, which culminated with the development of seven alternatives (City 1997a, p. ES-1). This led to the preparation of a Circulation Element Amendment (City 1997a) and evaluation of the seven alternatives in the Circulation Element Amendment Final EIR (City 1997b).

The Master Plan of Arterial Highways in the Circulation Element Amendment identifies the extension of Golden Valley Road (including the proposed bridge project) as a major highway from SR 14 to Newhall Ranch Road (City 1997a, p. C-29). The Circulation Element Update indicates that the major highway designation would include a divided roadway of at least six lanes, with no on-street parking (City 1997a, p. C-31).

A stated goal of the Circulation Element Amendment is the provision of a safe and efficient circulation system for the City. The following policies in the Circulation Element Amendment address this concern:

Policy 1.1: Improve circulation facilities to provide improved levels of service and standards of safety over current traffic operations with a priority to improve local traffic patterns (City 1997a, p. C-18).

Policy 1.2: Maintain appropriate levels of service at all intersections in the City during peak hours to ensure that traffic delays are kept to a minimum (City 1997a, p. C-19).

Policy 1.10: Limit the number of intersections and driveways on all major, secondary and limited secondary roadways to promote a safe, efficient and steady flow of traffic (City 1997a, p. C-19).

Policy 1.17 The City will maintain adequate access to state highways and freeways serving the Santa Clarita planning area including Interstate 5 on the West, State Route 14 on the Southeast, and State Route 126 on the Northwest (City 1997a, p. C-20).

SCAG Regional Comprehensive Plan and Guide

As the southern California region's Metropolitan Planning Organization and Regional Transportation Planning Agency, SCAG is responsible for regional planning concerns related to overall growth and traffic management.

The SCAG Regional Transportation Plan (RTP) is a federally legislated regional planning document that outlines the transportation goals, objectives, and policies for all surface transportation modes (multi-modal planning) across the region. This regional planning document meets the requirements of the Clean Air Act. The RTP assesses overall population, housing, and employment growth trends across the region to determine appropriate strategic objectives for transportation capital investments. As such, the RTP aims to address mobility and congestion problems, to evaluate funding availability, to estimate costs of the planned action, and to meet air quality requirements.

The RTP is updated every 3 years to ensure consistency with population, housing, employment, and environmental trends; land-use forecasts; and technology changes. The SCAG 2004 RTP was completed in March 2004 and adopted in April 2004. Various amendments have been adopted since the RTP was adopted, most recently the Final 2004 RTP Administrative Amendment adopted by SCAG on March 1, 2007.

County of Los Angeles Santa Clarita Valley Area Plan

The Santa Clarita Valley Area Plan, adopted in February 1984 and updated in 1990, is a coordinated statement of public policy set out by the County of Los Angeles. The Plan covers the Valley, extending north into the Angeles National Forest, east past Agua Dulce, south to the I-5 and SR 14 intersection, and west to the Ventura County line. As such, the Plan covers the entire City of Santa Clarita. The Plan sets out policies designed to facilitate planning decisions pertinent to the Valley. Policies relevant to the proposed project include the following:

Land Use Element	Policy 9.1:	Encourage development of access throughout the Santa Clarita Valley. a. As development occurs in each community, appropriate links should be provided from residential areas to major destination points; e.g., employment, shopping, public facilities and services, recreation and entertainment.
Land Use Element	Policy 9.3:	Encourage development of transportation systems consistent with the plan.
Community Design Element	Policy 2.1:	Carefully integrate physical development in rural areas into the natural environmental setting.
Circulation Policy Element	Policy 1.7:	Implement an arterial network that will adequately serve the rural to urban, recreational, emergency, and everyday circulation needs of the Santa Clarita Valley.
Environmental Resources Management Element	Policy 2.1:	Protect identified resources in Significant Ecological Areas ... by appropriate measures including preservation, mitigation and enhancement.

One Valley, One Vision

The One Valley One Vision (OVOV) Valleywide General Plan covers 590 square miles, including the City of Santa Clarita with its communities of Canyon Country, Newhall, Saugus, and Valencia, and the County communities of Stevenson Ranch, Castaic, Val Verde, Acton, Agua Dulce, and the future Newhall Ranch. The OVOV is currently being created and is anticipated to conclude in late 2008 (pers. comm. Jason Smisko, City of Santa Clarita, May 1, 2007). The action will result in a General Plan and EIR for the Santa Clarita Valley Planning Area, designed to direct development over the coming 20 years. The plan will be administered by both the City of Santa Clarita and the County of Los Angeles.

2.1.2 Affected Environment

The bridge area is characterized by sparsely vegetated, sandy, gently undulating terrain, sloping down to the Santa Clara River floodplain. As the river only intermittently conveys water, the floodplain is largely composed of rocks, gravel, and riverine vegetation with occasional pools of water.

The Castaic Lake Water Agency (CLWA) water treatment plant is located northwest of the proposed bridge. Ridgelines northwest of the river and below the CLWA water treatment plant break the rolling topography of the vicinity. The historic Los Angeles Aqueduct, owned by CLWA, crosses the Santa Clara River 0.4 mile southwest (downstream) of the proposed bridge site. High voltage electrical lines parallel Golden Valley Road, passing 170 feet northeast of the southern end of the proposed bridge. The proposed bridge would not cross the high voltage lines. Other utilities include buried oil/gas pipelines.

An industrial park is located along Soledad Canyon Road, southeast of the proposed bridge. East of the bridge site are a recycling facility, supply yard, and industrial buildings. South of the Santa Clara River, a variety of commercial and residential land uses line Soledad Canyon Road. These include two mobile home parks to the southeast. Scattered commercial, residential, and mining exploration uses are located along each side of Soledad Canyon Road.

Two residential projects, the Riverpark and Keystone developments, are proposed outside the study area, but within the vicinity of the Golden Valley Bridge. The Riverpark development includes 1,089 dwelling units and 16,000 square feet of commercial development, while the Keystone development includes 499 dwelling units, a school, open space, and an industrial lot.

The nearest park to the bridge site is North Oaks Park, located approximately 1.6 miles to the east.

2.1.3 Environmental Effects

The following discussion evaluates potential impacts associated with the construction and long-term operation of the proposed action.

Alternative 1: Bridge Alternative

Construction Effects

Construction would not require any rezoning or land use changes of properties adjacent or in the vicinity of the project site; consequently, the bridge construction would have no effect on land use.

Operational Effects

Zoning: The proposed bridge would be surrounded by relatively undeveloped land and would traverse land currently under a variety of zoning designations; however, the bridge is included in the City's Circulation Element Amendment and thus is compatible with Citywide circulation objectives. No existing zoning classifications would be changed as a result of the bridge's operation.

Effect on Communities and Land Acquisition: The nearest residences are in the mobile home park, approximately 800 feet southwest of the bridge; the bridge would not traverse any existing communities. ROW for the bridge would be dedicated by Newhall Land Company. Acquisition of this ROW would not affect structures of human habitation, nor would displacement and relocation impacts be introduced.

Compatibility with Plans: The proposed bridge would be consistent with relevant plans and development documents, including the Land Use Element and Circulation Element Amendment in the City's General Plan, the Santa Clarita Municipal and Unified Development Code, the SCAG Regional Comprehensive Plan and Guide, the County of Los Angeles General Plan, and the County of Los Angeles Santa Clarita Valley Area Plan. The OVOV plan is still being completed, but there are no known conflicts from the proposed bridge with this plan. Consequently, the operational effects of the proposed Golden Valley Road Bridge Project would not adversely affect Land Use.

Alternative 2: No Build Alternative

Implementation of the No Build Alternative would result in the continued use of the site in its existing condition. The existing onsite land uses would remain, and the land use effects from roadway construction, as described above for the proposed bridge project, would not occur. The No Build Alternative would conflict with the City's Circulation Element Amendment, which identifies the proposed action as a necessary roadway improvement. The proposed Bridge Alternative has been identified as a necessity to alleviate LOS deterioration to unacceptable levels (see Section 2.4, Traffic and Transportation, Pedestrian and Bicycle Facilities). Conversely, the No Build Alternative would not address projected land use and transportation needs, would not meet the action's purpose and need, and would perpetuate the existing land use conflicts into the foreseeable future.

2.1.4 Avoidance, Minimization, and/or Mitigation Measures

There would be no adverse effects on land use as a result of the proposed Bridge Alternative; consequently, no avoidance, minimization, and/or mitigation measures are proposed. Although the No Build Alternative would not address the identified need to resolve land use conflict and improve circulation, the effects of the No Build Alternative would not be adverse and, as such, no avoidance, minimization, and/or mitigation measures are proposed.

2.2 COMMUNITY IMPACTS

2.2.1 Regulatory Setting

Community Character and Cohesion

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

Relocations

Caltrans' Relocation Assistance Program (RAP) is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 CFR Part 24. The purpose of RAP is to ensure that persons displaced as a result of a transportation action are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate impacts/injuries as a result of actions designed for the benefit of the public as a whole. All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 USC 2000d, et seq.).

Environmental Justice

All actions involving a federal action (funding, permit, or land) must comply with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President Clinton on February 11, 1994. This Executive Order directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal actions on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the

Department of Health and Human Services poverty guidelines. For 2006, this was \$20,000 for a family of four. The poverty threshold, according to the most recent data available, for a family of four is \$18,307.

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this action. Caltrans' commitment to upholding the mandates of Title VI is evidenced by its Title VI Policy Statement, signed by the Director (Appendix B).

2.2.2 Affected Environment

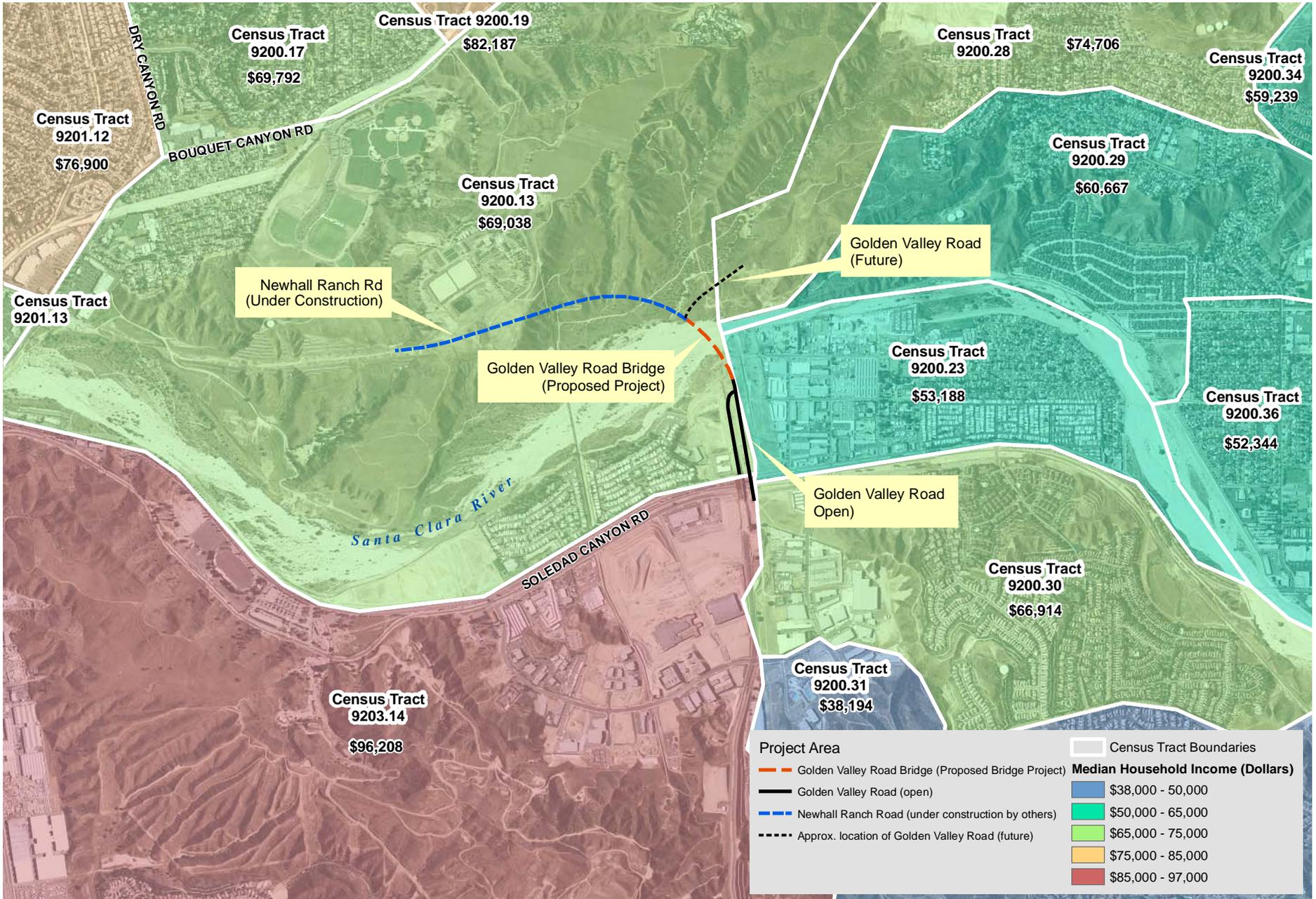
Income and Poverty

The poverty threshold in 2002 (the most recent year available) for a family of four, again is \$18,307 (U.S. Census Bureau 2003). As shown in Table 2.2-1 and Figure 2.2-1, the median household income within the study area is between \$53,188 and \$74,706, above that of the poverty threshold. The study area median income is also well above equivalent averages for the County of Los Angeles, and the City of Los Angeles, and comparable to that of the City of Santa Clarita.

**Table 2.2-1
Median Household and Per Capita Income for the Study Area**

	Median household income (1999)	Per capita income (1999)
Los Angeles County	\$42,189	\$20,683
City of Los Angeles	\$36,687	\$20,671
City of Santa Clarita	\$66,717	\$26,841
Census Tract 9200.13	\$69,038	\$25,387
Census Tract 9200.23	\$53,188	\$19,618
Census Tract 9200.28	\$74,706	\$24,124
Census Tract 9200.29	\$60,667	\$24,250

Source: Census 2000 Summary File 1 (SF 3) Sample Data Table P53: Median Household Income in 1999 (dollars)



Source: City of Santa Clarita 2002, 2005; NAIP 2005; US Census 2000



Figure 2-2-1
Median Household Income by Census Tract

Children and Young Adults

Between 1990 and 2000, the median age in the City of Santa Clarita has increased from 30.5 to 33.4 years. This has resulted from substantial increases in the proportion of people aged over 65 years, and a proportionate decrease in the working age population. The proportion of the population defined as children and youth (under 19 years of age) has remained relatively stable for the past decade and is currently similar to that of Los Angeles County and slightly lower than that of the City of Santa Clarita. Between 31.8 and 39.2 percent of the study area is composed of children and youth (Table 2.2-2). This is approximately the same as that the City of Santa Clarita.

**Table 2.2-2
Age Distribution in the Study Area**

	Total Population	Population under 19 Years		Median Age
	Number	Number	Percentage	
Los Angeles County	9,519,338	2,946,796	31.0	32
City of Los Angeles	3,694,820	1,091,049	29.5	31.6
City of Santa Clarita	151,088	49,858	33.0	33.4
Study Area	11,165	3,828	34.3	(n/a)
Census Tract 9200.13	3,808	1,211	31.8	38.3
Census Tract 9200.23	2,247	775	34.5	32.7
Census Tract 9200.28	1,928	756	39.2	31.6
Census Tract 9200.29	3,182	1,086	34.1	32.1

Source: Census 2000 Summary File 1 (SF 1) 100-Percent Data Table P12: Sex by Age

Race and Ethnicity

The study area is characterized by a relatively low proportion (18.8 percent) of minority populations (Table 2.2-3). This is well below the averages for Los Angeles County and the City of Los Angeles, which have minority populations of 51.3 percent and 53.1 percent, respectively, and is slightly lower than the 20.5 percent average for the City of Santa Clarita as a whole. No minority or low-income populations have been identified that would be adversely affected by the proposed action as determined above. Therefore, the proposed project is not subject to the provisions of Executive Order 12898.

**Table 2.2-3
Ethnicity in the Study Area**

	Total Population	Minority Population	
	Number	Number	Percentage
Los Angeles County	9,519,338	4,883,420	51.3
City of Los Angeles	3,694,820	1,961,949	53.1
City of Santa Clarita	151,088	30,973	20.5
Study Area	11,165	2094	18.8
Census Tract 9200.13	3,808	636	16.7
Census Tract 9200.23	2,247	454	20.2
Census Tract 9200.28	1,928	335	17.4
Census Tract 9200.29	3,182	668	21.0

Source: Census 2000 Summary File (SF 1), 100-percent Data Table P12: Sex by Age

2.2.3 Environmental Effects

Alternative 1: Bridge Alternative

Alternative 1 would not displace any current households or businesses and would not require the acquisition or relocation of any residential dwellings or businesses. As such, Alternative 1 would not have an adverse effect on community character and cohesion, or relocations.

Alternative 2: The No Build Alternative

Under Alternative 2, there would be no improvements to the existing road, and, as such, no change to the existing community character. No relocations would be needed and there would be no displacement of people or businesses. No persons or housing would be displaced. Furthermore, as no structures would be constructed, the physical landscape would not be altered and no adverse construction effects would result. As such, Alternative 2 would not have an adverse effect on community character and cohesion, or relocations.

2.2.4 Avoidance, Minimization, and/or Mitigation Measures

There would be no adverse effects to communities as a result of the Bridge Alternative or the No Build Alternative; consequently, no avoidance, minimization, and/or mitigation measures are proposed.

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2.3 UTILITIES / EMERGENCY SERVICES

This section describes the potential effects of the action on utilities and emergency services. In particular, the following issues are discussed: water and wastewater, solid waste, electricity, fire protection, and police protection.

2.3.1 Affected Environment

Water and Wastewater

Castaic Lake Water Agency (CLWA) is a wholesale water agency that supplies water for the Santa Clarita Valley planning area. CLWA, formed in 1962, contracts with the California Department of Water Resources to purvey imported water from the State Water Project (SWP) to retail water providers in the Santa Clarita Valley. Water is brought in from the SWP-operated reservoir at Castaic Lake. CLWA's Capital Improvements Program establishes funds for the purchase of additional imported supplies, implementation of reclaimed (recycled) water programs, and enhancement of groundwater, as well as groundwater banking/conjunctive-use programs both in and outside of the CLWA service area. These measures would provide sufficient supplies for projected water demands.

Four local agencies transport water throughout the City: Santa Clarita Water Division (SCWD), which is a division of CLWA; Valencia Water Company; Newhall County Water District; and Los Angeles County Water District #36 (Val Verde Water District). The SCWD service area includes portions of the City of Santa Clarita, including the bridge site, and unincorporated portions of Los Angeles County in the communities of Saugus, Canyon Country, and Newhall. SCWD would be the expected local retail water purveyor for the proposed project.

CLWA and the four retail water purveyors have prepared the joint Urban Water Management Plan. This document describes water conservation measures within the CLWA service area and updates the Santa Clarita Valley's Water Shortage Contingency Plan (CLWA 2000).

The County Sanitation Districts of Los Angeles County operate two water reclamation plants (WRPs) that provide wastewater treatment for the Santa Clarita Valley. District No. 26 operates and manages the Saugus WRP, providing primary, secondary, and tertiary treatment of approximately 7 million gallons per day (gpd) of wastewater. This plant, located south of the proposed bridge, is southeast of the intersection of Soledad Canyon Road and Bouquet Canyon Road and serves approximately 70,000 people. District No. 32 operates and manages the Valencia WRP, which processes approximately 11 million gpd for 110,000 people. The Valencia WRP is located west of the proposed action site, on The Old Road, north of Magic Mountain Parkway and west of I-5. Wastewater for the proposed project site is treated primarily by the Saugus WRP District 26, which together with the Valencia WRP District 32 provides for the wastewater treatment for most of the Santa Clarita Valley.

In the Santa Clarita Valley, stormwater runoff is channeled either into detention basins for groundwater recharge or into the Santa Clara River via widened and lined channels built by the Los Angeles County Department of Public Works. Most of these natural channels consist of vegetation and coarse-grained sediments, rather than concrete. Urban stormwater flows are routed through stormwater detention basins and to the river channels, where porous sand and gravel streambeds permit infiltration to the underlying groundwater.

Solid Waste

Since 1997, the City has diverted approximately 50 percent of solid waste through recycling programs to meet the provisions of the California Integrated Waste Management Act (AB 939). The purpose of AB 939 is to “reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible.” To this end, it requires every city and county in the state to prepare a Source Reduction and Recycling Element (SRRE) to its Solid Waste Management Plan, identifying how each jurisdiction will have met the mandatory state waste diversion goals of 25 percent by the year 1995 and 50 percent by the year 2000. The City is in full compliance with the SRRE with regard to preparation of plans and policies.

The City of Santa Clarita Department of Field Services contracts with three private haulers in the collection of residential, commercial, and industrial waste in the City. Separate franchise systems exist for commercial/industrial uses and for residential uses.

Nearly all waste from the City that is not diverted for recycling goes to the Chiquita Canyon Landfill, located approximately 6 miles west of the action site. The Chiquita Canyon Landfill has been approved for expansion to extend the life of this landfill to 2019, which would permit acceptance of the maximum daily tonnage of 6,000 tons of solid waste. Other small amounts of waste are sent to the Puente Hills Landfill in Whittier, Sunshine Canyon Landfill in Sylmar, and the Antelope Valley II Landfill in Palmdale.

Other Onsite Utilities and Easements

The proposed bridge project would pass close to a number of utility lines but would not cross any known lines. These include 84-inch and 102-inch CLWA water lines, which are located between the proposed bridge and the newly extended Newhall Ranch Road. A 40-foot-wide CLWA easement is located close to the newly extended Golden Valley Road, south of the proposed bridge. Two 60-foot-wide City of Los Angeles pole and wire easements cross the area immediately west of the Los Angeles aqueduct, which is adjacent to the bridge site. A 100-foot-wide City of Los Angeles easement conveys the Los Angeles Aqueduct, with another 100-foot-wide City of Los Angeles easement located east of the aqueduct. A 20-foot-wide Valencia Water Company easement crosses the proposed action site near the bridge's eastern terminus. High voltage power lines parallel the eastern portion of the proposed alignment but do not traverse the proposed bridge site.

Fire and Police Protection

The County of Los Angeles provides fire and police protection services throughout the City of Santa Clarita. Fire protection is provided by the Los Angeles County Fire Department, while police protection is provided by the Los Angeles County Sheriff's Department.

In addition to fire-fighting duties, the Los Angeles County Fire Department also provides pre-hospital emergency medical care for all calls within the City. The Fire Department operates nine fire stations within the City. Seven of the nine fire stations are located in the vicinity of the proposed project. Information on these seven stations is shown in Table 2.3-1. The City is served by Battalion 6 of the County's Fire Department.

**Table 2.3-1
City of Santa Clarita Fire Stations**

Fire Station No.	Location	Staffing	Distance from Site (miles)	Average Response Time (min)
FS 73	24875 N. San Fernando Road, Santa Clarita, CA 91321	19	3.0	6
FS 76	27223 Henry Mayo Drive, Valencia, CA 91355	27	6.2	10
FS 104 (Temporary)	26201 Golden Valley Road, Santa Clarita, CA 91350	12	1.0	1
FS 107	18239 W. Soledad Canyon Road, Canyon Country, CA 91351	15	3.0	4
FS 111	26829 Seco Canyon Road, Valencia, CA 91350	15	1.7	5
FS 123	26321 N. Sand Canyon Road, Canyon Country, CA 91351	9	5.7	10
FS 126 (Headquarters)	26320 Citrus Street Santa Clarita, CA 91355	27	2.9	5

Source: Jason Hurd PIO – Inspector, LA County Fire Department, 2004

The Santa Clarita Valley Sheriff's Station, located at 23740 Magic Mountain Parkway, provides law enforcement services for the proposed project area. Response time to emergency calls is estimated at 5.5 minutes (pers. com. Santa Clarita Valley Sheriff's Station, 2004).

2.3.2 Environmental Effects

Alternative 1: Bridge Alternative

Water and Wastewater

During construction, most water consumed would be used for site watering for dust reduction, construction equipment and vehicle washing, and mixing of cement or concrete. Overall, there is sufficient water to meet project needs during construction. If possible, nonpotable water would be used to further lessen the effect on municipal supplies. The amount of water used during construction would not substantially deplete area supplies and would not require new sources of water or construction of new or altered water supply facilities. Grading and excavation would result in construction related runoff. However, prior to construction initiation, Caltrans requires the development and implementation of an action-specific Storm Water Pollution Prevention Plan (SWPPP), which outlines construction best management practices (BMPs) that would be used to stabilize soils and minimize drainage offsite.

Construction of the proposed bridge would result in direct conversion of undeveloped land into a paved surface. The increase in impermeable surfaces would increase runoff during storm events and decrease groundwater recharge. There is a potential for pollutants related to vehicular traffic (e.g., rubber from tires, hydrocarbons from engine exhaust, etc.) to be washed off the road surface, and into the stormwater system and the Santa Clara River.

Solid Waste

The earthwork for Alternative 1 would be balanced; hence, only minor amounts of construction and demolition debris would be produced during construction. Vegetation removed during grading would be disposed of onsite or hauled to the Chiquita Canyon Sanitary Landfill for composting. Given that the Chiquita Canyon Sanitary Landfill is permitted to accept 6,000 tons per day of waste and has remaining capacity of 26 million cubic yards, it is anticipated that the landfill would be able accommodate the incremental amount of solid waste generated during construction. Consequently, the potential effects of the proposed Bridge Alternative from solid waste generation would not be adverse.

Electricity

Electricity consumed during construction of the proposed bridge would be minimal and would be principally consumed by the use of electrically powered hand tools, construction equipment, construction trailers, and onsite security lighting. These uses would not require construction or extension of electrical infrastructure, and construction demands for electricity would be met by the existing infrastructure. The bridge would also be equipped with lighting, which would also consume electricity. The amount of electricity used both during construction and operation of the proposed Bridge Alternative would be minimal. Consequently, the effects on electricity would not be adverse.

Onsite Utility Relocation and Disruption

The proposed bridge would not traverse any known utility lines. In the event that undisclosed utility lines were identified, the City would coordinate with the appropriate agencies and organizations responsible for these lines during design. No adverse effects to onsite utilities would result from construction and operation of the proposed Bridge Alternative.

Fire and Police Protection

Construction of the proposed bridge would occur in an area that is currently undeveloped. The proposed bridge would improve the ability of both the fire and police departments to promptly travel in an east-west direction through Santa Clarita, thus improving response times in emergency situations. Construction and operation of the proposed Bridge Alternative would not require additional staff or protection facilities; therefore, no adverse effects to fire or police protection would occur.

Alternative 2: The No Build Alternative

Under the No Build Alternative, the proposed bridge would not be constructed and the site would remain in its current condition. No grading or excavation would occur; hence, no water would be consumed, no wastewater would be generated, no electricity would be used, and no solid waste would be generated. There would be no change to the demand

for fire protection and police protection. Therefore, no adverse effects would occur. Long-term effects on emergency services could occur under this alternative.

2.3.3 Avoidance, Minimization, and/or Mitigation Measures

Stormwater infrastructure (temporary and permanent BMPs, potentially including but not limited to sand bags, bio-swales, and retention and detention basins) installed during construction would serve the needs of the proposed action. Therefore, the proposed Bridge Alternative would not adversely affect water and wastewater. There would be no adverse effects to utilities as a result of the No Build Alternative.

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2.4 TRAFFIC AND TRANSPORTATION / PEDESTRIAN AND BICYCLE FACILITIES

This section discusses the effect the proposed Golden Valley Road Bridge Project would have on traffic and circulation, both during and after construction. This section also contains a summary of the information and analyses in the *Final Traffic Report for the Proposed Golden Valley Road and Newhall Ranch Road Projects in the City of Santa Clarita, California* (KOA 2005) as found in Appendix C. The traffic analysis evaluates the existing conditions and the long-range periods using the Santa Clarita Consolidated Traffic Model.

2.4.1 Regulatory Setting

City of Santa Clarita General Plan

The City of Santa Clarita's Circulation Element included the elements of the CVC Corridor as a way to reduce forecast congestion and to provide an additional east-west route through the City. The proposed Golden Valley Road bridge would connect Golden Valley Road, which is a major arterial highway to the newly extended Newhall Ranch Road. The proposed bridge is a vital component of the CVC Corridor and would provide an additional route through the City that would help accommodate projected traffic growth.

2.4.2 Affected Environment

Existing Roadway System

SR 14 and I-5 primarily provide north-south access, and Soledad Canyon Road primarily provides east-west access in the Santa Clarita Valley. Currently, many travel trips in the east-west direction are made using the longer route of I-5 and SR 14 because Soledad Canyon Road is frequently severely congested. As a result, more out-of-direction vehicle miles are traveled, producing additional congestion on the freeway system.

Newhall Ranch Road is a six-lane arterial with a posted speed limit of 50 miles per hour that extends from Copper Hill Drive/Rye Canyon Road on the west. Golden Valley Road, which is a major arterial highway, connects to SR 14 on the eastern side of the Santa Clarita Valley.

Existing Traffic Volumes

Level of Service (LOS) describes the operating conditions within a stream of traffic, reflecting factors such as speed, travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. There are six levels of service, ranging from A to F. LOS definitions for signalized intersections are provided in Table 2.4-1. In general, LOS A represents free-flow conditions with no congestion, while LOS F represents severe congestion with stop-and-go conditions.

**Table 2.4-1
Level of Service Definitions – Signalized Intersections**

Level of Service	Vehicle Delay (seconds/vehicle)	Volume-to-Capacity Ratio	Description
A	≤ 5.00	0.00-0.60	Free Flow/Insignificant Delays: No approach phase is fully utilized by traffic and no vehicle waits longer than one red signal indication.
B	5.1-15.0	0.61-0.70	Stable Operation/Minimal Delays: An occasional approach phase is fully utilized. Many drivers feel somewhat restricted within platoons of vehicles.
C	15.1-25.0	0.71-0.80	Stable Operation/Acceptable Delays: Major approach phases fully utilized. Most drivers feel somewhat restricted.
D	25.1-40.0	0.81-0.90	Approaching Unstable/Tolerable Delays: Drivers may have to wait through more than one red signal indication. Queues may develop but dissipate rapidly, without excessive delays.
E	40.1-60.0	0.91-1.00	Unstable Operation/Significant Delays: Volumes at or near capacity. Vehicles may wait through several signal cycles. Long queues form upstream from intersection.
F	≥ 60.0	N/A	Forced Flow/Excessive Delays: Represents jammed conditions. Intersection operates below capacity with low volumes. Queues may block upstream intersections.

Source: Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington DC, 1994

The analysis of existing intersection LOS was based on field reviews and traffic volume data and forecasts prepared by the City. Existing conditions are documented by traffic calculations performed for the following intersections deemed most likely affected by the proposed action:

- Bouquet Canyon Road/Newhall Ranch Road
- Bouquet Canyon Road/San Fernando Road/Soledad Canyon Road/Valencia Boulevard.

Traffic demand in the area meets or exceeds roadway capacity on many of the arterial roadways. Increases in traffic are anticipated in the future based on regional projections and anticipated growth. The calculations show that the Bouquet Canyon Road/San Fernando Road/Soledad Canyon Road/Valencia Boulevard intersection operates at LOS F during the PM peak hour (see Table 2.4-2).

**Table 2.4-2
Level of Service Calculations – Existing Conditions**

Intersection	Weekday AM Peak Hour	Weekday PM Peak Hour
	V/C – LOS	V/C – LOS
Bouquet Canyon Road/Newhall Ranch Road	0.880 D	0.830 D
Bouquet Canyon Road/San Fernando Road/Soledad Canyon Road/Valencia Boulevard	0.760 C	1.040 F

Source: Katz, Okitzu & Associates 2005

Pedestrian and Bicycle Facilities

The City’s Circulation Element discusses creation of a pedestrian-friendly environment through well-designed urban spaces and safety enhancements that separate walking areas from vehicle lanes. Additionally, the Circulation Element identifies the proposed Golden Valley Road bridge as a potential bikeway (City of Santa Clarita 1997a), which would connect to the existing bike path/trail along Soledad Canyon Road.

2.4.3 Environmental Effects

Alternative 1: Bridge Alternative

The proposed bridge would provide a connection between the extended Newhall Ranch Road and Golden Valley Road. The calculations below show that the proposed project would connect Newhall Ranch Road and Soledad Canyon Road via Golden Valley Road. LOS would be acceptable during peak periods with the exception of the Golden Valley Road/Newhall Ranch Road intersection during the PM peak hour. Table 2.4-3 summarizes the analysis of the proposed project conditions.

**Table 2.4-3
Level of Service Calculations – With Proposed Action**

Intersection	Weekday AM Peak Hour	Weekday PM Peak Hour
	V/C – LOS	V/C – LOS
Bouquet Canyon Road/Santa Clarita Parkway	0.720 C	0.870 D
Bouquet Canyon Road/Newhall Ranch Road	0.840 D	0.830 D
Santa Clarita Parkway/Newhall Ranch Road	0.750 C	0.800 C
Golden Valley Road/Newhall Ranch Road	0.590 A	0.940 E
Santa Clarita Parkway/South of Soledad Canyon Road (Grade Separated)	0.510 A	0.630 B
Soledad Canyon Road/East of Santa Clarita Parkway (Grade Separated)	0.540 A	0.690 B
Soledad Canyon Road/Santa Clarita Parkway (at grade)	0.820 D	0.740 C
Soledad Canyon Road/Valley Center Drive	0.720 C	0.640 B
Golden Valley Road/Valley Center Drive	0.640 B	0.580 A
Bouquet Canyon Road/San Fernando Road/Soledad Canyon Road/Valencia Boulevard	0.790 C	0.900 D

Source: Katz, Okitsu & Associates 2005

The proposed Bridge Alternative would result in LOS E at the Golden Valley Road/Newhall Ranch Road intersection during the weekday peak PM hour. This calculated LOS is below the City’s target; however, the proposed project provides a capacity enhancement to the project area. Accordingly, the proposed project would improve long-term traffic conditions in the vicinity of the bridge. No adverse effects on traffic and transportation would occur.

Construction activities would generate additional, but temporary traffic, as construction workers travel to and from the site and trucks deliver and haul materials, supplies, and equipment to and from the bridge site. The majority of construction-related trips would occur during nonpeak traffic hours. Construction typically commences before the morning peak hour and finishes before the afternoon peak hour. Construction activities would occur on undeveloped land that currently offers no roadway access to adjacent properties. Consequently, the effect on local streets and the freeway system would be temporary and intermittent.

The proposed bridge project would include 12 feet for bicycle lanes, separated from the roadway and pedestrian walkways. The pedestrian walkways would be located on either side of the bridge and the bicycle lanes would be located on the northernmost bridge, as indicated in Figure 1-5. This is consistent with the city-wide layout and route for all major thoroughfares in the City according to the City's Circulation Element and multiuse corridor plan, including Exhibit C-9 of the Circulation Element, which indicates that the proposed bridge would convey a future bikeway. This would also connect to a larger bicycle path route to allow for east/west circulation. As such, the action would have no adverse effects on bicycle lanes or pedestrian traffic.

Alternative 2: The No Build Alternative

The intersection of Soledad Canyon Road and Santa Clarita Parkway was analyzed as both a grade separated and an at-grade intersection since the future configuration is currently undetermined. The calculations show that the Bouquet Canyon Road/Santa Clarita Parkway and Bouquet Canyon Road/San Fernando Road/Soledad Canyon Road/Valencia Boulevard intersections would operate at LOS E and F, respectively, during the PM peak hour. The Bouquet Canyon Road/San Fernando Road/Soledad Canyon Road/Valencia Boulevard intersection would also operate at a LOS E during the AM peak hour. Table 2.4-4 shows the calculated LOS for future conditions without construction of the proposed bridge.

**Table 2.4-4
Level of Service Calculations – No Build Conditions**

Intersection	Weekday AM Peak Hour	Weekday PM Peak Hour
	V/C – LOS	V/C – LOS
Bouquet Canyon Road/Santa Clarita Parkway	0.810 D	09.60 E
Bouquet Canyon Road/Newhall Ranch Road	0.880 D	0.810 D
Santa Clarita Parkway/South of Soledad Canyon Road (Grade Separated)	0.610 B	0.730 C
Soledad Canyon Road/East of Santa Clarita Parkway (Grade Separated)	0.640 B	0.860 D
Soledad Canyon Road/Santa Clarita Parkway (at grade)	0.820 D	0.850 D
Bouquet Canyon Road/San Fernando Road/Soledad Canyon Road/Valencia Boulevard	0.920 E	1.070 F

Source: Katz, Okitsu & Associates 2005

The planned improvements to pedestrian and bicycle facilities that would result under the proposed Bridge Alternative as previously discussed would not result with the No Build Alternative, reducing pedestrian and bicycle circulation through the project site. Bicycles would likely continue to utilize the bicycle path on the southern side of the Santa Clara River. Both bicycles and pedestrians would need to travel to the Bouquet Canyon Road bridge to cross the Santa Clara River. Although not optimal, the effects of the No Build Alternative would not be adverse.

2.4.4 Avoidance, Minimization, and/or Mitigation Measures

There would be no adverse effects to traffic, transportation, pedestrian, and bicycle facilities as a result of the Bridge Alternative; consequently, no avoidance, minimization, and/or mitigation measures are proposed.

Circulation would be adversely affected with the selection of the No Build Alternative. In the longer term, LOS at several intersections would deteriorate. Pedestrian and bicycle circulation would remain as at present, with no provisions for crossing the Santa Clara River in the project vicinity. No avoidance, minimization, and/or mitigation measures are available to ameliorate this situation.

2.5 VISUAL / AESTHETICS

This section evaluates the potential effects on visual resources resulting from the construction and operation of the proposed project. A Visual Impact Assessment (VIA) was approved by Caltrans in June 2004 as found in Appendix D. This VIA was prepared pursuant to the procedures of the FHWA Visual Impact Assessment for Highway Projects (FHWA Publication No. FHWA-HI-8-054). The VIA reviewed applicable planning documents, described the existing visual environment and viewers, and evaluated the anticipated view response. Potential visual effects were assessed based on the anticipated change to the visual environment from the proposed project implementation and how the proposed project could maintain consistency with approved plans. Mitigation measures are summarized below and are recommended for identified visual effects. This section summarizes the analysis and findings of the VIA.

2.5.1 Regulatory Setting

NEPA establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings (42 USC 4331[b][2]). To further emphasize this point, the FHWA in its implementation of NEPA (23 USC 109[h]) directs that final decisions regarding actions are to be made in the best overall public interest taking into account adverse environmental effects, including (among others) the destruction or disruption of aesthetic values.

Cross Valley Connector Aesthetics Guidelines

The Cross Valley Connector Aesthetics Guidelines (City 2004) provide direction regarding hardscape and softscape features to be used to enhance roadway design, including lighting, signage, slopes, utility lines, transit shelters, bicycle facilities, and selection of tree species. The Aesthetics Guidelines represent the most specific set of requirements for the CVC Corridor.

Santa Clarita Beautification Master Plan

The Santa Clarita Beautification Master Plan (Beautification Plan) was developed by the City to assist in the long-term goal of citywide streetscape improvements and beautification (City 2001). It addresses streetscape design, landscape enhancement, gateways, and monumental and signage features at both regional and community scales, and includes analysis of implementation costs, phasing, and priorities. Citywide guidelines are designed to unify the image of Santa Clarita as a whole and create a regional identity, while continuity with community-level guidelines allows for the unique individuality of four communities identified within the city.

Golden Valley and Newhall Ranch roads are identified as Primary Corridors within this Beautification Plan, which stipulates that medians should extend or complement existing median sections and should include special paving materials, trees, and shrub plantings (City 2001). The Beautification Plan also specifies tree spacing, sizing, and character within the median and along sidewalks and requires that roadways incorporate attractive and functional landscaping that is aesthetically pleasing and pedestrian friendly (City 2001). In addition utility lines should be underground where possible; billboards and advertisement signs should be avoided; and fences should be uniform in height, material, and style (City 2001). The Beautification Plan also recommends that bridge support columns should be minimized while maintaining a thin bridge structure; barrier rails should be an integral part of the bridge structure; and bridge abutment walls and other prominent features, such as light standards and fencing, should be visually complementary (City 2001).

2.5.2 Affected Environment

Viewshed

The viewshed is the areas from which the proposed project would be visible, and areas that would be visible from the bridge. This includes areas viewed from and to the east, south, and west of the bridge. The quality of views from and to the surrounding areas varies from one location to another within the viewshed for many reasons: the low elevation and a low profile of most of the roadway; the undulating terrain; the urbanized

level of development in proximity to the proposed bridge; the mature vegetation growth on the hillsides and in the Santa Clara River; and the views of the bridge from the elevated Golden Valley Road flyover over Soledad Canyon Road. Views from surrounding residential areas are partially to completely blocked by vegetation, hillsides, or buildings. Unobstructed views of the bridge site would be limited to motorists and pedestrians on surrounding roadways, commercial establishments south and southwest of the action site, and the mobile home park south of the roadway. Farther west, views of the bridge from residences located north of the proposed alignment would be obstructed by topography.

Landscape Units

Land uses and topographic patterns create a number of landscape units with distinct character. The following two landscape units have been identified for the existing environment.

Developed unit – This includes land that has permanent structures associated with it. The mobile homes and commercial areas adjacent to the proposed bridge are included in this unit.

Undeveloped unit – This includes disturbed and natural lands that do not have permanent structures associated with them. In the area of the proposed bridge, this includes the Santa Clara River and natural areas surrounding it.

Viewer Types and Anticipated Viewer Response

The effect of a change in visual character is influenced by social considerations, including public value placed on the resource, public awareness of the area, and general community concern for visual resources in the area. These social considerations are addressed as visual sensitivity and are defined as the degree of public interest in a visual resource and concern over adverse changes in the quality of that resource.

Visual effects may be associated with changes in either the human-made or natural environment and can be short or long term in duration. Grading and the presence of

heavy machinery (e.g., large trucks, bulldozers, cranes) during construction of the bridge is considered a short-term visual effect. Long-term changes are associated with altering the natural topography; building permanent structures (e.g., buildings, bridges, walls); and removing vegetation, including mature trees. The focus of the following analysis is on long-term physical changes that would be permanent in nature.

The evaluation of visual effects depends upon the degree of alteration, the scenic quality of the area disturbed, and the sensitivity of the viewers. The degree of alteration refers to the extent of change to the natural landform and the introduction of urban elements into an existing natural environment, while acknowledging any unique topographical formations or natural landmarks. Scenic quality is often indicated by special zoning and planning overlay zones. Sensitive viewers are those who utilize the outdoor environment or value a scenic viewpoint to enhance their daily activity and are typically residents, recreational users, or motorists in scenic areas. Changes in existing landscape where there are no identified scenic values or sensitive viewers are not considered adverse. It is also possible to acknowledge a visual change as possibly adverse but not a substantial adverse effect if viewers are not sensitive or the surrounding scenic quality is low.

2.5.3 Environmental Effects

Alternative 1: Bridge Alternative

A representative view was used to compare the existing visual environment with what would result under the proposed action. The view was chosen based on vantage points surrounding the action that are visible to citizens and employees in their places of residence or employment, or from the roadway system. There is no key view of the action area facing south because the northern portion of the action consists of hillsides that prevent public views of the action area.

Figure 2.5-1 shows the proposed bridge from a Key View that represents the scene viewed by residents of the mobile home park on Soledad Canyon Road as they look northward across the Santa Clara River, toward the slopes behind the mobile home park. Foreground views encompass the mobile home park, and middle- to background views of



Figure 2.5-1
Rendering of the Proposed Bridge

the Santa Clara River. The slopes consist of scattered scrub vegetation. As shown in Figure 2.5-1, the proposed bridge would be located in the middle-ground of this view, trending uphill toward the west as it crosses over the aqueduct.

The intactness and unity of the bridge site are already compromised by the presence of the Los Angeles Aqueduct, located west of the proposed bridge. Although the proposed bridge would constitute another man-made feature within the view, the presence of existing non-natural features would lessen the incremental change in visual quality due to the bridge. Consequently, several minimization measures are detailed in Section 2.5.4 to further lessen the effect of the proposed Bridge Alternative.

Alternative 2: The No Build Alternative

Under the No Build Alternative, the proposed bridge would not be constructed and views from the mobile home park, as indicated in Figure 2.5-1, would not change. The degree of vividness, intactness, and unity would remain the same and there would be no adverse effects to visual/aesthetics resources.

2.5.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: Bridge Alternative

This alternative may have adverse visual quality effects; therefore, the following measures are proposed:

1. The bridge shall be textured and/or stained with muted colors to diminish stark contrasts with the existing setting.
2. To the extent consistent with the Cross Valley Connector Aesthetics Guidelines, retaining walls shall be textured, patterned, and/or colored, and shall include landscape elements, to reduce their visual scale and assist their visual blending with the existing environment.

These measures would reduce the proposed project's potential adverse effect on visual quality.

Alternative 2: No Build Alternative

There would be no adverse effects on visual/aesthetic resources as a result of the Bridge Alternative or the No Build Alternative; consequently, no avoidance, minimization, and/or mitigation measures are proposed.

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PHYSICAL ENVIRONMENT

2.6 HYDROLOGY AND FLOODPLAIN

This section discusses hydrology and floodplain issues within the vicinity of the proposed bridge and considers potential adverse effects to water quality, water supply, and the floodplain arising from implementation of the proposed project. This section also contains a summary of the information and analyses in the *Golden Valley Road Bridge Location Hydraulic Study*, completed in March 2005 (Dokken Engineering 2005) as found in Appendix E. The hydraulic study examined the possible effects to the Santa Clara River from the construction of the Golden Valley Road bridge.

2.6.1 Regulatory Setting

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

To comply, the following must be analyzed:

- the practicability of alternatives to any longitudinal encroachments;
- risks of the action;
- impacts on natural and beneficial floodplain values;
- support of incompatible floodplain development; and
- measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values impacted by the action.

The 100-year floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the 100-year floodplain.”

2.6.2 Affected Environment

Surface Water

The proposed bridge, located in the northeastern quadrant of Los Angeles County, lies within the Santa Clara-Calleguas Hydrologic Unit. This is the largest hydrologic unit in the Los Angeles region and covers portions of Los Angeles, Ventura, and Kern counties. Major and minor tributaries drain 1,760 square miles, most of which is open space, punctuated by agriculture and urban areas. The Santa Clara River and Calleguas and Sespe creeks are the major tributaries in the unit. They are fed by hundreds of minor tributaries that drain Angeles National Forest; Los Padres National Forest; the San Gabriel Mountains; the Santa Susana Mountains; Oak Ridge; South Mountain; Simi Hills; and the Sawmill, Liebre, and Frazier mountains.

The Santa Clara River is one of southern California's only "naturally" flowing rivers. From its headwaters in Angeles National Forest, east of Soledad Canyon, the river flows in its natural streambed through to Ventura County and terminates at the Pacific Ocean. Flowing through both Los Angeles and Ventura counties, the Santa Clara River is more than 100 miles long and is geographically divided into nine reaches. The proposed project is located within Reach 9.

The Los Angeles RWQCB is responsible for management of the water resources within the Santa Clara-Calleguas Hydrologic Unit. The RWQCB identifies the beneficial uses of the watershed's resources, which are the foundation of the water quality protection measures under the Water Quality Control Plan - Basin Plan for the Coastal Watersheds of Los Angeles and Ventura counties (Basin Plan). Beneficial uses of the surface water resources above the Santa Clara River's estuary include wildlife habitat, preservation of rare and endangered species, migratory bird habitat, wetlands habitat, municipal (drinking water), industrial service, industrial process, agricultural, groundwater recharge, freshwater replenishment, warm water habitat, and coldwater habitat. Although a high priority of the RWQCB, the Santa Clara River and the other tributaries in the watershed are under pressure to absorb hundreds of permitted point- and nonpoint source discharges.

Groundwater

Groundwater resources exist within the watershed and are divided into several distinct units usually as a result of seismic faulting. The geologically divided aquifers have varying levels of alluvial deposits; therefore, groundwater depth and volume can differ between aquifers in the same general location. The bridge is located within the Eastern Hydrologic Subarea of the Upper Santa Clara River Hydrologic Area, as designated by the RWQCB.

The Alluvial Basin is a shallow aquifer, which is underlain by the Saugus Formation. Due to its shallow depth to groundwater, the Alluvial Basin is tapped to produce between 30,000 and 40,000 acre-feet of water annually. The Saugus Formation provides an estimated 7,500 to 15,000 acre-feet per year. Recharge of these aquifers is dependent on water from the Santa Clara River. The river's natural condition allows for stream flow to percolate through the alluvial substrate until it is confined by an impervious rock formation that acts as an aquitard.

Historically, groundwater was extracted from the Alluvial and Saugus aquifers to provide water to the Santa Clarita Valley. In 1980, the City of Valencia and its surrounding areas contracted with the California Department of Water Resources for allocations of water from the State Water Project, which is stored in Castaic Lake. Today, groundwater extraction accounts for 54 percent of the municipal water supply in the Valley, with State Water Project allocations providing 46 percent.

Floodplain

The Santa Clara River is the most important hydrologic feature in the vicinity of the proposed bridge site and lies within the 100-year floodplain designated by FEMA (Figure 2.6-1).

Castaic Reservoir lies approximately 7.5 miles northwest of the proposed bridge site, while Bouquet Canyon Reservoir is just over 12 miles northeast of the proposed bridge site. According to the Flood and Inundation Hazards map (Plate 6) in the County of Los Angeles' General Plan Safety Element (1990), the proposed bridge would be located



Source: City of Santa Clarita 2002, 2005; FEMA 2006



Figure 2-6-1
Project Limits and 100-year Floodplain

outside of the inundation area for both Castaic Lake and Bouquet Reservoir. However, according to the FEMA Flood Insurance Rate Map (FIRM) number 060729 0345C, dated September 9, 1989, for the Unincorporated Areas of Los Angeles County, California, the bridge site lies within the 100-year floodplain for the Santa Clara River (i.e., Zone A floodplain).

2.6.3 Environmental Effects

Alternative 1: Bridge Alternative

The new proposed bridge over the Santa Clara River consists of approximately 4.48 acres of new impervious surfaces, and stormwater runoff from the bridge would ultimately be directed into Reach 9 of the Santa Clara River. The Santa Clara River is an impaired water body for several pollutants as indicated on the 303(d) list. These pollutants for the different reaches of the Santa Clara River include sulfates, dissolved solids, ammonia, chloride, high coliform count, nitrate, and nitrite. Stormwater runoff from transportation facilities may contain a mix of motor-vehicle-related detritus composed of petrochemicals, asbestos (brake pads), antifreeze, and other unknown constituents that may have leaked from vehicles. Bridges also collect dust, organic debris (e.g., leaves and tree bark), and trash.

Caltrans has developed treatment BMPs (Category III), listed below, to treat stormwater runoff from transportation facilities. Because runoff from the proposed project would be a nonpoint source of pollution from a collection of several source contaminants, the proposed project would incorporate treatment BMPs that are maintainable and effective at removing pollutants before those waters discharge into a receiving water. To address the runoff from the roadway, the action would be designed to include a combination of the following treatment BMPs developed and approved by the City and Caltrans:

- biofiltration, i.e., swales and strips;
- infiltration basins;
- detention devices;

- traction sand traps;
- dry-weather flow diversion; and
- gross solids removal devices.

Additionally, according to total maximum daily load (TMDL) schedules for the Santa Clara Watershed, National Pollutant Discharge Elimination System (NPDES) permits granted to the City and Caltrans would include BMPs to reduce chloride and nitrogen. For 303(d)-listed pollutants, such as coliform (pathogens), treatment BMPs would include infiltration basins and dry-weather flow diversions.

It is anticipated that the City would meet all requirements of the NPDES permit by implementing all approved BMPs for effluent limitations; therefore, the action would have no adverse effect on water quality standards established for the Santa Clara River. In doing so, the City would be in compliance with the Clean Water Act of 1972.

The *Location Hydraulic Study* was conducted for the Cross Valley Connector East to address the Santa Clara River channel 100-year floodplain, and to assess the risk associated with any possible encroachment, including effects on natural and beneficial floodplain values as a result of the construction of the proposed Golden Valley Road bridge.

The construction of the proposed bridge would encroach upon and increase the elevation of the existing floodplain immediately upstream of the proposed bridge. FEMA allows a floodplain to be encroached upon so long as the rise in flood level does not exceed 1 foot. The study determined that the proposed bridge would raise flood levels by a maximum of 0.9 foot. Accordingly, the increase would not exceed the FEMA 100-year floodplain boundary.

The depth to groundwater at the bridge site has varied in the past; however, subsurface investigations found that groundwater levels in the area are approximately 34 feet deep (Seward 2003b). The groundwater table can fluctuate with natural recharge and pumping. Consequently, there is potential for groundwater to be encountered during construction, particularly as construction of the bridge would entail excavation and depth

drilling. Implementing the BMPs outlined below and in Section 2.7 would avoid potential adverse effects to groundwater.

According to the NRMP EIS/EIR, dated August 1998, by the ACOE and CDFG, the installation of a bridge over the Santa Clara River would cause both temporary and permanent effects to floodplain values within the Santa Clara River. However, these habitats are mostly small and fragmented remnants of larger, previously undisturbed habitats and are not likely to support self-sustaining wildlife or sensitive species. In addition, negative effects on these habitats can be mitigated through the use of controlled construction zones, restoration of disturbed streambeds, and temporarily relocating habitats. The nature of the surrounding area consists of sparse and fragmented habitats. Therefore, the construction of the proposed bridge would not result in adverse effects to the floodplain values of the area.

Recharge of the Alluvial Aquifer and Saugus Formation depends on surface water seepage from the Santa Clara River. Although the construction of 4.48 acres of new impervious surfaces could reduce local infiltration, it would not substantially interfere with groundwater recharge. Additionally, construction of the proposed bridge would not require the use of local groundwater. Hence, construction of Golden Valley Road bridge would have no adverse effects on hydrology and floodplain.

Alternative 2: No Build Alternative

Under Alternative 2, the proposed bridge would not be constructed. Temporary construction effects to water quality and stormwater would not occur and no permanent structure would be constructed in the floodplain. There would be no increase in the amount of impermeable surface area and, as such, no change to the amount of runoff from the site. Hence, the No Build Alternative would not have an adverse effect on hydrology and floodplain values.

2.6.4 Avoidance, Minimization, and/or Mitigation Measures

There would be no adverse effects on hydrology and floodplain values as a result of the Bridge Alternative or the No Build Alternative; consequently, no avoidance, minimization, and/or mitigation measures are proposed.

2.7 WATER QUALITY AND STORMWATER RUNOFF

2.7.1 Regulatory Setting

Section 401 of the Clean Water Act, the primary federal law regulating water quality, requires water quality certification from the state board or regional board when an action (1) requires a federal license or permit—Section 404 is the most common federal permit for Caltrans actions—and (2) will cause discharge into waters of the U.S. Section 402 of the Clean Water Act establishes the NPDES permit system for the discharge of any pollutant (except dredge or fill material) into waters of the U.S. To ensure compliance with Section 402, the State Water Resources Control Board (SWRCB) has developed and issued an NPDES Statewide Storm Water Permit, to regulate stormwater discharges from all of Caltrans’s ROW, properties, and facilities. The permit regulates both storm and non-stormwater water discharges during and after construction.

In addition, the SWRCB issues the Statewide Permit for all of Caltrans’s construction activities of 1 acre or greater. The SWRCB also issues permits for actions where a number of smaller actions are part of a common plan of development with the total area exceeding 1 acre, and for actions that have the potential to adversely impair water quality. Caltrans actions subject to the Statewide Storm Water Permit require a SWPPP, while other actions, smaller than 1 acre, require a Water Pollution Control Program (WPCP).

The California Environmental Protection Agency (EPA) has delegated administration of the federal NPDES program to the SWRCB and nine regional boards. This action is located within the jurisdiction of the SWRCB and the Los Angeles RWQCB.

Subject to Caltrans review and approval, the contractor prepares both the SWPPP and the WPCP. The WPCP and SWPPP identify construction activities that may cause pollutants in storm water and measures to control these pollutants. Because neither the WPCP nor the SWPPP is prepared at this time, the following discussion focuses on anticipated pollution sources or activities that may cause pollutants in the stormwater discharges.

Additional laws regulating water quality include the Porter-Cologne Water Quality Act, Safe Drinking Water Act, and Pollution Prevention Act. State water quality laws are

codified in the California Water Code, Health and Safety Code, and Fish and Game Code Section 5650-5656.

2.7.2 Existing Setting

Discharges to the Santa Clara Watershed, from both point and nonpoint sources, have collectively contributed to the contamination of the Santa Clara River and other tributaries and lakes within the watershed. On July 25, 2003, California EPA approved a 2002 303(d) list for California, which listed Reach 9 of the Santa Clara River as impaired for high coliform count. Reach 9 includes the project site. A TMDL for coliform was established on March 18, 2004, for the reach from Bouquet Canyon Road to above Lang Gaging Station.

2.7.3 Environmental Effects

Alternative 1: Bridge Alternative

The proposed Bridge Alternative would disturb an approximate area of 4.48 acres as a result of construction grading and excavation. Overall, the proposed project would increase the amount of impervious surfaces by approximately 4.48 acres. Grading, fill/exportation/moving, and laying asphalt could adversely affect the water quality of the Santa Clara River if the construction site discharges disturbed sediment/soils into the stream channel and/or releases petrochemicals from construction equipment.

Alternative 2: The No Build Alternative

Under the No Build Alternative, no construction would occur and there would consequently be no changes to water quality and stormwater runoff. No adverse effect on water quality or stormwater runoff would result from the No Build Alternative.

2.7.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: Bridge Alternative

To minimize potential effects to water quality during construction and operation of the proposed action, the following measures shall be implemented:

In accordance with Caltrans requirements, and SWPPP/WPCP manual guidelines, the proposed project would be required to implement state-approved design (Category IB) and construction-site (Category II) BMPs, listed below. These BMPs can be temporary (to accommodate the construction phase) or permanent (for the operational phase). Design BMPs are incorporated into the design of the new facility during the planning and engineering design phase. The design BMPs are focused on pollution prevention by assessing the following potential effects to water resources: downstream effects of increased flows, preservation of existing vegetation, flow conveyance systems, and slope protection.

The second Caltrans category is construction-site BMPs, which are the best conventional technology/best available technology controls required by the Caltrans Statewide Permit and the General Permit for Construction Activity. The SWPPP/WPCP manual outlines six categories for construction BMPs: temporary soil stabilization, temporary sediment control, wind erosion control, tracking control, non-stormwater management, and waste management and materials pollution control. A list of possible BMPs from each category that may be used for construction of the proposed Bridge Alternative includes:

- Temporary soil stabilization – sandbag barriers, straw bale barriers, sediment traps, and fiber rolls;
- Temporary sediment control – hydraulic mulch, hydroseeding, and geotextiles;
- Wind erosion control – portable water and straw mulch;
- Tracking control – street sweeping and entrance/outlet tire washing;
- Non-stormwater management – clear water diversion and dewatering; and

- Waste management and materials pollution control – vehicle and equipment cleaning, concrete waste management, and contaminated soil management.

Treatment BMPs developed by the City and approved by Caltrans shall be incorporated into the proposed project design. A combination of the following treatment BMPs could be included:

- biofiltration – swales and strips,
- infiltration basins,
- detention devices,
- traction sand traps,
- dry-weather flow diversion, and
- gross solids removal devices.

Bridge construction shall be in accordance with the length requirements determined by the *Golden Valley Road Bridge Location Hydraulic Study* (Dokken 2005).

These measures would avoid adverse effects on water quality and stormwater runoff.

Alternative 2: The No Build Alternative

There would be no adverse effects on water quality and stormwater runoff as a result of the No Build Alternative; consequently, no avoidance, minimization, and/or mitigation measures are proposed.

2.8 GEOLOGY / SOILS / SEISMIC / TOPOGRAPHY

This section describes existing geologic, soil, and seismic conditions within the action area and vicinity; identifies associated regulatory requirements; and evaluates potential adverse effects and mitigation measures associated with implementation of the proposed action.

2.8.1 Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.”

This section also discusses geology, soils, and seismic concerns as they relate to public safety and action design. Earthquakes are prime considerations in the design and retrofit of structures. Caltrans’ Office of Earthquake Engineering is responsible for assessing the seismic hazard for proposed Caltrans actions. The current policy is to use the anticipated Maximum Credible Earthquake (MCE), from young faults in and near California. The MCE is defined as the largest earthquake that can be expected to occur on a fault over a particular period of time.

Alquist-Priolo Earthquake Fault Zoning Act

Following the 1971 San Fernando Earthquake, the State of California passed the Alquist-Priolo Earthquake Fault Zoning Act in 1972 to address the hazard of surface faulting. The main purpose of the Act is to prevent the construction of structures intended for human occupancy on the surface trace of active faults and requires regulatory zones around the surface trace to be established. Local agencies are required to regulate development within these zones, which average approximately 1/4 mile wide.

2.8.2 Affected Environment

Geology

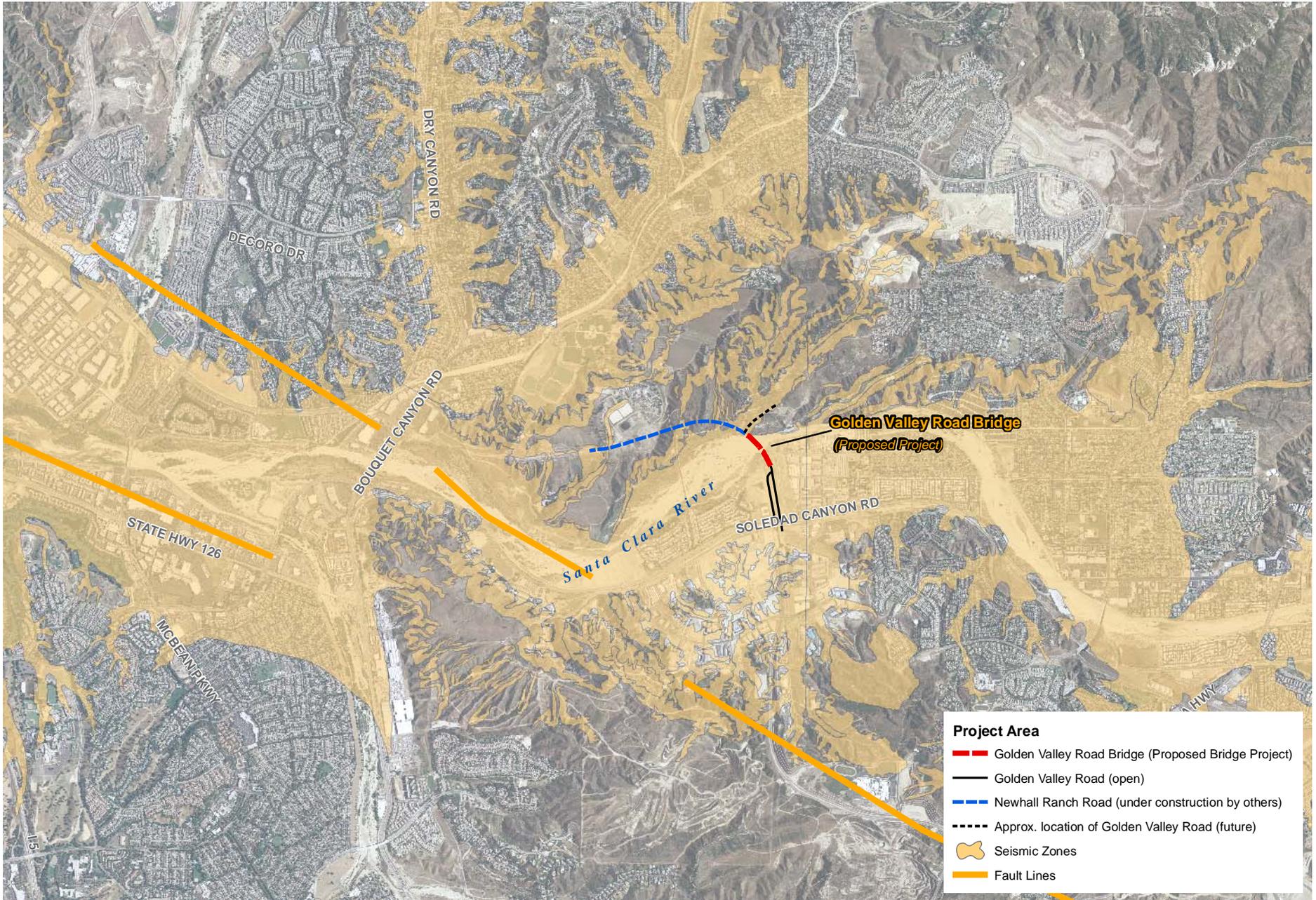
The proposed Golden Valley Road bridge is located in the western Transverse Ranges geomorphic province in the western portion of the Soledad Basin north of the San Gabriel result from ongoing compressional tectonics, characterize this region. The Soledad Basin extends from the San Gabriel fault in the Newhall-Saugus area to the San Andreas fault near Palmdale (Figure 2.8-1). Cenozoic-aged sedimentary rocks have accumulated in a thick layer within this basin. Subsequent faulting and folding by repeated tectonic action have deformed these sediments.

The Santa Clara River has changed its course over time, such that a thick accumulation of ancient river sediments has been deposited on a series of benches found in the underlying Saugus Formation bedrock. Such depositional terrace deposits show some evidence of having been laid in horizontal strata. Alluvium dating from the Quaternary age covers the valley floors.

Groundwater/Aquifers

Groundwater beneath the proposed action is either contained in recent alluvium or perched above low permeability layers in either the Saugus Formation or the Quaternary Terrace Deposits. Historic and recent records indicate that groundwater has approached within 5 feet of the existing ground surface along the edge of the Santa Clara River and may have intercepted the channel in the past.

Perched groundwater in the Saugus Formation bedrock and Quaternary terrace deposits has been encountered at the elevated portions of the site. Perched groundwater is a zone of saturation that is not connected to the water table but is instead surrounded by unsaturated zones. Such zones may be subsurface accumulations of precipitation, or they may be the result of percolation from nearby surface water or other perched water zones. Perched groundwater conditions may contribute to slope instability on both natural and artificial slopes.



Source: City of Santa Clarita 2002, 2005; FEMA 2006



**Figure 2-8-1
 Fault Zones**

Soils

Within the Santa Clara River vicinity, soils are characteristically alluvial. Such soils have generally been disturbed by past agricultural and grading activities. Upgraded areas of the proposed project area have silty-sand soils with scattered pebbles that are moderate- to yellowish-brown and yellowish-gray in color.

Expansive (or shrink-swell) behavior in soils or surficial deposits is related to the water-holding capacity of certain clay minerals and can adversely affect the structural integrity of structures such as foundations, footings, and pavement. Expansive soils occur naturally across much of the western United States. Typically located in floodplains and low-lying regions, the soils expand rapidly upon becoming wet, then shrink as water is removed. Over time, this rapid expansion and shrinking may cause deterioration of constructed features, such as foundations.

Faulting and Seismicity

Much of southern California, including the Santa Clarita Valley, is characterized by a series of Quaternary-age fault zones. As such, the proposed bridge site is situated within a seismically active region and is potentially subject to seismic effects associated with moderate to large seismic events along regional fault zones.

The eastern portion of the Santa Susana Mountains area has historically experienced strong ground motion during seismic events. The 1971 San Fernando earthquake, generated on the Sierra Madre-San Fernando fault, and the 1994 Northridge earthquake resulted in major ground shaking in the area. Table 2.8-1 summarizes major historical and regional earthquakes that have occurred near the proposed project site.

**Table 2.8-1
Major Historical and Regional Earthquakes**

Earthquake	Approx. Distance To Epicenter (Miles)¹	Earthquake Magnitude²
Fort Tejon (1857)	41	8.0
Kern Co. (1952)	49	7.7
Santa Barbara (1812)	50	7.0
San Fernando (1971)	7	6.4
Northridge (1994)	8	6.7
Santa Susana	6.5	6.6
Northridge (E. Oak Ridge)	5.4	6.9
Sierra Madre-San Fernando	8.1	6.7
San Gabriel	0.1	7.0
Holser	1.5	6.5
San Andreas	18.2	7.8

Source: Seward 2003a

¹ Approximate closest distance to surface trace in miles.

² Monument Magnitude after 1933 and above 6, or Local Magnitude prior to 1933 or below 6 (S.C.E.C.).

No active faults traverse the proposed project bridge alignment. The San Gabriel fault, approximately 2,000 feet to the south of the proposed bridge alignment, is considered active. The Newport-Inglewood fault zone is a structural zone that trends northwest from Newport Bay to Beverly Hills, a distance of approximately 42 miles. This fault can be seen on the surface as a series of low, discontinuous hills and ridges. The proposed project site is also near the Palos Verdes fault, which has potential to generate major ground motion. The San Andreas fault, over 50 miles northeast of the bridge site, could also generate major ground motion in the action vicinity.

Landslides

The occurrence of slope failures, such as landslides, can be influenced by a number of factors, including slope grade, soil moisture, vegetation cover, the physical nature and competency of surface and subsurface materials, and the presence of a triggering mechanism (e.g., a seismic event). There are no mapped landslides located at the proposed bridge site.

Liquefaction

Liquefaction is the phenomenon whereby soils lose shear strength and exhibit fluid-like flow characteristics. Liquefaction is generally associated with seismic ground shaking and occurs primarily in loose, unconsolidated and saturated (or near saturated) granular (sandy) materials at depths of less than approximately 100 feet. Settlement and shifting of surficial deposits as a result of liquefaction can substantially affect structures and foundations due to the loss of support.

Based on the widespread occurrence of sandy alluvial materials within the proposed project vicinity and the anticipated presence of shallow groundwater, the proposed project would be subject to potential effects related to seismically induced liquefaction. The proposed bridge would be located in a liquefaction hazard zone as indicated by the Seismic Hazards Map for the Newhall Quadrangle (Figure 2.8-2). This hazard zone includes much of the Santa Clara River.

2.8.3 Environmental Effects

Alternative 1: Bridge Alternative

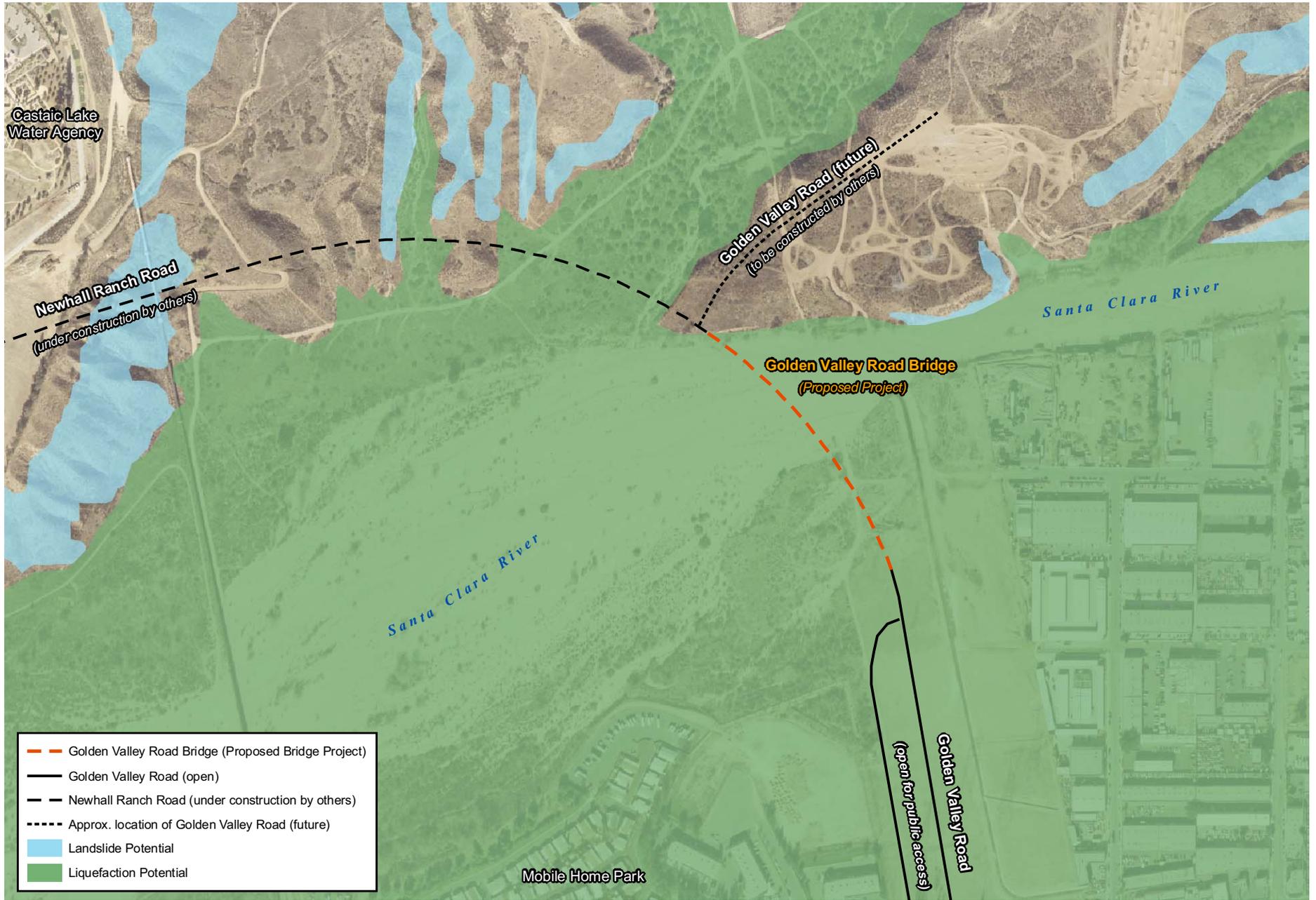
Faults and Seismicity

No faults have been mapped in or within the immediate vicinity of the proposed action, and the proposed bridge does not lie in an Alquist-Priolo Earthquake Fault Zone.

Consequently, the site is not considered subject to surface rupture and soil cracking. The potential for surface rupture and soil cracking from distant active sources is likewise negligible. There is some potential for seismic settlement to result from future seismic events; however, mitigation measure GEO-A (described below) would reduce these effects below an adverse level.

Liquefaction and Lateral Spreading Potential

The bridge is located in a liquefaction hazard zone (see Figure 2.8-2) as identified on the California Division of Mines (CDMG) Seismic Hazard Zones map, requiring that the



Source: City of Santa Clarita, 2002, 2005

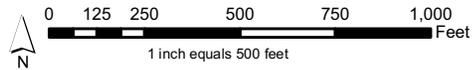


Figure 2.8-2
Liquefaction and Landslide Potential

design and construction comply with Public Resources Code Section 2693(c). Adherence to the CDMG requirements and Caltrans' statutory requirements for soils potentially subject to liquefaction and lateral spreading would reduce the effects of liquefaction.

Expansive Soils

There is potential for the fine-grained units of the Saugus Formation to be expansive. Furthermore, artificial fill at the proposed bridge site may also contain potentially expansive material. Geotechnical investigations during design, as required in mitigation measure GEO-B (described below), would confirm the presence and determine the appropriate treatment of any expansive soils. The recommendations may include standard measures for removing, replacing, or treating unsuitable materials. Inclusion of mitigation measures GEO-B and GEO-C (described below) would reduce the potentially adverse effects from expansive soils.

Seiche, Tsunami, or Mudflow

The site lies over 25 miles from the ocean, at an elevation of approximately 1,200 feet. Consequently, the risk of inundation by tsunami is considered negligible.

As discussed in Section 2.6, Castaic Reservoir lies approximately 7.5 miles northwest of the bridge site and Bouquet Canyon Reservoir is just over 12 miles northeast of the bridge site. According to the Flood and Inundation Hazards map (Plate 6) in the County of Los Angeles' General Plan Safety Element (1990), the proposed bridge site is located outside of the inundation area for both Castaic Lake and Bouquet Canyon Reservoir. Consequently, there would be no risk that the bridge would be inundated by a seiche.

The proposed project site is located within the direct influences of the Santa Clara River; therefore, the potential for mud or debris flows to affect the proposed project site does exist. However, the proposed bridge would be constructed to withstand the 100-year flood requirements as determined by FEMA. Mitigation measure GEO-D (described below) would reduce the effects of debris and mud flow to below adverse levels.

Alternative 2: No Build Alternative

The No Build Alternative would result in continued use of the site in its current condition. The existing geological conditions and associated hazards would remain; however, as the proposed bridge would not be constructed, no new structures or populations would be exposed to seismic or other geological hazards. Consequently, there would be no adverse effect related to geological, soils, or seismic hazards from the No Build Alternative.

2.8.4 Avoidance, Minimization, and/or Mitigation Measures**Alternative 1: Bridge Alternative**

Effects related to geology, soils, and seismic hazards would be lessened through the implementation of the following mitigation measures:

GEO-A A geological engineer certified within the State of California shall evaluate the potential for seismic settlement (dynamic densification) during future seismic events in the alluvial and slopewash areas of the site and shall provide recommendations to minimize the effects of seismic settlement on the proposed bridge. The results of this assessment shall be incorporated into the bridge design. Prior to construction commencement, the City of Santa Clarita's Director of Public Works shall certify, on the final bridge plans and specifications, that this requirement has been met. The City's Director of Public Works shall sign and date this statement.

GEO-B A geological engineer certified within the State of California shall evaluate the hydroconsolidation (consolidation of earth materials upon wetting) potential of the thick slopewash deposits and portions of the alluvium and shall provide recommendations to minimize the deleterious effects of hydroconsolidation on the proposed bridge. The results of this assessment shall be incorporated into the bridge design. Prior to construction commencement, the City of Santa Clarita's Director of Public Works shall certify, on the final bridge plans and

specifications, that this requirement has been met. The City's Director of Public Works shall sign and date this statement.

GEO-C Prior to construction commencement, a geological engineer shall test for and identify expansive materials located within the bridge's abutments and piers. During excavation and grading, expansive soils shall be replaced with materials that have very low to nonexpansive characteristics, as defined by Caltrans Offices of Geotechnical Design; alternatively, the expansive soil may be treated with additives to lower the expansion index, as approved by Caltrans specifications. The bridge engineers and geological engineers shall provide input on the recommended treatment; however, the final decision shall be at the discretion of the City of Santa Clarita's Director of Public Works, who shall certify, on the final bridge plans and specifications, that this requirement has been met by completing the following statement: "Expansive materials have been identified in the areas shown on the attached plan and remediated/treated as follows:..." The City's Director of Public Works shall sign and date this statement.

GEO-D The City of Santa Clarita shall design the bridge to minimize potential debris flow hazards. This shall be achieved by selecting appropriate structural locations, constructing effect or debris walls and/or debris basins, control of runoff, or removal of loose surficial materials. The City Department of Public Works shall document the technique used to minimize potential debris flow hazards on the final plans and shall sign and date this statement.

Alternative 2: No Build Alternative

There would be no adverse effects on geology, soils, seismicity, and topography as a result of the No Build Alternative; consequently, no avoidance, minimization, and/or mitigation measures are proposed.

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2.9 HAZARDOUS WASTE AND MATERIALS

This section addresses the potential for the proposed project to expose people to hazards and hazardous wastes. The following discussion focuses on the potential for hazardous materials to affect public health and safety during construction and operation of the proposed bridge. An Initial Site Assessment (ISA) for hazardous waste sites was prepared in June 2006 for the Golden Valley Bridge Project as found in Appendix F. The report identifies possible sources of hazards and hazardous waste and discusses their potential effect on the proposed project, as well as outlining mitigation measures to address their effects.

2.9.1 Regulatory Setting

Hazardous materials and hazardous wastes are regulated by state and federal laws, which not only include specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for “cradle to grave” regulation of hazardous wastes. Other federal laws include:

- Community Environmental Response Facilitation Act of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety & Health Act
- Atomic Energy Act
- Toxic Substances Control Act
- Federal Insecticide, Fungicide, and Rodenticide Act

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of RCRA and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project-related construction activities.

Hazardous substances are defined by state and federal regulations as substances that must be regulated to protect public health and the environment. Typical hazardous substances are toxic, corrosive, ignitable, explosive, or chemically reactive. The term “hazardous substances” encompasses every chemical regulated by the U.S. Department of Transportation (USDOT), including those potentially used in an emergency response. Hazardous materials are generally chemicals that have the capacity to cause a health hazard or harm to the environment during an accidental release or mishap.

According to CCR Title 22, Chapter 11, Article 3, substances that are toxic, ignitable, corrosive, or reactive are considered hazardous. Hazardous wastes are hazardous substances that no longer have a practical use, such as materials that have been abandoned, discarded, spilled, or contaminated, or materials that are being stored prior to disposal. They are a by-product of processes and/or activities that can pose a substantial or potential hazard to human health or the environment when improperly managed.

Toxic substances may cause short-term or long-term health effects, ranging from temporary effects to permanent disability or death. Examples of toxic substances include most heavy metals, pesticides, benzene, gasoline, hexane, sulfuric acid, lye, explosives, pressurized canisters, and radioactive and biohazardous materials. Soils may also become toxic due to toxic substance spills.

2.9.2 Affected Environment

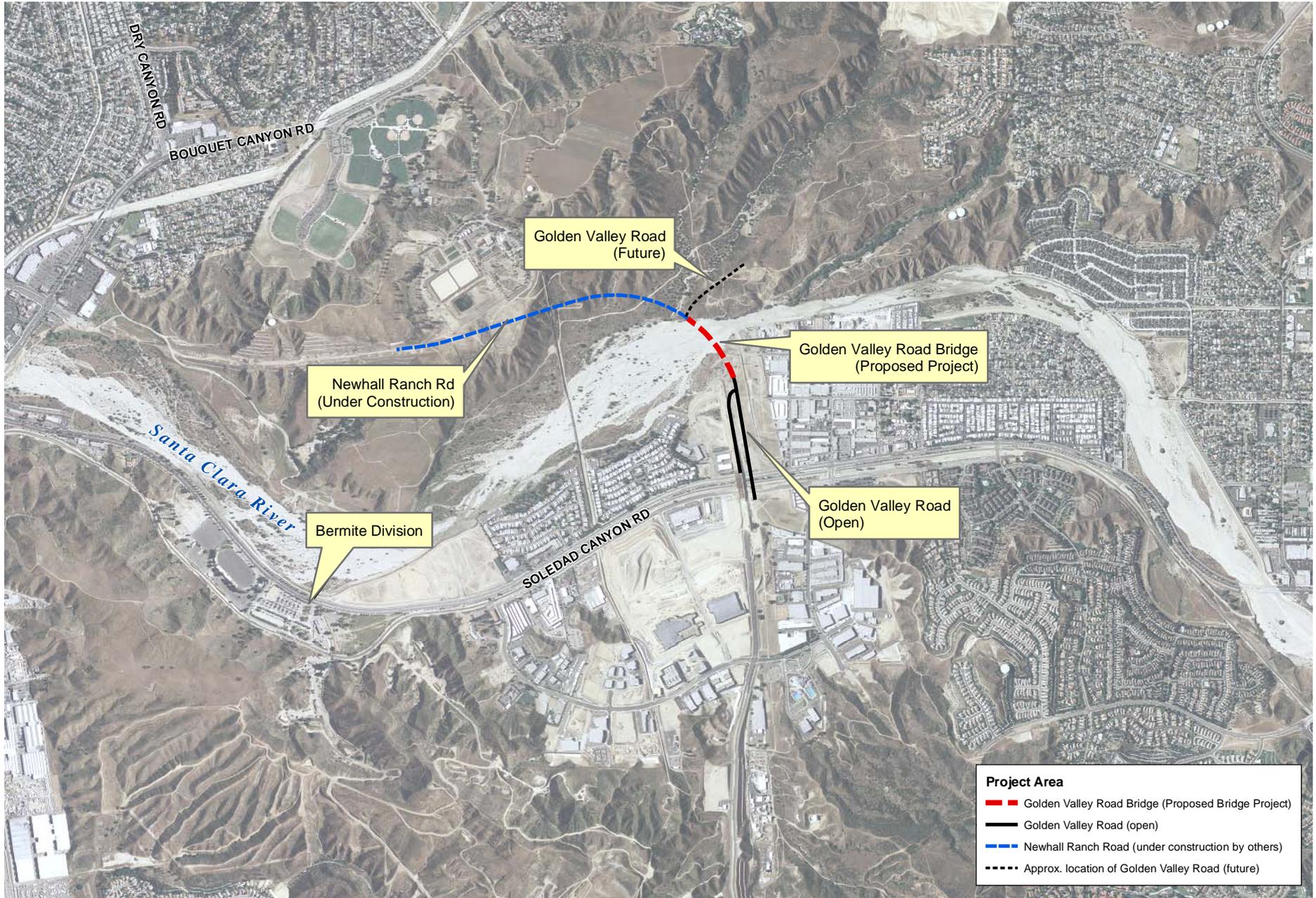
A hazards report documenting hazardous waste sites was prepared for the Golden Valley Road bridge in June 2006. All nearby state classified hazards and hazardous waste sites were identified from a governmental record list compiled by Environmental Data Resources (EDR). The records search was conducted to identify business types located within the vicinity of the action likely to store, transfer, or utilize large quantities of hazardous materials. Based on prior reports, site visits, and research information, the bridge site does not contain any known hazardous waste or concern for hazardous waste contamination. One nearby site has been identified as an “Area of Potential Concern.” The Bermite Division of Whittaker site is an active California EPA Agency Annual Workplan site located within 1/8 mile of the proposed action (Figure 2.9-1). The site may have groundwater and soil contamination and, though the proposed action would not encroach on the contaminated site, there is a possibility that contaminated groundwater may have migrated underneath the bridge site.

The June 2006 ISA also discusses a visual site survey undertaken on March 11, 2003 (EDAW 2003). Evidence of construction concrete dumping and minor amounts of trash and debris were noted in the area surrounding the bridge site.

2.9.3 Environmental Effects

Alternative 1: Bridge Alternative

Existing and past land use activities are potential indicators of hazardous material storage and use at individual sites. As noted in Section 2.9.2, the Bermite Division of the Whittaker site has been identified as an Area of Potential Concern. The Bermite site was used for the manufacturing of fireworks, explosives, rockets, and munitions. Portions of the site were also used as onsite disposal and storage for hazardous waste. Part of the Bermite site is currently in a purchase offer with the City, which plans to construct a commuter railroad station on the site. The EDR report indicates that the Bermite site is contaminated with ammonium perchlorate (perchlorate), which is an inorganic chemical widely used in the manufacture of fireworks, explosives, and rocket propellants. Several sections of the site have undergone soil mediation cleanup, which has allowed those



Source: City of Santa Clarita 2002, 2005; NAIP 2005



Figure 2-9-1
Project Location and Bermite Division of Whitaker Site

portions of the site to be used for municipal purposes, including a new Metrolink station and a school. Several studies cited in the ISA indicate that the extent and potential treatment of groundwater contamination and the observed level of perchlorate contamination decrease at a faster rate north of the Bermite site. As the proposed bridge site is north of the Bermite site, there is a low potential for encountering groundwater and perchlorate contamination when constructing the Golden Valley Road bridge. Mitigation measures HAZ-A and HAZ-B (described below) would reduce hazardous materials effects to below adverse levels.

Although groundwater contamination has not been documented in the action area, past use of the action area for agricultural purposes creates the potential to encounter groundwater contaminated with pesticides, herbicides, fertilizers, or other agricultural chemicals. If dewatering is required during construction, the City would be required to implement water quality measures, as discussed in Section 2.7.

Alternative 2: No Build Alternative

Under the No Build Alternative, there would be no construction and, consequently, no change in the risk of human exposure to hazards or hazardous materials. Under the No Build Alternative, there would be no hazards effects.

2.9.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: Bridge Alternative

HAZ-A The Bermite Division of Whittaker site is considered an Area of Potential Concern. Though low, there is the potential of encountering contaminated groundwater when constructing the Golden Valley Road bridge. If groundwater is encountered during construction, the Department of Toxic Substances Control (DTSC) shall be notified and the water shall be tested for contamination by the City of Santa Clarita. Construction techniques that minimize or eliminate the need for groundwater extraction shall be applied to the design of the bridge. Furthermore, groundwater and soils within the footprint of the proposed bridge shall be tested for perchlorate contamination during the final design of the

project. Should perchlorate be encountered, the City shall notify DTSC to obtain advice on appropriate remediation and/or treatment of the groundwater.

HAZ-B Should the City of Santa Clarita anticipate encountering groundwater during construction, a dewatering permit shall be obtained from the RWQCB prior to the start of construction. A dewatering permit covers discharges from dewatering operations and groundwater extractions.

Alternative 2: No Build Alternative

There would be no adverse effects on hazardous waste and materials as a result of the No Build Alternative; consequently, no avoidance, minimization, and/or mitigation measures are proposed.

2.10 AIR QUALITY

This section provides an assessment of potential air quality effects associated with the Golden Valley Road Bridge Project, particularly those that can be traced principally to motor vehicles and construction equipment. This evaluation addresses conformance with the State Implementation Plan (SIP), local carbon monoxide (CO) impacts, and construction emissions generated by implementation of the project. The information in this section is based on the analysis in the technical report entitled *Air Quality Impact Analysis: Golden Valley Road Bridge, Santa Clarita, California* as found in Appendix G.

“Air pollution” is a general term that refers to one or more chemical substances that degrade the quality of the atmosphere. Individual air pollutants may adversely affect human or animal health, reduce visibility, damage property, and reduce the productivity or vigor of crops and natural vegetation.

The U.S. EPA has identified the seven following air pollutants as being of concern nationwide: CO, ozone (O₃), nitrogen dioxide (NO₂), respirable particulate matter sized 10 microns or less (PM₁₀) and fine particulate matter sized 2.5 microns or less (PM_{2.5}), sulfur dioxide (SO₂), and lead (Pb).

Carbon Monoxide (CO): CO is a colorless and odorless gas that, in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. Relatively high concentrations are typically found near crowded intersections and along heavily used roadways carrying slow-moving traffic. Even under the severest meteorological and traffic conditions, high concentrations of CO are limited to locations within a relatively short distance (300 to 600 feet) of heavily traveled roadways. Overall CO emissions are decreasing because of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973. CO concentrations are typically higher in winter. As a result, California has required the use of oxygenated gasoline in the winter months to reduce CO emissions. CO interferes with the transfer of oxygen to the blood, which causes dizziness and fatigue and may also impair central nervous system functions.

Ozone (O₃): O₃ is the principal component of smog and is formed in the atmosphere through a series of reactions involving volatile organic compounds (VOC) and nitrogen oxides (NO_x) in the presence of sunlight. VOC and NO_x are called precursors of O₃. NO_x includes various combinations of nitrogen and oxygen, including NO, NO₂, nitrogen trioxide (NO₃), etc. O₃ is a principal cause of lung and eye irritation in the urban environment. Considerable O₃ concentrations are normally produced only in the summer, when atmospheric inversions are greatest and temperatures are high. VOC and NO_x emissions are both considered critical in O₃ formation. Control strategies for O₃ have focused on emissions from vehicles, industrial processes using solvents and coatings, and consumer products.

Nitrogen Dioxide (NO₂): NO₂ is a product of combustion and is generated in vehicles and in stationary sources, such as power plants and boilers. NO₂ can cause lung damage. As noted above, NO₂ is part of the NO_x family and is a principal contributor to O₃ and smog.

Respirable Particulate Matter (PM₁₀): Respirable particulate matter includes both liquid and solid particles equal to or less than 10 microns in diameter. Particulates can be inhaled and cause adverse health effects such as increased respiratory disease, lung damage, and premature death. Particulates in the atmosphere come from dust- and fume-producing industrial and agricultural operations, combustion, and atmospheric photochemical reactions. In urban areas, sources of particulates include demolition, construction, and vehicular traffic. Natural sources include windblown dust and ocean spray. Control of PM₁₀ is accomplished through controlling dust at construction sites, cleaning paved roads, and wetting or paving frequently used unpaved roads.

Fine Particulate Matter (PM_{2.5}): The sources, health effects, and control of PM_{2.5} are similar to those of PM₁₀. In 1997, the U.S. EPA determined that the health effects of PM_{2.5} were severe enough to warrant additional standards, and standards for PM_{2.5} became effective on September 15, 1997. The U.S. Supreme Court affirmed the standards, and policies and systems to implement these new standards. Formal attainment classifications for PM_{2.5} were formally published on December 17, 2004, by

the U.S. EPA (2004). The South Coast Air Basin is a nonattainment area for PM_{2.5}. The California Air Resources Board (ARB) must submit a PM_{2.5} SIP to the U.S. EPA by April 5, 2008. The PM_{2.5} attainment year for the South Coast Air Basin is 2010, with a possible 5-year extension to 2015 (SCAG 2006b).

Sulfur Dioxide (SO₂): SO₂ is a combustion product, with the primary source being power plants and heavy industry that use coal or oil as fuel. SO₂ is also a product of diesel engine combustion. The health effects of SO₂ include lung disease and breathing problems for asthmatics. SO₂ in the atmosphere contributes to the formation of acid rain. In the South Coast Air Basin, there is relatively little use of coal and oil, and SO₂ is of lesser concern than in many other parts of the country.

Lead (Pb): Pb is a stable compound that persists and accumulates both in the environment and in animals. The Pb used in gasoline anti-knock additives represents a major source of Pb emissions to the atmosphere. However, Pb emissions have greatly decreased due to the near elimination of the use of leaded gasoline.

2.10.1 Regulatory Setting

The Clean Air Act as amended in 1990 is the federal law that governs air quality, which sets the standard for the quantity of pollutants that can be in the air. These standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for the following six criteria pollutants that have been linked to potential health concerns: CO, NO₂, O₃, particulate matter (PM), Pb, and SO₂.

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

Regional level conformity in California is concerned with how well the region is meeting the standards set for CO, NO₂, O₃, and PM. California is in attainment for the other criteria pollutants. At the regional level, RTPs are developed that include all of the

transportation projects planned for a region over a period of years, usually at least twenty. Based on the projects included in the RTP, an air quality model is run to determine whether implementing those projects would conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the regional planning organization, in the case of this project, the SCAG, and the appropriate federal agencies, such as the FHWA, make the determination that the RTP is in conformity with the SIP for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to meet regional conformity requirements for purposes of project-level analysis. For approval, a project must conform with both the RTP and the Regional Transportation Improvement Program (RTIP). The current RTP, the 2006 RTP was adopted in July 2006. The air quality conformity determination for the 2006 RTP was approved October 2, 2006. The most recent version of the RTP, titled the *Final 2004 Regional Transportation Plan Amendment and 2006 Regional Transportation Improvement Program Amendment*, was adopted on February 2, 2006. The 2006 RTIP was adopted by SCAG on July 27, 2006, approved by Caltrans on August 31, 2006, and approved by FHWA/Federal Transit Administration (FTA) on October 2, 2006.

Conformity at the project-level also requires “hot spot” analysis if an area is “nonattainment” or “maintenance” for CO and/or PM. A region is a nonattainment area if one or more monitoring stations in the region fail to attain the relevant standard. Areas that were previously designated as nonattainment areas but have recently met the standard are called maintenance areas. Hot spot analysis is essentially the same, for technical purposes, as CO or PM analysis performed for NEPA and CEQA purposes. Conformity does include some specific standards for projects that require a hot spot analysis. In general, projects must not cause the CO standard to be violated, and in nonattainment areas the project must not cause any increase in the number and severity of violations. If a known CO or PM violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

Federal and State Standards

The federal Clean Air Act (42 USC §§ 7401-7671q) requires the adoption of NAAQS to protect the public health and welfare from the effects of air pollution. The NAAQS have been updated as needed. Current standards are set for SO₂, CO, NO₂, O₃, PM₁₀, PM_{2.5}, and Pb. The ARB has established additional standards that are generally more stringent than the NAAQS. Both federal and state standards are shown in Table 2.10-1.

Areas are classified under the federal Clean Air Act as either attainment or nonattainment areas for each criteria pollutant based on whether the NAAQS have been achieved or not. The Los Angeles County portion of the air basin is currently classified as a federal and state nonattainment area for O₃, CO, and PM₁₀; the air basin currently meets the federal and state standards for NO₂, SO₂, and Pb and is classified as an attainment area for these pollutants.

Regional Authority

In the South Coast Air Basin, the South Coast Air Quality Management District (SCAQMD) is the agency responsible for the administration of federal and state air quality laws, regulations, and policies. Included in the SCAQMD's tasks are monitoring of air pollution, preparation of the SIP for the South Coast Air Basin, and the promulgation of its Rules and Regulations. The SIP includes strategies and tactics to be used to attain the federal O₃ standard in the Los Angeles – South Coast Air Basin area. The SIP elements are taken from the 2003 Air Quality Management Plan (AQMP), the SCAQMD plan for attaining the state O₃ standard (ARB 2003). The Rules and Regulations include procedures and requirements to control the emission of pollutants and to prevent adverse effects. SCAQMD regulations require that any equipment that emits or controls air contaminants, such as NO_x and reactive organic compounds (ROC), be permitted prior to construction, installation, or operation (Permit to Construct or Permit to Operate). The SCAQMD is responsible for review of applications and for the approval and issuance of these permits.

**Table 2.10-1
California and National Ambient Air Quality Standards**

Pollutant	Averaging Time	NAAQS ¹		CAAQS ²
		Primary ³	Secondary ⁴	Concentration ⁵
Ozone (O ₃)	1-Hour	Note 6	-	0.09 ppm (180 µg/m ³)
	8-Hour	0.08 ppm (157 µg/m ³)	Same as Primary Standard	0.070 ppm (137 µg/m ³)
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m ³)	None	9.0 ppm (10 mg/m ³)
	1-Hour	35 ppm (40 mg/m ³)		20 ppm (23 mg/m ³)
Nitrogen Dioxide (NO ₂)	Annual Average	0.053 ppm (100 µg/m ³)	Same as Primary Standard	-
	1-Hour	-		0.25 ppm (470 µg/m ³)
Sulfur Dioxide (SO ₂)	Annual Average	0.03 ppm (80 µg/m ³)	-	-
	24-Hour	0.14 ppm (365 µg/m ³)	-	0.04 ppm (105 µg/m ³)
	3-Hour	-	0.5 ppm (1300 µg/m ³)	-
	1-Hour	-	-	0.25 ppm (655 µg/m ³)
Suspended Particulate Matter (PM ₁₀)	24-Hour	150 µg/m ³ note 9	-	50 µg/m ³
	Annual Arithmetic Mean	50 µg/m ³	Same as Primary Standard	20 µg/m ³ note 7
Fine Particulate Matter (PM _{2.5})	24-Hour	65 35 µg/m ³ note 10	-	-
	Annual Arithmetic Mean	15 µg/m ³	Same as Primary Standard	12 µg/m ³ note 7
Lead (Pb) ⁸	30-Day Average	-	-	1.5 µg/m ³
	Calendar Quarter	1.5 µg/m ³	Same as Primary Standard	-
Hydrogen Sulfide (HS)	1-Hour	No Federal Standards		0.03 ppm (42 µg/m ³)
Sulfates (SO ₄)	24-Hour			25 µg/m ³
Visibility Reducing Particles	8-Hour (10 am to 6 pm, Pacific Standard Time)			In sufficient amount to produce an extinction coefficient of 0.23 per km due to particles when the relative humidity is less than 70 percent.
Vinyl chloride ⁸	24-Hour			0.01 ppm (26 µg/m ³)

¹ NAAQS (other than O₃, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O₃ standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is not to be exceeded more than once per year. The annual standard is attained when the 3-year average of the weighted annual mean at each monitor within an area does not exceed 50 µg/m³. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, do not exceed 65 µg/m³. The annual standard is attained when the 3-year average of the weighted annual mean at single or multiple community-oriented monitors does not exceed 15 µg/m³.

² California Ambient Air Quality Standards for O₃, CO (except Lake Tahoe), SO₂ (1- and 24-hour), NO₂, PM₁₀, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equalled or exceeded.

³ National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

⁴ National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

⁵ Concentration expressed first in units in which it was promulgated. Ppm in this table refers to ppm by volume or micromoles of pollutant per mole of gas.

⁶ The federal 1-hour O₃ standard was revoked for most areas of the United States, including all of California on June 15, 2005.

⁷ On June 5, 2003, the Office of Administrative Law approved the amendments to the regulations for the state ambient air quality standards for particulate matter and sulfates. Those amendments established a new annual average standard for PM_{2.5} of 12 µg/m³ and reduced the level of the annual average standard for PM₁₀ to 20 µg/m³. The approved amendments were filed with the Secretary of State on June 5, 2003. The regulations became effective on July 5, 2003.

⁸ The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

⁹ The EPA has revoked the annual standard for PM₁₀; the revocation was effective December 18, 2006

¹⁰ The 24-hour standard for PM_{2.5} has been reduced from 65 µg/m³ to 35 µg/m³, effective December 18, 2006.

ppm = parts per million; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; km = kilometer
Source: ARB 2006b; USEPA 2006

SCAQMD's AQMP and SIP

The current AQMP in the South Coast Air Basin is the 2003 AQMP, which is an update to the 1997 AQMP. The 2003 AQMP employs up-to-date science and analytical tools and incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on-road and off-road mobile sources, and area sources. The 2003 AQMP proposes policies and measures to achieve federal and state standards for healthful air quality in the South Coast Air Basin. The 2003 AQMP updates the demonstration of attainment with the federal standards for O₃ and PM₁₀; replaces the 1997 attainment demonstration for the federal CO standard and provides a basis for a maintenance plan for CO for the future; and updates the maintenance plan for the federal NO₂ standard that the South Coast Air Basin has met since 1992 (SCAQMD 2006). The 2003 AQMP was adopted by the SCAQMD in August 2003 and approved, with modifications, by the ARB in October 2003 (ARB 2003). The U.S. EPA is reviewing the 2003 AQMP and approval is pending.

SCAQMD Significance Criteria

The SCAQMD has established thresholds of significance for air quality for construction activities and project operation (Table 2.10-2). Only the thresholds for construction activities are applicable to this project.

**Table 2.10-2
SCAQMD Air Quality Significance Thresholds**

Mass Daily Thresholds		
Pollutant	Construction	Operation
NO _x	100 lbs/day	55 lbs/day
VOC ¹	75 lbs/day	55 lbs/day
PM ₁₀	150 lbs/day	150 lbs/day
SO _x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs) and Odor Thresholds		
TACs (including carcinogens and noncarcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Hazard Index ≥ 1.0 (project increment) Hazard Index ≥ 3.0 (facilitywide)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	

Ambient Air Quality for Criteria Pollutants	
NO ₂ 1-hour average annual average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.25 ppm (state) 0.053 ppm (federal)
PM ₁₀ 24-hour average annual geometric average annual arithmetic mean	10.4 µg/m ³ (recommended for construction) 2.5 µg/m ³ (operation) 1.0 µg/m ³ 20 µg/m ³
Sulfate 24-hour average	25 µg/m ³
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) 9.0 ppm (state/federal)

lbs/day = pounds per day; ppm = parts per million; µg/m³ = micrograms per cubic meter

¹VOC – volatile organic compounds. For purposes of this report, VOC are the same as ROC, and ROC is the term used for this report.

Source: SCAQMD 2006

Conformity of Federal Actions

The Clean Air Act Amendments of 1990 (Pub. L. 101-549, 104 Stat. 2399) require the U.S. EPA to promulgate rules to ensure that federal actions conform to the appropriate SIP. These rules, known together as the General Conformity Rule (40 CFR § 51.100 et seq. and § 93.100 et seq.), require any federal agency responsible for an action to determine if its action conforms with pertinent guidelines and regulations.

Section 176(c) of the Clean Air Act requires the following:

“No department, agency, or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve, any activity which does not conform to an implementation plan after it has been approved....

Conformity to an implementation plan means:

- (A) conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards; and
- (B) that such activities will not
 - (i) cause or contribute to any new violation of any standard in any area;
 - (ii) increase the frequency or severity of any existing violation of any standard in any area; or
 - (iii) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.”

The determination of conformity shall be based on the most recent estimates of emissions, and such estimates shall be determined from the most recent population, employment, travel, and congestion estimates as determined by the metropolitan planning organization or other agency authorized to make such estimates.

In November 1993, the USDOT and U.S. EPA developed guidance for determining conformity of transportation plans, programs, and projects. This guidance is denoted as the Transportation Conformity Rule (40 CFR §§ 51.390-464 and 40 CFR §§ 93.100-136).

SCAG is the metropolitan planning organization responsible for the preparation of regional plans regarding transportation and the associated air quality analyses. The regional plans are the RTP and RTIP. The current RTP, the 2006 RTP, was adopted in July 2006. The air quality conformity determination for the 2006 RTP was approved October 2, 2006. The most recent version of the RTP, titled the *Final 2004 Regional Transportation Plan Amendment and 2006 Regional Transportation Improvement Program Amendment*, was adopted on February 2, 2006. SCAG is currently soliciting input for the 2007 RTP (SCAG 2006a). The 2006 RTIP was adopted by SCAG on

July 27, 2006, approved by Caltrans on August 31, 2006, and approved by FHWA/FTA on October 2, 2006.

2.10.2 Affected Environment

Meteorology and Climate

Air quality is affected by both the rate and location of pollutant emissions and by meteorological conditions, which influence movement and dispersal of pollutants. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients, along with local topography, provide the link between air pollutant emissions and air quality.

The distinctive climate of the South Coast Air Basin is determined by its terrain and geographic location. The South Coast Air Basin is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the southwest and high mountains around the rest of its perimeter. The general region lies in the semipermanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds.

The vertical dispersion of air pollutants in the air basin is hampered by the presence of persistent temperature inversions. High-pressure systems, such as the semipermanent high-pressure zone in which the air basin is located, are characterized by an upper layer of dry air that warms as it descends, restricting the mobility of cooler marine-influenced air near the ground surface, and resulting in the formation of subsidence inversions. Such inversions restrict the vertical dispersion of air pollutants released into the marine layer and, together with strong sunlight, can produce worst-case conditions for the formation of photochemical smog. The basinwide occurrence of inversions at 3,500 feet above sea level or less averages 191 days per year (SCAQMD 1993).

The atmospheric pollution potential of an area is largely dependent on winds, atmospheric stability, solar radiation, and terrain. The combination of low wind speeds

and low inversions produces the greatest concentration of air pollutants. On days without inversions, or on days of winds averaging over 15 miles per hour, smog potential is greatly reduced.

Santa Clarita is located in Los Angeles County north of the San Fernando Valley, surrounded by the Santa Susana and San Gabriel mountain ranges on the southeast and west, and the Sierra Pelona Mountains on the north. Santa Clarita is situated in the transitional microclimatic zone of the South Coast Air Basin, located between two climate types, known as “valley marginal” and “high desert.” Due to the city’s location, it usually escapes the damp coastal air and fog. The summers are typically hot and the winters are typically sunny and warm.

Santa Clarita’s climate is relatively mild. Annual average daytime temperatures range from 89.7 degrees Fahrenheit (°F) in summer to 63.6°F in winter. Low temperatures average 58.9°F in summer to 41.3 °F in winter. Annual precipitation of Santa Clarita is 13.10 inches, which occurs almost exclusively between late October and April (WRCC 2004).

Regional and Local Air Quality

Specific geographic areas are classified as either attainment or nonattainment areas for each pollutant based upon the comparison of measured data with federal and state standards. As previously mentioned, the Los Angeles County portion of the air basin is currently classified as a federal and state nonattainment area for O₃, PM₁₀, and PM₁₀. The entire air basin is currently classified as a federal and state attainment area for NO₂, SO₂, and Pb pollutants (Table 2.10-3).

Ambient air pollutant concentrations in Los Angeles County are measured at 13 air quality monitoring stations operated by the SCAQMD. The nearest air quality monitoring station to the project site is the Santa Clarita Air Quality Monitoring Station 089 (Santa Clarita Station), which is located at 24875 San Fernando Road, approximately 2.5 miles southwest of the project site. Table 2.10-4 presents a summary of the highest pollutant values recorded at this station from 2003 to 2005.

**Table 2.10-3
Attainment for Los Angeles County Portion
of the South Coast Air Basin**

Pollutant	Attainment Status	
	Federal	State
O ₃ 8-Hour	Nonattainment Severe	Nonattainment
CO	Serious Nonattainment ¹	Attainment
PM ₁₀	Serious Nonattainment	Nonattainment
PM _{2.5}	Nonattainment	Nonattainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment
Pb	Attainment	Attainment

¹ Redesignation to attainment was submitted to the U.S. EPA for approval in February 2006.
Source: U.S. EPA 2006; ARB 2006b

**Table 2.10-4
Santa Clarita Monitoring Station – Ambient Air Quality**

Pollutant Standards	2003	2004	2005
Ozone (O₃)			
Maximum 1-hour concentration (ppm)	0.194	0.158	0.173
Maximum 8-hour concentration (ppm)	0.152	0.133	0.141
Number of Days Standard Exceeded			
NAAQS 1-hour (>0.12 ppm)	35	13	11
CAAQS 1-hour (>0.09 ppm)	89	69	65
NAAQS 8-hour (>0.08 ppm)	69	52	47
Carbon Monoxide (CO)			
Maximum 8-hour concentration (ppm)	1.7	3.7	1.3
Maximum 1-hour concentration (ppm)	3.3	5.2	2.2
Number of Days Standard Exceeded			
NAAQS 8-hour (≥9.0 ppm)	0	0	0
CAAQS 8-hour (≥9.0 ppm)	0	0	0
NAAQS 1-hour (≥35 ppm)	0	0	0
CAAQS 1-hour (≥20 ppm)	0	0	0
Particulate Matter (PM₁₀)¹			
National maximum 24-hour concentration (μg/m ³)	72.0	54.0	55.0
National second highest 24-hour concentration (μg/m ³)	67.0	52.0	44.0
State maximum 24-hour concentration (μg/m ³)	69.0	52.0	52.0
State second highest 24-hour concentration (μg/m ³)	64.0	49.0	42.0
National annual average concentration (μg/m ³)	31.8	28.1	25.6
State annual average concentration (μg/m ³)	30.3	26.8	24.7
Number of Days Standard Exceeded			
NAAQS 24-hour (>150 μg/m ³) ²	0	0	0
CAAQS 24-hour (>50 μg/m ³) ²	46.6	6.5	6.1

¹ Measurements usually collected every 6 days.

² Based on an estimate of how many days concentrations would have been greater than the standard because samples are collected once every 6 days.

CAAQS = California Ambient Air Quality Standards

NAAQS = National Ambient Air Quality Standards

Sources: ARB 2006b; U.S. EPA 2006

2.10.3 Environmental Effects

Alternative 1: Bridge Alternative

Construction Effects

SCAQMD has established thresholds of significance for air quality for construction activities and project operation as shown in Table 2.10-5. Only the thresholds pertaining to construction are applicable to this project.

**Table 2.10-5
SCAQMD Air Quality Significance Thresholds**

Mass Daily Thresholds		
Pollutant	Construction	Operation
NO _x	100 lbs/day	55 lbs/day
VOC ¹	75 lbs/day	55 lbs/day
PM ₁₀	150 lbs/day	150 lbs/day
SO _x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs) and Odor Thresholds		
TACs (including carcinogens and noncarcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Hazard Index ≥ 1.0 (project increment) Hazard Index ≥ 3.0 (facilitywide)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants		
NO ₂ 1-hour average annual average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.25 ppm (state) 0.053 ppm (federal)	
PM ₁₀ 24-hour average annual geometric average annual arithmetic mean	10.4 µg/m ³ (recommended for construction) 2.5 µg/m ³ (operation) 1.0 µg/m ³ 20 µg/m ³	
Sulfate 24-hour average	25 µg/m ³	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) 9.0 ppm (state/federal)	

lbs/day = pounds per day; ppm = parts per million; µg/m³ = micrograms per cubic meter

¹ VOC – volatile organic compounds. For purposes of this report, VOC are the same as ROC, and ROC is the term used for this report.

Source: SCAQMD 2006

The principal sources of pollutant emissions during construction are fugitive dust and engine exhaust from construction equipment. Fugitive dust would be created during site clearing, excavation, and grading; vehicle travel on paved and unpaved roads; and material blown from unprotected graded areas, stockpiles, and haul trucks. Fugitive dust includes PM₁₀ and PM_{2.5}, which are potential health hazards and often contribute to visibility and nuisance effects that occur when dust from construction activities is deposited on residences, vehicles, and vegetation. In construction equipment exhaust, the principal pollutants of concern are NO_x and ROC, the primary constituents in the formation of O₃, a pollutant for which the region is currently considered in nonattainment.

Table 2.10-6 presents the estimated daily emissions from construction of the bridge. No mitigation or emission reduction measures have been included in the calculations.

**Table 2.10-6
Estimated Bridge Construction Emissions**

Project Phases¹	ROC (lbs/day)	CO (lbs/day)	NO_x (lbs/day)	PM₁₀² (lbs/day)
Grubbing/Land Clearing	8	40	44	17
Grading/Excavation	9	49	55	18
Drainage/Utilities/Sub-Grade	9	44	47	18
Paving	4	18	27	2
Maximum	9	49	55	18
SCAQMD CEQA Significance Threshold	75	550	100	150
Threshold exceeded?	No	No	No	No

¹ Assumes construction start in 2007 with duration of 12 months.

² Assumes 3 acres of disturbance per day; 10 acres of total disturbed area; 1 water truck.

Source: Sacramento Air Quality Management District, Road Construction Model 5.1

Toxic Air Contaminants (TACs): Diesel Exhaust Emissions: The only TAC of concern for the proposed project would be particulate exhaust emissions from diesel-fueled engines (diesel PM). Construction of the proposed project would generate diesel PM emissions from the use of off-road diesel equipment for site grading and excavation, paving, and other construction activities. According to ARB, the potential cancer risk from the inhalation of diesel PM, as discussed below, outweighs the potential noncancer health effects (ARB 2003).

Because the use of mobilized equipment would be temporary and the nearest receptors are more than 900 feet from the project site, short-term construction activities would not expose sensitive receptors to substantial TAC concentrations and the effect would not be adverse.

Odors: Minor sources of odors would be present during construction of the bridge. The predominant source of power for construction equipment is diesel engines. Exhaust odors from diesel engines, as well as emissions associated with asphalt paving, may be considered offensive to some individuals. However, because odors would be temporary and would disperse rapidly with distance from the source, construction-generated odors would not result in the frequent exposure of receptors to objectionable odorous emissions. As a result, construction-related odors would not be adverse.

Operational Effects

RTIP and RTP Conformity: The proposed project conforms to both the RTP and the RTIP. The proposed project is included in *Destination 2030: 2004 Regional Transportation Improvement Program (RTP) Appendix I, Project Lists*, on page I-31, as Santa Clarita project LA0B103 - Construct Golden Valley Road from Soledad Canyon to Newhall Ranch Road. 0 to 6 lanes. Less than 0.5 miles - includes bridge over Santa Clara River (SCAG 2006a). The RTP was approved by federal agencies on October 2, 2006, and the USDOT adopted a Clean Air Act conformity determination for the RTIP on that date (SCAG 2006a).

The proposed project is also included in *Final Adopted 2006 Regional Transportation Improvement Program (RTIP)* on page 32, of the Los Angeles County Local Highways Section, as Santa Clarita project LA0B103 - Construct Golden Valley Road from Soledad Canyon to Newhall Ranch Road. 0 to 6 lanes. Less than 0.5 miles - includes bridge over Santa Clara River (SCAG 2006a). The RTIP was approved by federal agencies on October 2, 2006, and the USDOT adopted a Clean Air Act conformity determination for the RTIP on that date (USDOT 2006).

The proposed project is consistent with the description included in the 2006 RTIP and therefore conforms to the RTIP and RTP. Approval of the 2006 RTIP and its air quality conformity analysis by the FHWA and FTA means that the proposed project conforms to the RTIP and RTP.

Carbon Monoxide: The project site is in a federal CO and PM₁₀ nonattainment areas, and, consequently, the project must be evaluated for CO and PM₁₀ effects at a project level. The *Transportation Project-Level Carbon Monoxide Protocol, UCD-ITS-97-21* (the Protocol), University of California, Davis, December 1997 (UC Davis Institute of Transportation Studies 1997) provides procedures and guidelines for use by agencies to evaluate the potential local level CO effects of a transportation project. Per the Protocol, the project is satisfactory for local CO concentrations and no further analysis is required. A description of the process used to reach this conclusion is provided in the *Air Quality Impact Analysis: Golden Valley Road Bridge, Santa Clarita, California* (EDAW 2006c).

Particulate Matter - PM₁₀ and PM_{2.5}: A hot spot analysis is defined in 40 CFR 93.101 as an estimation of likely future localized PM_{2.5} or PM₁₀ pollutant concentrations and a comparison of those concentrations to the relevant air quality standards. A hot spot analysis assesses the air quality effects on a scale smaller than an entire nonattainment or maintenance area, including, for example, congested roadway intersections and highways or transit terminals. Such an analysis is a means of demonstrating that a transportation project meets Clean Air Act conformity requirements to support state and local air quality goals with respect to potential localized air quality effects. When a hot spot analysis is required, it is included within the project-level conformity determination made by the FHWA or FTA.

Based on the project traffic report (Katz, Okitsu & Associates 2005), a conservative estimate of the maximum Average Annual Daily Traffic (AADT) on Newhall Ranch Road/Golden Valley Road is 50,000. Further, a diesel truck traffic fraction on the roadway is likely 2 to 3 percent. Therefore, the Golden Valley Road Bridge Project is not a project of air quality concern, and no qualitative PM₁₀ or PM_{2.5} analysis is required by the FHWA.

Mobile Source Air Toxics (MSAT)

The proposed project would have a low potential for MSAT effects. This assessment is based on FHWA guidance that, although the proposed project would result in a new road, the proposed bridge would not convey the minimum 140,000 AADT required to trigger the MSAT requirements (FHWA 2006). Further, there are no sensitive receptors near the planned Golden Valley Road bridge. The closest existing residential receptors are more than 900 feet away. The closest planned residential development is approximately 800 feet away, and the closest commercial/industrial development is approximately 500 feet away.

Operation of the bridge, particularly as it completes the CVC, would divert traffic from other roads and thus decrease MSAT emissions elsewhere. The U.S. EPA's national control programs are projected to reduce MSAT emissions by 57 to 87 percent between 2000 and 2020. Although there may be local variations in these emissions rates, the magnitude of the U.S. EPA-projected reductions is so great that even after accounting for an increase in the average number of miles driven, MSAT emissions in the study area are likely to decrease in the future in nearly all cases.

Alternative 2: No Build Alternative

The proposed action is needed to improve local circulation, primarily by allowing existing and projected future traffic to avoid Soledad Canyon Road and Bouquet Canyon Road. The proposed Golden Valley Road bridge would connect Newhall Road and Golden Valley Road and provide a continuous roadway throughout Santa Clarita. This east-west connection would help alleviate traffic congestion at local intersections. Without the proposed bridge project, even with the assumed completion of Santa Clarita Parkway, the LOS at Bouquet Canyon Road/Newhall Ranch Road would decline to LOS E during the morning peak hour. LOS at San Fernando Road/Soledad Canyon Road during the morning peak hour would remain at LOS D. Both intersections would decline to LOS F during the evening peak hour, while LOS at other local intersections with Santa Clarita Parkway would range from A to D for each peak hour. Without the proposed project, traffic conditions at these intersections are anticipated to deteriorate to

unacceptable LOS. As future intersection operation worsens with increased traffic, contributions of regional and local emissions would also worsen. With the projected increases in traffic volumes and the potential for a No Build Alternative, the degradation of local air quality is probable.

2.10.4 Avoidance, Minimization, and/or Mitigation Measures

There would be no adverse effects on air quality as a result of the Bridge Alternative or the No Build Alternative; consequently, no avoidance, minimization, and/or mitigation measures are proposed.

BIOLOGICAL RESOURCES

A Natural Environment Study Report for the proposed Golden Valley Road Bridge Project was prepared in October 2006 as found in Appendix H. Biological investigations on the project site were guided by correspondence with the relevant resource agencies. Letters were transmitted to the USFWS and the CDFG requesting agency input regarding sensitive species potentially occurring within the project corridor. The response letters from each of these agencies directed the type and breadth of survey requirements (see Appendix A). The area surveyed for biological resources, known as the biological study area (BSA), is defined as a 500-foot buffer zone that surrounds the centerline of the proposed bridge. The BSA encompasses 58.38 acres. Field analyses included vegetation classification, focused species surveys for arroyo toad and California gnatcatcher biological species reconnaissance, and jurisdictional wetland delineations.

The proposed project is located within the Significant Ecological Area (SEA) number 23 (City 2003). SEA 23 is defined by areas of high biological value within the city limits and managed by the City. These areas were characterized by the County of Los Angeles and adopted by the City as buffer zones for native ecological resources.

As discussed in Section 1.5, the proposed bridge is located within the confines of the NRMP. The proposed project has been designated as NRMP Project #109. The NRMP serves as a long-term management plan for infrastructure projects, such as the proposed project, expected to affect the Santa Clara River and its associated tributaries. An EIS/EIR for the NRMP was approved by the ACOE, RWQCB, and CDFG, and the City is complying with the requirements of the associated Section 404 and 1600 permits issued by the ACOE and CDFG, respectively. Consequently, no permits will be applied for under this EA and there is no discussion in this section of any applications for these permits. The mitigation measures outlined in the NRMP Mitigation Monitoring and Reporting Program (MMRP) are referenced throughout the following sections and included as Appendix I to this EA.

2.11 NATURAL COMMUNITIES

2.11.1 Regulatory Setting

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the FESA are discussed in Section 2.15, Threatened and Endangered Species and Wetlands and Waters of the U.S. are discussed in Section 2.12.

2.11.2 Affected Environment

Vegetation types or communities are assemblages of plant species that usually coexist in the same area. The classifications of vegetation communities in this document correspond with the CDFG manual (2003) and/or Holland (1986) and are based upon the life form of the dominant species within each community and the associated flora. Vegetation types within the Area of Effect (AE) consist primarily of one wetland/riparian community, southern riparian scrub, and one upland scrub community, big sagebrush scrub that border the wetlands within the AE. The remaining two habitat/land cover types present in the AE are nonwetland waters of the U.S. within the river, and disturbed ruderal habitat (Table 2.11-1). In addition, holly-leaf cherry scrub, a native upland community, and disturbed habitat, a nonnative land cover type, occur within the northern portions of the BSA, but outside of the AE; consequently, although they occur close to the bridge site, they would not be directly affected by construction of the bridge.

**Table 2.11-1
Vegetation Communities within the Biological Study Area**

Vegetation Community	Within BSA in acres	Within AE in acres
Disturbed Riversidian Coastal Sage Scrub	4.38	--
Holly-Leaf Cherry Scrub	2.48	--
Big Sagebrush Scrub	0.96	0.15
Southern Riparian Scrub	15.81	2.24
Ruderal	14.47	0.02
Disturbed Habitat	0.88	--
Nonwetland Waters of the U.S.	19.40	2.07
TOTAL	58.38	4.48

Native Communities

Riversidian Coastal Sage Scrub - Disturbed

Riversidian coastal sage scrub is an upland native community. Coastal sage scrub is one of the major shrub-dominated (scrub) communities within California. This community occurs on xeric sites with shallow soils. Sage scrub species are typically drought-deciduous plants with shallow root systems. Both of these adaptations allow for the occurrence of sage scrub species on these xeric sites.

Within Los Angeles County, there are several recognized subassociations of Riversidian coastal sage scrub based upon the dominant species. Approximately 4.38 acres of disturbed Riversidian coastal sage scrub occur within the BSA. All the areas within the BSA classified as Riversidian coastal sage scrub are considered disturbed. The manufactured slopes, north of the proposed bridge within the BSA, consist of revegetated Riversidian coastal sage scrub. On these graded slopes, sage scrub species have recently become established over a short period of time, which warrants the classification as sage scrub habitat. Other areas within the BSA have been previously disturbed and have experienced some recovery over the interim. These areas are dominated by early seral species such as coyote bush (*Baccharis pilularis*), California buckwheat (*Eriogonum fasciculatum* var. *foliolosum*), deer weed (*Lotus scoparius*), and felt-leaved yerba santa (*Eriodictyon crassifolium*).

Holly-leaf Cherry Scrub

Holly-leaf cherry scrub is an upland native community. It is a relatively open community that is restricted to steep north-facing slopes that occur within sandstone-derived soils. The sole dominant species that characterizes this community is the holly-leaf cherry (*Prunus ilicifolia* ssp. *ilicifolia*). Most often these stands consist of tall shrubby individuals, but some populations have been found to have exceptionally large trees.

Within the BSA, the sole stand of holly-leaf cherry scrub is restricted to the moderate slopes of an unnamed tributary northeast of the Santa Clara River. The tributary is characterized as a 25-foot-wide, 4.5-foot-tall drainage with sandy soils that contributes to the main river system. The holly-leaf cherry scrub encompasses approximately 2.48 acres of the BSA.

Big Sagebrush Scrub

Big sagebrush scrub is an upland native community that is a moderately tall, fairly open shrubland found on well-drained gravelly soils. Dominant species include big sagebrush (*Artemisia tridentata*) and antelope bush (*Purshia tridentata*).

Within the BSA, there are a few isolated patches of big sagebrush scrub adjacent to the Santa Clara floodplain. These patches are characterized by having elevated slopes with well-drained granitic soils, which are adjacent to the active riverbed. With long periods of drought, this community can thrive very well and invade adjacent communities. Approximately 0.96 acre of big sagebrush scrub occurs within the BSA.

Southern Riparian Scrub

Southern riparian scrub is a wetland and riparian native community. It is an inclusive term for several riparian, shrub-dominated communities such as southern cottonwood willow riparian forest, southern willow scrub, mule fat scrub, and tamarisk scrub, which are highly mixed in a relatively small area (Sawyer and Keeler-Wolf 1995). This general community best describes the mosaic patchwork found throughout the floodplain of the Santa Clara River. Primarily, this community is represented by narrow-leaf willow (*Salix*

exigua), red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), mule fat (*Baccharis salicifolia*), Fremont's cottonwood (*Populus fremontii* var. *fremontii*), and highly invasive species like tamarisk (*Tamarix* sp.). Approximately 15.81 acres occur within the BSA.

Southern riparian scrub is considered sensitive by local and state agencies, and specifically by the CDFG (2003). Southern riparian scrub is considered sensitive because of the high number of sensitive species associated with this community and the recent losses due to urbanization. Southern riparian scrub is a very restricted community, only occurring in southern California counties. This community is home to a number of sensitive species and is endemic to southern California. This community has been heavily affected by urban and rural channelization and development.

Other Land Cover Types

Nonwetland Waters of the U.S.

The majority of the BSA consists of the riverbed for the Santa Clara River and its tributaries. The riverbed is a periodically scoured wash that is unvegetated most of the time. This area has been classified as nonwetland waters of the U.S. Approximately 19.40 acres of this land cover type occur within the BSA.

Ruderal

Ruderal communities are areas of high disturbance dominated by nonnative weedy forbs (herbaceous, nongrass species) that are adapted to a regime of frequent disturbances. Many of the species characteristic of ruderal areas are also indicator species of nonnative grasslands. Ruderal habitats occur throughout portions of the BSA and are areas that support nonnative weedy vegetation. Approximately 14.47 acres of this habitat occur within the BSA.

Disturbed Habitat

Disturbed habitats refer to areas disturbed so frequently that they do not support any vegetation. Such areas include dirt trails and cleared areas. Approximately 0.88 acre of this habitat occurs within the BSA.

Migration Corridors

In an urban context, a wildlife migration corridor can be defined as a linear landscape feature of sufficient width and buffer to allow wildlife movement between two patches of comparatively undisturbed habitat, or between a patch of habitat and some vital resources. Regional corridors are defined as those linking two or more large areas of natural open space, and local corridors are defined as those allowing resident wildlife to access critical resources (food, cover, and water) in a smaller area that might otherwise be isolated by urban development.

Wildlife migration corridors are essential in geographically diverse settings, especially in urban settings, for the sustenance of healthy and genetically diverse wildlife communities. At a minimum, they promote colonization of habitat and genetic variability by connecting fragments of like habitat and help sustain individual species distributed in and among habitat fragments. Habitat fragments, by definition, are separated by otherwise foreign or inhospitable habitats, such as urban/suburban tracts. Isolation of populations can have many harmful effects and may contribute to local species extinction.

A viable wildlife migration corridor consists of more than a path between habitat areas. To provide food and cover for transient species as well as resident populations of less mobile animals, a wildlife migration corridor must also include pockets of vegetation.

The BSA currently acts as a wildlife migration corridor for a variety of wildlife species. The Santa Clara River represents one of the last natural river systems in the region. The riparian and stream habitats of the Santa Clara River provide habitat for migrating wildlife to temporarily stop, rest and forage, use for protective cover, or as their breeding grounds. The stretch of the Santa Clara River within the BSA is part of a diverse set of

habitat linkages and movement corridors that connects pockets of open space throughout its length – from its headwaters in the Angeles National Forest, east of Soledad Canyon, all the way to the coast. The river provides connectivity to large tracts of open space such as the Santa Susana Mountains and the Santa Monica Mountains.

A report by the California Wilderness Coalition (CWC), *Missing Linkages: Restoring Connectivity to the California Landscape* (2001) identifies the entire Santa Clara River as a landscape linkage, defined as a “large, regional connection between habitat blocks (‘core areas’) meant to facilitate animal movements.” Additionally, the CWC identifies several general areas along the river within Soledad Canyon as areas necessary for habitat connectivity for large mammalian carnivore species in the region. These areas were assessed by the CWC as being threatened by development, but with an opportunity for conservation. Due to its position along the Santa Clara River, the BSA helps to provide connectivity between the coast and inland areas. The BSA is primarily part of an avian wildlife migration corridor, but it can also foster the movements of reptiles such as the western whiptail, or mammals like the coyote (*Canis latrans*), bobcat (*Felis rufus*), and mule deer (*Odocoileus hemionus*) up and down the river, or across other tracts of open space.

2.11.3 Environmental Effects

Alternative 1: Bridge Alternative

Sensitive habitats are those that are considered rare within the region or are considered sensitive by the CDFG (2003). Communities listed on California Natural Diversity Data Base as having the highest inventory priorities are also considered sensitive (CDFG 2006a), as well as wetland and/or riparian habitat regulated by the ACOE under Section 404 of the Clean Water Act and by the CDFG under Section 1600 of the CDFG Code. Within the BSA, the only sensitive community is southern riparian scrub.

Within the project area, the southern riparian scrub community can be found within the floodplain and along the upper edges of the Santa Clara River. Approximately 15.81 acres of southern riparian scrub habitat were observed within the BSA.

Permanent grading activities would directly affect this sensitive habitat in areas of the proposed AE and indirectly affect habitat that persists adjacent to the AE. The Bridge Alternative would permanently affect 2.24 acres of southern riparian scrub habitat.

Indirect effects to this community, outside of but adjacent to the AE, could arise from unauthorized construction trespass, erosion, sedimentation, and construction-generated fugitive dust. Avoidance, minimization, and mitigation measures have been provided in Section 2.11.4 that would reduce the potential for adverse effects.

Alternative 2: No Build Alternative

Under the No Build Alternative, no development would occur at the project site; consequently, there would be no adverse effect to natural communities.

2.11.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: Bridge Alternative

Environmental consequences of the proposed project on southern riparian scrub would be avoided and reduced to the extent feasible through project design. This could be achieved by avoiding permanent impacts to areas of southern riparian scrub by shifting the bridge, approach, and pier locations, and by avoiding temporary impacts that could result from staging and access routes. Areas of pristine and high-quality southern riparian scrub within the construction limits should be fenced off to avoid impacts.

Efforts to further avoid and reduce effects to these sensitive resources would be done during project implementation via responsible preconstruction planning and construction activities as noted in the NRMP MMRP (see Appendix I of this EA). Specific avoidance measures in the MMRP include Measures BIO-1 (a-n) and BIO-2 (a-d). Additional measures such as preconstruction meetings, contractor awareness programs, temporary fencing and signage of all sensitive resource areas immediately adjacent to the AE, the presence of biological monitors during the construction activities adjacent to sensitive biological resources, and the implementation and strict adherence to standard BMPs

developed in the NRMP are also recommended to avoid effects to southern riparian scrub.

Mitigation Measures: Unavoidable permanent direct and indirect effects to the southern riparian scrub would require mitigation. Mitigation efforts to be implemented for permanent effects to this vegetation community are outlined in Mitigation Measure BIO-5 (a-o), Riparian Habitat Mitigation Program, of the NMRP. Mitigation ratios for this vegetation will range from 1:1 to 3:1, depending upon the timing of implementation of southern riparian scrub restoration (BIO-5a of the NRMP; see Appendix I of this EA). Implementing this mitigation would reduce the potential adverse effects of the proposed project; consequently, no additional mitigation is proposed.

Alternative 2: No Build Alternative

There would be no adverse effects on natural communities as a result of the Bridge Alternative or the No Build Alternative; consequently, no avoidance, minimization, and/or mitigation measures are proposed.

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2.12 WETLANDS AND WATERS OF THE U.S.

As discussed in Section 1.3, the proposed bridge is located within the confines of the NRMP. The NRMP serves as a long-term management plan for infrastructure projects, such as the proposed action, expected to affect the Santa Clara River and its associated tributaries. As previously discussed, an EIS/EIR for the NRMP was approved by the ACOE, RWQCB, and CDFG, and the City is complying with the requirements of the associated Section 404 and 1600 permits issued by the ACOE and CDFG, respectively. Consequently, no permits will be applied for under this EA and there is no discussion in this section of any applications for these permits. Consequently, the following discussion provides an overview of the jurisdictional waters effects for which permits have already been obtained.

2.12.1 Regulatory Setting

Wetlands and Waters of the U.S. are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 USC 1344) is the primary law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be degraded. The Section 404 permit program is run by the ACOE with oversight by the U.S. EPA.

The Executive Order for the Protection of Wetlands (Executive Order 11990) also regulates the activities of federal agencies with regard to wetlands. This executive order states that a federal agency, such as the FHWA, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds (1) that there is no practicable alternative to the construction, and (2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the CDFG and RWQCBs. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the CDFG before beginning construction. If the CDFG determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFG jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the ACOE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFG.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCBs also issue water quality certifications in compliance with Section 401 of the Clean Water Act. See Section 2.7 for additional details.

In considering the potential wetlands effects of the proposed Golden Valley Road Bridge Project, it is recognized that the bridge crossing of the Santa Clara River has already been permitted by the ACOE and CDFG (ACOE 1998b). The Valencia Company applied to these agencies for approval of the NRMP, which includes certain channel, drainage, river bank protection, and bridge crossing improvements along a portion of the Santa Clara River and its tributaries. The NRMP improvements were the subject of the joint EIS/EIR prepared by these agencies (ACOE 1998a). The effects resulting from the proposed

crossing of the Santa Clara River under the proposed Bridge Alternative include a portion of the 22.23 acres of bridge crossing effects to habitat under jurisdiction of the two agencies. Coordination and initiation of the proposed project under the NRMP permits, requires the submittal of a Verification Request Letter to the ACOE and CDFG. For approval, this letter must prove that the measures in the proposed project design are consistent with the measures outlined in the NRMP. Once this request is approved, bridge construction may commence.

2.12.2 Affected Environment

From field results and other documents on local jurisdictional information, several general trends were identified for mapping jurisdictional boundaries. Generally, the soils within the Santa Clara River floodplain are mapped as Sandy Alluvial Lands and Riverwash by the U.S. Soil Conservation Service. These soils have not developed hydric characteristics because of the dynamic nature of the flood channel and the ongoing deposition and/or removal of sand. Therefore, the delineation relied primarily on vegetation and hydrology indicators for jurisdictional determinations. ACOE jurisdictional wetlands located within the Santa Clara River floodplain include a relatively large area of southern riparian scrub (Table 2.12-1). In some locations along the river edge, southern riparian scrub was determined to be outside of ACOE jurisdiction (sample point S1, Figure 2.12-1). This habitat was located on higher flood terraces, which lacked wetland hydrology and adequate hydrophytic vegetation indicators. These areas are within the 100-year floodplain regulated by the CDFG but did not display hydrophytic vegetation or wetland hydrology indicators; therefore, the CDFG would retain jurisdiction.

**Table 2.12-1
Extent of ACOE and CDFG Jurisdiction within the BSA**

Jurisdiction	Area in acres
ACOE and CDFG (subtotal)	24.86
Wetlands	5.53
Nonwetland Waters of the U.S.	19.33
CDFG Wetlands only	6.62
Total	31.48



Source: Stewart GeoTechnologies 2004

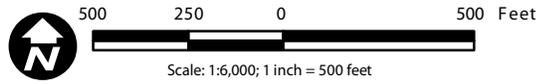


Figure 2.12-1
Wetland Delineation

Nonwetland waters of the U.S. under ACOE and CDFG jurisdiction were delineated for the main, active flood channel of the Santa Clara River on the eastern end of the project at the proposed river crossing (sample point S8). This area has only about 10 percent vegetative cover, including primarily mule fat, scale broom, and giant reed. The vegetation is hydrophytic; however, the channel is too sparse to be delineated as wetland with 90 percent open sand (Figure 2.12-1).

One small tributary to the Santa Clara River was delineated within the BSA at the eastern end and is sparsely vegetated with scattered patches of nonhydrophytic vegetation (primarily scale broom) within the Ordinary High Water Mark; this area was delineated as ACOE nonwetland waters of the U.S. and CDFG unvegetated streambed (sample point S9). Most of the remaining tributaries include disturbed or altered drainages or ditches but also include portions of natural drainages. The areas of ACOE and CDFG jurisdiction within the BSA are summarized above in Table 2.12-1.

U.S. Army Corps of Engineers

A total of 24.86 acres of ACOE jurisdiction occur within the BSA. This total includes both vegetated wetlands (5.53 acres) and nonwetland waters of the U.S. (19.33 acres). ACOE wetlands occur predominately within the Santa Clara River, but smaller patches of wetland were delineated within the tributaries and drainage ditches connecting with the Santa Clara River. Portions of the southern riparian scrub are the only vegetation community qualifying as ACOE jurisdictional wetlands.

California Department of Fish and Game

Approximately 31.48 acres of CDFG jurisdiction occurs within the BSA. The ACOE jurisdictional wetlands and waters described above are also CDFG jurisdictional streambed. In addition to the areas described above, areas with riparian vegetation associated with the Santa Clara River or its tributary drainages, but lacking hydrophytic vegetation, hydrology, or soil indicators, were mapped as CDFG jurisdiction. Portions of southern riparian scrub are the only vegetation community qualifying as CDFG jurisdictional wetlands.

Regional Water Quality Control Board

The area within the jurisdiction of the RWQCB is considered the same as the area within ACOE jurisdiction (24.86 acres).

2.12.3 Environmental Effects

Jurisdictional resources may be either directly or indirectly affected by an action. Direct and indirect effects may furthermore be either permanent or temporary in nature. These effects are defined below.

Direct: Any alteration, disturbance, or destruction of biological resources that would result directly from project-related activities is considered a direct effect. Examples include clearing vegetation and placing fill into wetlands.

Indirect: As a result of project-related activities, biological resources may be affected in a manner that is not direct. Examples include elevated noise and dust levels, shading from bridges, soil compaction, increased human activity, decreased water quality, and the introduction of invasive animals (domestic cats and dogs) and plants.

Permanent: All effects that result in the irreversible removal of jurisdictional resources are considered permanent. For the purposes of this project, effects are irreversible when placing fill results in a permanent elevation change or the creation of an impervious surface. Examples include constructing a building or permanent road on an area containing biological resources.

Temporary: Any effects on biological resources considered to be reversible can be viewed as temporary. For the purpose of this project, if preconstruction contours are maintained and the original characteristics of the area can be reestablished in place, then the effect is considered temporary. Examples include removing vegetation for underground pipeline trenching activities and either revegetating or allowing the natural vegetation to recolonize the recontoured impact area, and placing and subsequently removing fill for the purpose of temporary construction access.

Alternative 1: Bridge Alternative

The direct effects to jurisdictional wetlands and nonwetland waters as a result of the proposed alternatives are presented in Table 2.12-1. Table 2.12-2 summarizes the direct effects to wetlands under the jurisdiction of ACOE and CDFG. Indirect effects are not quantified because there are no established standards to determine the extent of effects from the point source (dust, sediment, lighting, runoff, illegal trespass, etc.). Direct effects to native riparian and wetland communities and other waters would require mitigation.

**Table 2.12-2
Effects to ACOE and CDFG Jurisdictional Resources**

Direct Effects	ACOE and CDFG in acres	CDFG only in acres	Total CDFG in acres
Permanent	2.49	1.46	1.59

It is assumed that the placement of bridge piles and ground disturbance within the jurisdictional wetlands and other waters would be the nexus for ACOE and CDFG involvement. Permanent direct effects to wetland and nonwetland waters/unvegetated streambed would occur.

Table 2.12-2 shows that 2.49 acres of ACOE and CDFG jurisdictional waters would be permanently affected. Effects to CDFG jurisdictional specific resources would permanently affect 1.46 acres. These effects are a portion of the effects allowable under the terms of a 404 Permit and 1603 Agreement issued for the NRMP.

Alternative 2: No Build Alternative

Under the No Build Alternative, no development would occur at the project site; consequently, there would be no adverse effect on wetlands and other waters.

2.12.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: Bridge Alternative

The direct effects to federal and state jurisdictional waters and streambed, including wetlands, as a result of permanent road fill and bridge structures would require mitigation. These effects, and the corresponding mitigation, have already been covered in an individual permit issued by the ACOE, pursuant to Section 404 of the Clean Water Act, and a Streambed Alteration Agreement issued by the CDFG pursuant to Section 1603 of the Fish and Game Code. Mitigation for these effects to jurisdictional waters and streambed is specified in the permit and agreement. As noted by the Riparian Habitat Mitigation Program in the MMRP, mitigation for jurisdictional areas will be performed at a ratio varying from 1:1 to 3:1 depending upon the timing of its implementation (see BIO-5 [a-o]).

Compensatory wetland mitigation requirements can be satisfied through a combination of wetland creation/restoration and enhancement, as outlined in Mitigation Measure BIO-5, known as the Riparian Habitat Mitigation Program and established for the NRMP. Permanent direct effects on vegetated wetlands should be compensated at a minimum 1:1 mitigation ratio if mitigation is completed 2 years or more prior to initiation of the action. If mitigation for permanent effects is completed less than 2 years in advance of effect, the mitigation ratio would vary between 1:1 and 3:1 depending on the value of habitat. Mitigation for all permanent effects to wetlands will include a minimum 1:1 creation/restoration component. Minimum wetland mitigation requirements are discussed below. Compensatory mitigation ratios must be reviewed and approved by the resource agencies before being considered final.

The ACOE policy of no net loss applies specifically to wetlands. “No net loss of wetlands” refers to a no net loss of both wetland area and function (U.S. EPA and ACOE 1990). The CDFG also requires replacement of impacted habitat, typically at ratios similar to the ACOE. Mitigation requirements for the bridge action’s effects on jurisdictional waters and streambed have already been determined by the permit and

agreement issued for the NRMP. Mitigation for jurisdictional areas will be performed at a ratio varying from 1:1 to 3:1 depending upon the timing of its implementation.

Implementation of the NRMP mitigation for wetlands effects would reduce the proposed project's potential for adverse effects.

Alternative 2: No Build Alternative

There would be no adverse effects on wetlands and other waters as a result of the No Build Alternative; consequently, no avoidance, minimization, and/or mitigation measures are proposed.

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2.13 PLANT SPECIES

2.13.1 Regulatory Setting

The USFWS and CDFG share regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the FESA and/or the California Endangered Species Act (CESA). Please see Section 2.15 in this document for detailed information regarding these species.

This section of the document discusses all the other special-status plant species, including CDFG fully protected species and species of special concern, USFWS candidate species, and nonlisted California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at USC 16, Section 1531, et seq. See also 50 CFR Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Caltrans projects are also subject to the Native Plant Protection Act, found at Fish and Game Code, Section 1900-1913, and CEQA, Public Resources Code, Sections 2100-21177.

2.13.2 Affected Environment

Sensitive plants include those listed as threatened, endangered, or proposed for listing by the USFWS (2005), CDFG (2006b, 2006c), and CNPS (2001). The CNPS Listing is sanctioned by the CDFG and essentially serves as its list of candidate species for threatened or endangered status.

Species that are federally or state listed are afforded a degree of protection that entails a permitting process, including specific mitigation measures to compensate for effects to the species. Species that are proposed to be listed by the USFWS are treated similarly to listed species by that agency. Recommendations of the USFWS, however, are advisory

rather than mandatory in the case of proposed species. Species considered state species of special concern by the CDFG have a lesser degree of protection under CEQA. Plant species considered sensitive by the CNPS have a lesser degree of protection under CEQA. Under CEQA, avoidance of effects to these species or implementation of measures such as preconstruction surveys could be required to reduce potential effects.

Of the 28 sensitive plant species with the potential to occur within the region, the BSA consists of suitable habitat for 26 species. Only two species were observed during the late spring 2003 survey, Plummer's mariposa lily and coast live oak. However, five other sensitive plant species were identified in regions of the BSA by Impact Sciences (2004), whose project site for the proposed Riverpark development is within and adjacent to the BSA of Golden Valley Road Bridge Project. In the *Riverpark Environmental Impact Report* (Impact Sciences 2004), surveys conducted in spring 2003 documented locations of early annual sensitive plant species within the BSA, such as the slender mariposa lily, Peirson's morning glory, and Palmer's grappling hook. Biologists conducted additional update surveys for these species during the spring of 2006. Four species were observed in 2006, the Plummer's mariposa lily, Peirson's morning glory, Palmer's grappling hook, and coast live oak. Figures 2.13-1 and 2.13-2 show the vegetation communities, and sensitive plant species locations, respectively, and the footprint of the proposed bridge. Table 2.13-1 depicts the number of individuals observed in the BSA, the suitable habitat affected by the AE, and compensatory mitigation measures approved in the NRMP.

Slender Mariposa Lily

The slender mariposa lily is a perennial herb in the lily family considered extremely rare (List 1B) by the CNPS (2001). This endemic monocot ranges within Los Angeles County with a total of only nine known occurrences found in coastal sage scrub and chaparral habitats. Typically, this species is known to grow on rocky slopes and/or in serpentine soils. Due to soil restrictions and habitat loss, this species is severely threatened by development and urbanization. Two of the nine occurrences in Los Angeles County are located in Soledad Canyon and San Francisquito Canyon, which are approximately 0.35 mile and 3.92 miles, respectively, northwest of the BSA



Source: Stewart GeoTechnologies 2004

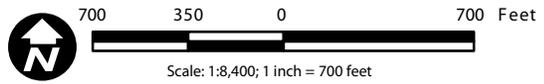
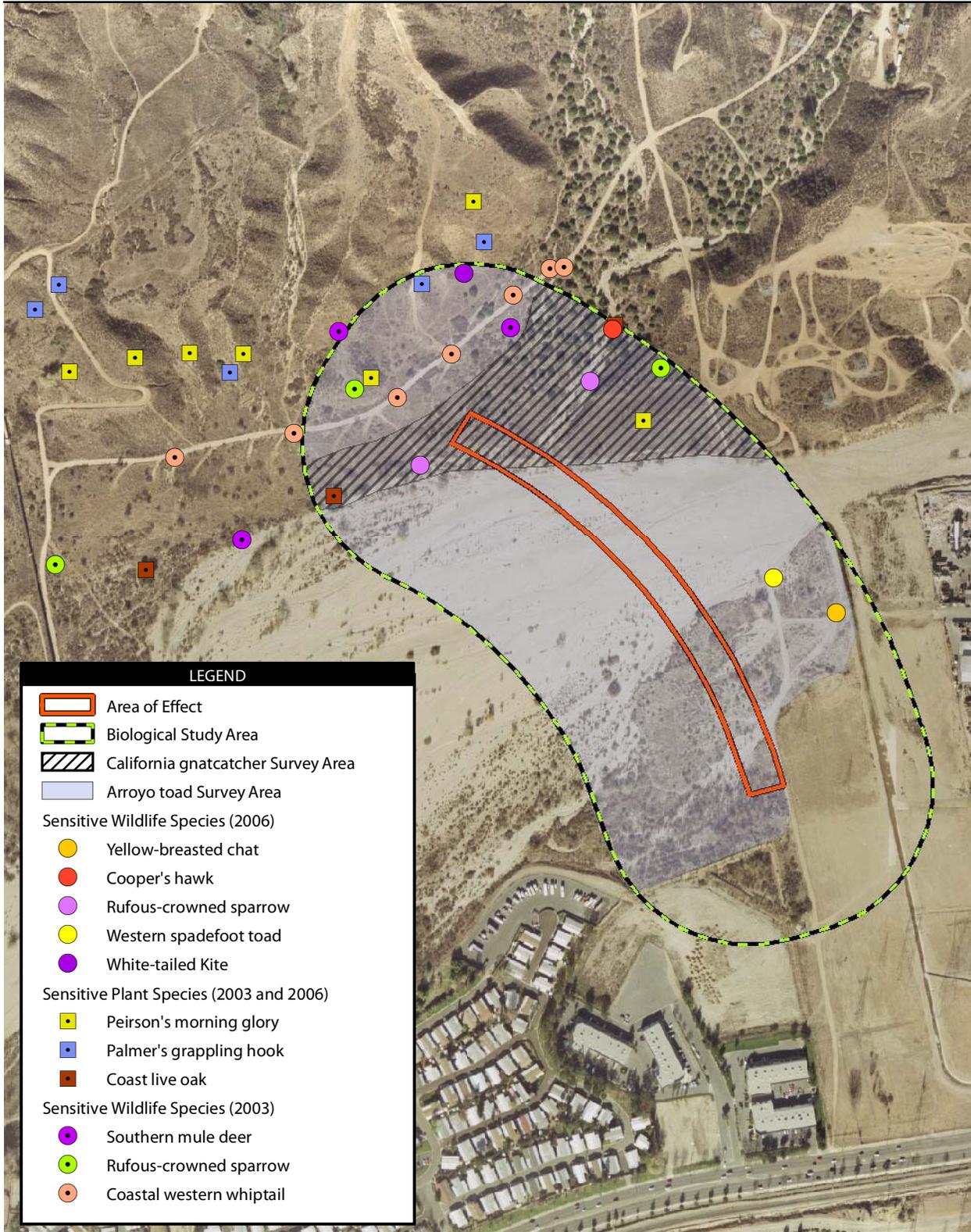


Figure 2.13-1
Vegetation Communities



Source: Stewart GeoTechnologies 2004; EDAW 2003, 2006

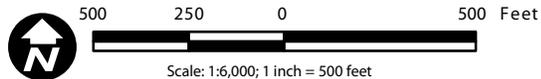


Figure 2.13-2
Sensitive Species

**Table 2.13-1
Sensitive Species Effect Matrix and Recommended Compensatory Mitigation**

Species	Population Size Observed within the BSA	Suitable Habitat within AE	Affected within AE	Potential Compensatory Mitigation Ratio or Rate	Maximum Compensatory Mitigation Amount or Area
Slender Mariposa Lily	3 individuals	None	3 individuals would be indirectly affected	Since there would not be any direct effects to slender mariposa lily, no compensatory mitigation measures would be required. Potential temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard best management practices (BMPs) such as preconstruction surveys, temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the resource agencies
Plummer's Mariposa Lily	35 individuals	None	35 individuals would be indirectly affected	Since there would not be any direct effects to Plummer's mariposa lily, no compensatory mitigation measures would be required. Potential temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard BMPs such as preconstruction surveys, temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the resource agencies
Peirson's Morning Glory	236 individuals	None	236 individuals would be indirectly affected	Since there would not be any direct effects to Peirson's morning glory, no compensatory mitigation measures would be required. Potential temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through	To be determined through discussions with the resource agencies

Species	Population Size Observed within the BSA	Suitable Habitat within AE	Affected within AE	Potential Compensatory Mitigation Ratio or Rate	Maximum Compensatory Mitigation Amount or Area
				standard BMPs such as preconstruction surveys, temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	
Palmer's Grappling Hook	50 individuals	None	50 individuals would be indirectly affected	Since there would not be any direct effects to Palmer's grappling hook, no compensatory mitigation measures would be required. Potential temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard BMPs such as temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the resource agencies
Coast Live Oak	1 individual	None	1 individual would be indirectly affected	Since there would not be any direct effects to coast live oak, no compensatory mitigation measures would be required. Potential temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard BMPs such as preconstruction surveys, temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the City of Santa Clarita and the resource agencies

(CDFG 2006a). The slender mariposa lily was not observed within the BSA during the winter 2002, spring 2003, or spring 2006 field surveys. The surveys were conducted at the end of the blooming period for this species. At this time, fruit maturation begins and the species becomes fairly inconspicuous. However, surveys conducted in 2004 identified three individuals of this species within the BSA (Riverpark Draft Environmental Impact Report (DEIR), 2004). Thirty-three individuals were also observed adjacent to and west of the BSA during spring 2003 (Riverpark DEIR, 2004).

Plummer's Mariposa Lily

The Plummer's mariposa lily is another perennial herb in the lily family considered a List 1B species by the CNPS (2001). Typically, it is found in granitic substrate in chaparral, coastal sage scrub, cismontane woodland, lower montane coniferous forest, and foothill grasslands. Its distribution range includes Ventura, Los Angeles, Orange, Riverside, and San Bernardino counties, but known populations have reduced considerably due to habitat loss from urbanization (CNPS 2001).

The Plummer's mariposa lily was observed within the BSA during the 2003 and 2006 field surveys. Approximately 28 individuals were found within the BSA in 2003 and a total of 35 were found during the 2006 surveys. No individuals occur within the AE.

Peirson's Morning Glory

The Peirson's morning glory is a perennial herb in the morning glory family considered a List 4 species by the CNPS (2001). Typically it is found in granitic, sandy substrate in chaparral, coastal sage scrub, and chenopod scrub. Its distribution range includes Ventura, Los Angeles, Orange, Riverside, and San Bernardino counties, but known populations have reduced considerably due to habitat loss from urbanization (CNPS 2001).

The Peirson's morning glory was observed within the BSA during spring 2003 field surveys conducted by Impact Sciences (2004) for the Riverpark EIR. Approximately 236 individuals were observed in the BSA (Figure 2.13-2), but of these, only 150 individuals could be relocated in 2006 surveys. Adjacent to the BSA, approximately 71 individuals

were observed on south-facing slopes and flat areas in disturbed vegetation such as nonnative grasslands and coastal sage scrub (Riverpark DEIR, 2004).

Palmer's Grappling Hook

The Palmer's grappling hook is an inconspicuous annual herb in the borage family and is considered a List 4 species by the CNPS (2001). Typically it is found in clay soils in chaparral, coastal sage scrub, and annual grasslands. Its distribution range includes Los Angeles, Orange, Riverside, and San Diego counties, but known populations have reduced considerably due to habitat loss from urbanization (CNPS 2001).

The Palmer's grappling hook was observed within the BSA during the spring 2003 and spring 2006 surveys. Approximately 30 individuals were observed in the BSA in the spring 2003 field survey by Impact Sciences (2004) and a total of 50 individuals were observed during the 2006 surveys (Figure 2.13-2). Additionally, 17 individuals were recorded adjacent to the BSA during 2003 (Riverpark DEIR, 2004).

Coast Live Oak

The coast live oak is a California endemic tree considered a sensitive resource by the Santa Clarita Municipal Code (City 2006). The Oak Tree Preservation ordinance (Section 17.17.090) serves to protect and preserve all healthy oak trees in Santa Clarita. Found throughout California, the coast live oak is still too common for CNPS to consider listing it as a rare or threatened species. However, local city ordinances throughout the state of California have made it a priority to preserve these ancient trees as way of preserving the local heritage.

There is one individual coast live oak tree within the BSA, located in a tributary, northeast of the Santa Clara River basin (Figure 2.13-2). No coast live oak trees occur within the AE.

2.13.3 Environmental Effects

Alternative 1: Bridge Alternative

The proposed action would not be anticipated to affect the 3 individuals of slender mariposa lily and the 236 individuals of Peirson's morning glory observed in the BSA. All individuals observed are located outside of the AE where all grading activities would be confined. Therefore, there would be no direct effect on this species from the proposed bridge.

Construction and operation of the bridge would not be expected to affect any of the Plummer's mariposa lily or Palmer's grappling hook individuals, or the coast live oak identified. No suitable habitat for the Plummer's mariposa lily occurs within the AE. Indirect permanent and temporary effects outside of but adjacent to the AE could arise from unauthorized construction trespass, erosion, sedimentation, and construction-generated fugitive dust.

Alternative 2: No Build Alternative

Under the No Build Alternative, no development would occur at the project site; consequently, there would be no effect on sensitive plants.

2.13.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: Bridge Alternative

Avoidance and Minimization Efforts: Environmental consequences of the project on biological resources would be avoided and reduced to the extent feasible through project design. Additional measures to further avoid and reduce effects to these sensitive resources would be done during project implementation via responsible preconstruction planning and construction activities. Such measures would include, but not be limited to, preconstruction surveys, contractor awareness programs, temporary fencing and signage of all sensitive resource areas immediately adjacent to the AE, the presence of biological monitors during the construction activities adjacent to sensitive biological resources, and the implementation and strict adherence to standard BMPs.

Mitigation: Potential direct effects on slender mariposa lily, Plummer's mariposa lily, Peirson's morning glory, and Palmer's grappling hook would be mitigated at a 1:1 ratio for all individuals affected in the AE and BSA (Valencia 1998). Mitigation Measures BIO-4 (a-c) and BIO-24 in the NMRP outline habitat-based mitigation for the permanent effects to habitat. For indirect effects, mitigation measures would include standard BMPs such as temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan as directed in the NRMP.

Potential temporary indirect effects on coast live oak, such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation, would be mitigated through standard BMPs listed in the NRMP, such as temporary construction fencing and signage, dust abatement measures, and implementation of an approved SWPPP.

Alternative 2: No Build Alternative

There would be no adverse effects on plant species as a result of the No Build Alternative; consequently, no avoidance, minimization, and/or mitigation measures are proposed.

2.14 ANIMAL SPECIES

2.14.1 Regulatory Setting

Many state and federal laws regulate effects on wildlife. The USFWS, National Marine Fisheries Service, and CDFG are responsible for implementing these laws. This section discusses potential effects and permit requirements associated with wildlife not listed or proposed for listing under the CESA or FESA. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.15. All other special status animal species are discussed here, including CDFG fully protected species and species of special concern, and USFWS or National Oceanic & Atmospheric Administration (NOAA) Fisheries candidate species.

Federal laws and regulations pertaining to wildlife include the following:

- NEPA
- Migratory Bird Treaty Act (MBTA)
- Fish and Wildlife Coordination Act

State laws and regulations pertaining to wildlife include the following:

- CEQA
- Sections 1601 – 1603 of the Fish and Game Code
- Section 4150 and 4152 of the Fish and Game Code

2.14.2 Affected Environment

Special status wildlife are species that are listed or proposed to be listed as threatened or endangered by the USFWS (2005) and CDFG (2006d), or are considered federal species of concern, protected species, fully protected species, or species of special concern by the CDFG (2006e). Species that are federally or state listed are afforded a degree of protection that entails a permitting process, requiring the implementation of mitigation measures to compensate for effects to the species. Species that are proposed to be listed

by the USFWS are treated similarly to species listed by that agency; recommendations of the USFWS, however, are advisory rather than mandatory in the case of proposed species.

Additionally, the federal MBTA provides legal protection for almost all breeding bird species occurring in the United States and, therefore, affords protection to the bird species nesting within the study area. The MBTA restricts the killing, taking, collecting, and selling or purchasing of native bird species or their parts, nests, or eggs. Certain game bird species can be hunted for specific periods determined by federal and state governments. The intent of the MBTA is to eliminate any commercial market for migratory birds, feathers, or bird parts, especially for eagles and other birds of prey. The proposed project is in compliance with the MBTA because the project would not facilitate the commercial market for any bird species.

Of the 55 sensitive wildlife species known to occur within the region, 8 sensitive wildlife species are known to occur in the BSA surrounding the proposed Golden Valley Road Bridge Project, including the southern mule deer, which is regulated by the state as a harvest species and is discussed in greater detail below. Five sensitive wildlife species were observed within the BSA during the spring 2006 surveys: the western spadefoot toad (*Spea hammondi*), Cooper's hawk (*Accipiter cooperii*), white-tailed kite (*Elanus leucurus*), yellow-breasted chat (*Icteria virens*), and southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*). Three sensitive wildlife species were observed within the BSA during the spring 2003 surveys: the coastal western whiptail, yellow warbler (*Dendroica petechia brewsteri*), and the southern California rufous-crowned sparrow. In the Riverpark EIR, eight other species were observed just west of the BSA: the sharp-shinned hawk (*Accipiter striatus*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), loggerhead shrike (*Lanius ludovicianus*), summer tanager (*Piranga rubra*), Bell's sage sparrow (*Amphispiza belli belli*), tricolored blackbird (*Agelaius tricolor*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and San Diego woodrat (*Neotoma lepida intermedia*) (Impact Sciences 2004). This information is summarized in Table 2.14-1.

**Table 2.14-1
Sensitive Species Effect Matrix and Recommended Compensatory Mitigation**

Species	Population Size Observed within the BSA	Suitable Habitat within AE	Affected within AE	Potential Compensatory Mitigation Ratio or Rate	Maximum Compensatory Mitigation Amount or Area
Western Spadefoot Toad	1 individual adult, hundreds of tadpoles	4.31 acres	A small breeding population would be indirectly affected	Potential permanent and temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard BMPs such as preconstruction surveys, temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the resource agencies.
Coastal Western Whiptail	7 individuals	2.39 acres	7 individuals would be indirectly affected	Compensatory mitigation measures for direct effects to coastal western whiptail would be riparian habitat-based for the seven individuals affected. Potential temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard BMPs such as preconstruction surveys, temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the resource agencies.
White-tailed Kite	1 individual	2.39 acres	1 individual would be indirectly affected	Potential permanent and temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard BMPs such as preconstruction surveys, temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the resource agencies.
Sharp-shinned Hawk	1 individual	2.39 acres	No individuals would be affected	Potential permanent and temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard BMPs such as preconstruction surveys, temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the resource agencies.

Species	Population Size Observed within the BSA	Suitable Habitat within AE	Affected within AE	Potential Compensatory Mitigation Ratio or Rate	Maximum Compensatory Mitigation Amount or Area
Cooper's Hawk	8 individuals	2.39 acres	8 individuals would be indirectly affected	Potential permanent and temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard BMPs such as preconstruction surveys, temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the resource agencies.
Western Yellow-billed Cuckoo	1 individual	2.24 acres	1 individual would be indirectly affected	Potential permanent and temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard BMPs such as preconstruction surveys, temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the resource agencies.
Loggerhead Shrike	2 individuals	0.15 acre	2 individuals would be indirectly affected	Potential permanent and temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard BMPs such as preconstruction surveys, temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the resource agencies.
Yellow Warbler	1 individual	2.24 acres	1 individual would be indirectly affected	Potential permanent and temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard BMPs such as preconstruction surveys, temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the resource agencies.
Summer Tanager	1 individual	2.24 acres	1 individual would be indirectly affected	Potential permanent and temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard BMPs such as preconstruction surveys, temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the resource agencies.

Species	Population Size Observed within the BSA	Suitable Habitat within AE	Affected within AE	Potential Compensatory Mitigation Ratio or Rate	Maximum Compensatory Mitigation Amount or Area
Southern California Rufous-crowned Sparrow	3 individuals	0.15 acre	3 individuals would be indirectly affected	Potential permanent and temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard BMPs such as preconstruction surveys, temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the resource agencies.
Bell's Sage Sparrow	1 individual	0.15 acre	1 individual would be indirectly affected	Potential permanent and temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard BMPs such as preconstruction surveys, temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the resource agencies.
Tricolored Blackbird	1 individual	2.24 acres	1 individual would be indirectly affected	Potential permanent and temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard BMPs such as preconstruction surveys, temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the resource agencies.
San Diego Black-tailed Jackrabbit	2 individuals	2.39 acres	2 individuals would be indirectly affected	Potential permanent and temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard BMPs such as preconstruction surveys, temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the resource agencies.
San Diego Woodrat	2 individuals	2.39 acres	2 individuals would be indirectly affected	Potential permanent and temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard BMPs such as preconstruction surveys, temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the resource agencies.

Species	Population Size Observed within the BSA	Suitable Habitat within AE	Affected within AE	Potential Compensatory Mitigation Ratio or Rate	Maximum Compensatory Mitigation Amount or Area
Southern Mule Deer	3 individuals	4.48 acres	3 individuals would be indirectly affected	Potential temporary indirect effects such as unauthorized construction-related trespass, construction-generated fugitive dust, erosion, and sedimentation would be mitigated through standard BMPs such as temporary construction fencing and signage, dust abatement measures, and implementation of an approved erosion control plan.	To be determined through discussions with the resource agencies.

The southern mule deer was observed within the BSA. The southern mule deer is discussed in this EA because the presence or absence of the species in open space areas can be used as an indicator of how a project site functions as a local or regional wildlife movement corridor. Additional discussion on a “harvest species” definition should be added. The following discussion of sensitive species and potential effects is based on field survey information, data obtained from the USFWS and CDFG, and existing environmental documentation for projects within the region. All avoidance, minimization, and mitigation measures described below for each species are based on the NRMP EIS/EIR (ACOE 1998a) and Record of Decision (ROD) (ACOE 1998b) and were designed to minimize all effects to sensitive biological resources within the BSA. The MMRP from the ROD (ACOE 1998b) includes the referenced avoidance, minimization, and mitigation measures approved by the ACOE and CDFG.

Western Spadefoot Toad

The western spadefoot toad is considered a state species of special concern (CDFG 2006e). It prefers sandy or gravelly soil in grasslands, open chaparral, and pine-oak woodlands. This toad breeds during the winter months, from January to May, in the waters of quiet streams, ephemeral ponds, and vernal pools. It aestivates during the drier months in burrows in upland habitats adjacent to these pools. The species is found west of the coastal ranges, from Point Conception to northern Baja California, Mexico, and in the Central Valley of California.

One western spadefoot adult toad was heard and hundreds of tadpoles were observed during focused arroyo toad surveys conducted within the BSA in 2006. One male was heard calling on May 4, 2006, and tadpoles were observed during the following survey, May 17, 2006. Observations were made within the central portion of the BSA within drainages (a combination of concrete and earthen-lined channels) fed by runoff from an adjacent industrial complex to the east of the proposed project. Surveys conducted in 2003 observed one individual within the BSA (Riverpark DEIR, 2004).

Coastal Western Whiptail

The coastal western whiptail is a state special animal (CDFG 2006e). It is found in several semiarid to arid climates and various habitat types that have openings or clearings for movement. Typical habitats include riparian woodlands, open chaparral, and annual grasslands with scattered perennials. This species is endemic to California and ranges throughout the state (except in the northwest) from sea level to approximately 7,500 feet.

Three individuals of coastal western whiptail were observed within the BSA during the general wildlife surveys conducted during 2002/2003 field surveys (Figure 2.13-2), although no individuals were observed within the AE. No individuals were observed during the 2006 surveys of the proposed Golden Valley Road Bridge Project site.

White-tailed Kite

The white-tailed kite is a state fully protected species (CDFG 2006e). It inhabits riparian or oak woodland adjacent to grassland or open fields where it hunts rodents. This species occurs in North, Central, and South America; Australia; southern Eurasia; and Africa. In North America, the white-tailed kite is distributed along the Pacific Coast from Washington south to Baja California, Mexico, with a small population in southeast Arizona, and along the Gulf Coast from Florida south into Mexico. In California, kites are found along the coast and in the Central Valley.

One individual white-tailed kite was observed during July 2006, but there was no evidence of nesting. Survey results in 2003 by Impact Sciences (2004) also observed this species within the BSA and in 1999 at least one individual white-tailed kite was observed nesting just west of the BSA (Guthrie 1999).

Sharp-shinned Hawk

The sharp-shinned hawk is considered a state species of special concern (CDFG 2006e). It is a woodland hawk that requires a certain amount of dense cover, but this can be localized and scattered through relatively open country. This species is distributed throughout North, Central, and South America. In California, it is a fairly common

migrant and winter resident, although its breeding distribution is poorly documented. Sharp-shinned hawk populations have experienced a steady decline due to increased urbanization and habitat destruction.

No sharp-shinned hawks were observed during the 2006 surveys. However, one individual was observed just west of the BSA during general wildlife surveys conducted in 2003 (Impact Sciences 2004).

Cooper's Hawk

The Cooper's hawk is considered a state species of special concern (CDFG 2006e). It prefers to breed in dense stands of oak or riparian woodland and, on a limited basis, suburban exotic woodlands. This species ranges throughout much of the United States, from southern Canada to northern Mexico.

One Cooper's hawk was observed within the BSA during the 2006 surveys. Additionally, surveys conducted during 2003 observed eight Cooper's hawks just west of the BSA during 2003 (Impact Sciences 2004).

Western Yellow-Billed Cuckoo

The western yellow-billed cuckoo is considered a federal candidate species (USFWS 2005) and a state listed endangered species (CDFG 2006d). It inhabits willow and cottonwood forests along rivers and streams. This subspecies is found in the western United States, west of the Rocky Mountains, and in northwestern Mexico. It breeds in southern California along the South Fork Kern, Santa Ana, Amargosa, Owens, and Colorado rivers, and the Prado Basin in Los Angeles County.

No western yellow-billed cuckoos were observed during the April – July 2006 surveys. However surveys conducted during 2003 observed the species just west of the BSA within riparian habitat (Riverpark DEIR, 2004).

Loggerhead Shrike

The loggerhead shrike is considered a state species of special concern (CDFG 2006e). It inhabits open country, typically lowland plains and gently sloping hillsides with short grass for foraging and scattered trees and shrubs that provide nesting and perching sites. This species occurs throughout most of North America, except in the northeastern United States, northern Rocky Mountains, and Cascade Range, and in southern Alberta, Saskatchewan, and Manitoba.

No loggerhead shrikes were observed during the general wildlife surveys conducted within the BSA during the 2002, 2003, or 2006 surveys. However, surveys conducted in 2003 observed this species within the BSA (Riverpark DEIR, 2004).

Yellow Warbler

The yellow warbler is considered a state species of special concern (CDFG 2006e). It occupies marshes, swamps, streamside groves, willow and alder thickets, open woodlands with thickets, orchards, gardens, and open mangroves. This species breeds from Alaska to Newfoundland and south to western South Carolina and northern Georgia, and west sporadically through the southwest to the Pacific Coast. The yellow warbler is highly migratory and winters in Central America and the West Indies south to northern Peru. The yellow warbler is a summer visitor in California.

No yellow warblers were observed within the BSA during the 2002, 2003, or 2006 field surveys. The species was observed during general wildlife surveys just west of the BSA in riparian vegetation during 2003 surveys for the Cross Valley Connector Corridor. A lack of large areas of suitable habitat features (e.g., marshes, thickets, orchards) within the survey area indicates that the population for this species west the BSA is likely to be very small.

Summer Tanager

The summer tanager is considered a state species of special concern (CDFG 2006e). It occurs in pine-oak and oak forests, streamside willows and cottonwood trees, and dry

open woodlands. This species breeds from southeastern California and southern Nevada to central Oklahoma, and from southeastern Nebraska to New Jersey south to the Gulf Coast and northern Mexico. It winters mainly from Mexico to Bolivia. Summer tanager populations have experienced a steady decline over the past several years due to increased urbanization and habitat destruction (Unitt 2004).

No summer tanagers were observed during the general wildlife surveys conducted within the BSA during the 2002, 2003, or 2006 surveys. However, surveys conducted in 2003 observed this species in the BSA (Riverpark DEIR, 2004).

Southern California Rufous-Crowned Sparrow

The southern California rufous-crowned sparrow is considered a state species of concern (CDFG 2006e). It is an uncommon to fairly common, localized resident of sage scrub on steep rocky slopes of the coastal plain of southern California and Baja California, Mexico, from sea level to 1,800 feet.

A pair of southern California rufous-crowned sparrows was observed exhibiting breeding behavior within the BSA during 2006 surveys. Three individuals were observed during general wildlife surveys conducted during 2002. This species is expected to occur in low numbers throughout the suitable upland scrub communities within the BSA.

Bell's Sage Sparrow

Bell's sage sparrow is considered a state species of special concern (CDFG 2006e). It occupies dense coastal sage scrub and open chaparral habitats. This subspecies ranges from the Cascade Mountains to Baja California, Mexico.

No Bell's sage sparrows were observed during 2006 surveys. Surveys conducted during 2003 observed this species just west of the BSA (Riverpark DEIR, 2004). There is a high potential for this species to occur on-site.

Tricolored Blackbird

The tricolored blackbird is considered a state species of special concern (CDFG 2006e). It nests in large, dense colonies in freshwater marsh and riparian scrub habitats and forages in agricultural areas, lakeshores, and damp lawns. This species' distribution is centered in the Sacramento/San Joaquin valleys of California.

No tricolored blackbirds were observed during 2006 surveys. Surveys conducted during 2003 observed this species just west of the BSA (Riverpark DEIR, 2004).

San Diego Black-Tailed Jackrabbit

The San Diego black-tailed jackrabbit is considered a state species of special concern (CDFG 2006e). It inhabits arid regions, including desert scrub, desert dunes, open coastal sage scrub, early stages of chaparral, prairies, and farmlands.

No San Diego black-tailed jackrabbits were observed and no signs were observed during the general wildlife surveys within the BSA during 2006. However, surveys conducted in 2003 observed this species just west of the BSA (Riverpark DEIR, 2004).

San Diego Desert Woodrat

The San Diego desert woodrat is considered a state species of special concern (CDFG 2006e). It occupies rocky habitats in association with chaparral and coastal sage scrub. This subspecies is restricted to southern California from San Luis Obispo south to northwestern Baja California, Mexico.

No San Diego desert woodrats were observed during the various general wildlife surveys conducted within the BSA during 2006. However, surveys conducted in 2003 observed this species west of the BSA (Riverpark DEIR, 2004).

Southern Mule Deer

The southern mule deer is a state regulated game species. It occurs in large, undisturbed tracts of coastal sage scrub, chaparral, mixed grassland/scrub vegetation, riparian and oak woodlands, and coniferous forest, especially in areas with a mosaic of vegetation that

provide clearings interspersed with dense brush or tree thickets. Mule deer range from the Southern Yukon Territory and Mackenzie in Canada, south through the western United States to Wisconsin and western Texas, and throughout Baja California and northern Mexico. In California, mule deer occur throughout the state with the exception of the San Joaquin Valley and some southeastern desert areas. Most of the California population is migratory, moving to lower elevations in the fall.

The southern mule deer was observed and observed within the BSA during the various general wildlife surveys of the study area conducted during 2002, 2003, and 2006. Southern mule deer sign (tracks and scat) were documented along the Santa Clara River, and individual mule deer were observed on multiple occasions in the river and on the scrub-covered slopes immediately west of the CLWA filtration plant. Since the southern mule deer was observed and observed within the survey area during general wildlife surveys conducted for the project, and suitable foraging, shelter, and dispersal habitat occurs throughout the BSA, it is expected that the project would affect this species through the disruption of dispersal corridors and loss of habitat.

2.14.3 Environmental Effects

Alternative 1: Bridge Alternative

Acreage effects are shown in Table 2.14-1. In summary, the proposed project would result in indirect effects to:

- A small breeding population of western spadefoot toad
- 7 coastal western whiptail individuals
- 1 white-tailed kite individual
- 8 Cooper's hawk individuals
- 1 western yellow-billed cuckoo individual
- 2 loggerhead shrike individuals
- 1 yellow warbler individual
- 1 summer tanager individual
- 3 southern California rufous-crowned sparrow individuals

- 1 Bell's sage sparrow individual
- 1 tricolored blackbird individual
- 2 San Diego black-tailed jackrabbit individuals
- 2 San Diego woodrat individuals
- 3 Southern mule deer individuals

No sharp-shinned hawks would be affected.

Alternative 2: No Build Alternative

Under the No Build Alternative, no development would occur at the project site; consequently, there would be no effect on animal species.

2.14.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: Bridge Alternative

Avoidance and Minimization Efforts: Effects within the BSA would be minimized or avoided through project design modifications. Should effects to animal species be unavoidable, all construction activities would be required by the federal and state regulatory agencies to avoid the breeding seasons of potentially affected species. Additional measures outlined in the NRMP MMRP (see Appendix I of this EA) shall be incorporated into the project design to further minimize potential effects to this species' habitat.

Mitigation: Mitigation Measures BIO-4 (a-c), BIO-5 (a-o), BIO-19, BIO-22, BIO-24 in the NMRP include habitat restoration, creation, and/or exotic habitat removal. Per BIO-5 and BIO-24, any effects to nesting and foraging habitat would be mitigated at a ratio of 1:1 for upland habitats and ratios ranging from 1:1 to 3:1 for riparian habitats depending on the timing of mitigation (see BIO-5 [a] and BIO-24).

Alternative 2: No Build Alternative

There would be no adverse effects on animal species as a result of the No Build Alternative; consequently, no avoidance, minimization, and/or mitigation measures are proposed.

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2.15 THREATENED AND ENDANGERED SPECIES

2.15.1 Regulatory Setting

The primary federal law protecting threatened and endangered species is the FESA USC 16, Section 1531, et seq. (see also 50 CFR Part 402). This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the FHWA, are required to consult with the USFWS and NOAA Fisheries to ensure that they are not undertaking funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an incidental take permit. Section 3 of FESA defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

California has enacted a similar law at the state level, the CESA, California Fish and Game Code, Section 2050, et seq. CESA emphasizes early consultation to avoid potential effects to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The CDFG is the agency responsible for implementing CESA. Section 2081 of the Fish and Game Code prohibits “take” of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by the CDFG. For projects requiring a Biological Opinion under Section 7 of the FESA, the CDFG may also authorize effects to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

2.15.2 Affected Environment

In a regional context, the proposed bridge is located within the confines of the NRMP (Valencia 1998). The NRMP serves as a long-term management plan for infrastructure projects, such as the proposed Golden Valley Road Bridge Project, expected to affect the Santa Clara River and its associated tributaries. Projects described in the plan include river bank protection, storm drain outlets, utility lines, and bridge widening and development.

In 1998, the ACOE and CDFG approved the NRMP and issued a Section 404 Permit (No. 94-00504) and a 1603 Streambed Alteration Agreement (No. 5-502-97), respectively. The ACOE's Final EIS/EIR (1998a) and ROD (1998b) for the NRMP permits outline specific avoidance and mitigation measures to minimize direct and indirect effects to sensitive resources expected from the proposed activities described in the NRMP. These measures would be implemented in the project design for the proposed Golden Valley Road Bridge Project. Specific avoidance and mitigation measures for sensitive flora and fauna were discussed in greater detail in Sections 2.13 and 2.14, respectively. Measures for jurisdictional wetlands and waters were discussed in greater detail in Section 2.12.

The proposed project is also located within the SEA, specifically SEA 23 (City 2003). The SEA is defined by areas of high biological value within the city limits and managed by the City. These areas were characterized by the County of Los Angeles and adopted by the City as buffer zones for native ecological resources. Potential effects in the SEA from the proposed action would be mitigated through the measures provided from the certified NRMP EIS/EIR (ACOE 1998a) and ROD (ACOE 1998b) upon approval by the City.

The sensitive plant and wildlife species that occur within the region of the BSA are represented in Tables 2.13-1 and 2.14-1. These summary tables include the regulatory status, presence or absence of the species or its habitat, and a brief discussion of its potential for occurrence within the proposed BSA.

2.15.3 Environmental Effects

Alternative 1: Bridge Alternative

Threatened and endangered plants include those listed as threatened, endangered, or proposed for listing by the USFWS (2005), CDFG (2006b, 2006c), and CNPS (2001). The CNPS Listing is sanctioned by the CDFG and essentially serves as its list of candidate species for threatened or endangered status. All threatened and endangered species observed within the BSA or that have a potential to occur within the BSA based on previously recorded occurrences in the vicinity of the BSA, or the presence of suitable habitat, are listed in Table 2.15-1.

**Table 2.15-1
Effects on Threatened and Endangered Species**

Species	Population Size Observed within the BSA	Suitable Habitat within AE (acres)	Affected within AE
Slender Mariposa Lily	3 individuals	None	3 individuals would be indirectly affected
Plummer's Mariposa Lily	35 individuals	None	35 individuals would be indirectly affected
Peirson's Morning Glory	236 individuals	None	236 individuals would be indirectly affected
Palmer's Grappling Hook	50 individuals	None	50 individuals would be indirectly affected
Coast Live Oak	1 individual	None	1 individual would be indirectly affected
Western Spadefoot Toad	1 individual adult, hundreds of tadpoles	4.31	A small breeding population would be indirectly affected
Coastal Western Whiptail	7 individuals	2.39	7 individuals would be indirectly affected
White-tailed Kite	1 individual	2.39	1 individual would be indirectly affected
Sharp-shinned Hawk	1 individual	2.39	No individuals would be affected
Cooper's Hawk	8 individuals	2.39	8 individuals would be indirectly affected
Western Yellow-billed Cuckoo	1 individual	2.24	1 individual would be indirectly affected
Loggerhead Shrike	2 individuals	0.15	2 individuals would be indirectly affected
Yellow Warbler	1 individual	2.24	1 individual would be indirectly affected

Species	Population Size Observed within the BSA	Suitable Habitat within AE (acres)	Affected within AE
Summer Tanager	1 individual	2.24	1 individual would be indirectly affected
Southern California Rufous-crowned Sparrow	3 individuals	0.15	3 individuals would be indirectly affected
Bell's Sage Sparrow	1 individual	0.15	1 individual would be indirectly affected
Tricolored Blackbird	1 individual	2.24	1 individual would be indirectly affected
San Diego Black-tailed Jackrabbit	2 individuals	2.39	2 individuals would be indirectly affected
San Diego Woodrat	2 individuals	2.39	2 individuals would be indirectly affected
Southern Mule Deer	3 individuals	4.48	3 individuals would be indirectly affected

Species that are federally or state listed are afforded a degree of protection that entails a permitting process, including specific mitigation measures to compensate for impacts to the species. Species that are proposed to be listed by the USFWS are treated similarly to listed species by that agency. Recommendations of the USFWS, however, are advisory rather than mandatory in the case of proposed species. Species considered state species of special concern by the CDFG have a lesser degree of protection under CEQA.

Indirect impacts such as dust, sediment, lighting, runoff, and illegal trespass are not quantified because there are no established standards to determine the extent of impacts from the point source. Indirect impacts due to shading from the proposed bridge would not have an adverse impact on sensitive resources because this section of the river does not frequently flow with water. Shading effects are determined by how much area is covered by a bridge over standing or flowing water systems. With infrequent water flows, this portion of the river would not be adversely affected by the shadow of the proposed bridge.

Alternative 2: No Build Alternative

Under the No Build Alternative, no development would occur at the project site; consequently, there would be no impact to sensitive species.

2.15.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: Bridge Alternative

The NRMP was approved by the ACOE and CDFG in 1998. The ACOE's Final EIS/EIR (1998a) and ROD (1998b) for the NRMP permits outline specific avoidance and mitigation measures to minimize direct and indirect impacts to sensitive resources expected from the proposed activities described in the NRMP. These measures would be implemented in the project design, construction, and operation for the proposed Golden Valley Road Bridge Project. The NRMP has been approved by the ACOE, CDFG, and RWQCB and would therefore satisfy the regulatory requirements for impacts to sensitive species. Consequently, the proposed Bridge Alternative would not have adverse effects on sensitive species.

Alternative 2: No Build Alternative

There would be no adverse effects on threatened and endangered species as a result of the No Build Alternative; consequently, no avoidance, minimization, and/or mitigation measures are proposed.

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2.16 INVASIVE SPECIES

2.16.1 Regulatory Setting

On February 3, 1999, President Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” FHWA guidance issued August 10, 1999, directs the use of the state’s noxious weed list to define the invasive plants that must be considered as part of the NEPA analysis for a proposed project.

2.16.2 Affected Environment

The introduction of invasive species into native habitats creates many problems for native wildlife, including increased competition for resources and increased predation. The BSA is characterized by disturbed native vegetation communities that have been invaded by exotic plants. These species are listed in Table 2.16-1.

**Table 2.16-1
Invasive Species List**

Scientific Name	Common Name
Angiospermae	
<u>Asteraceae - Sunflower Family</u>	
<i>Centaurea melitensis</i>	Tocalote
<u>Brassicaceae - Mustard Family</u>	
<i>Brassica ssp.</i>	Mustards
<i>Hirschfeldia incana</i>	Perennial mustard
<u>Myoporaceae - Myoporum Family</u>	
<i>Myoporum laetum</i>	Myoporum
<u>Solanaceae - Nightshade Family</u>	
<i>Nicotiana glauca</i>	Tree tobacco
Monocotyledoneae	
<u>Poaceae - Grass Family</u>	
<i>Avena barbata</i>	Slender wild oat
<i>Arundo donax</i>	Giant reed
<i>Bromus diandrus</i>	Ripgut grass
<i>Bromus madritensis ssp. rubens</i>	Foxtail chess
<i>Cortaderia sp.</i>	Pampas grass
<i>Cynodon dactylon</i>	Bermuda grass
<i>Polypogon monspeliensis</i>	Annual beard grass
<i>Rhynchelytrum repens</i>	Natal grass

2.16.3 Environmental Effects

Alternative 1: Bridge Alternative

Given the presence of a range of invasive species onsite, there is some potential for these species to spread to other areas through vehicle tracking. The seeds could also be disturbed during construction and spread through windborne or waterborne methods. Mitigation measures INVS-A and INVS-B provided below would help avoid adverse effects from the introduction or spreading of invasive species.

Alternative 2: No Build Alternative

Under the No Build Alternative, no ground disturbance would occur at the project site; consequently, there would be no impact to invasive species.

2.16.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: Bridge Alternative

The following mitigation measures would reduce the potential for adverse effects:

INVS-A: Erosion control measures implemented during construction and following construction shall be designed and implemented in compliance with Executive Order 13112, designed to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause. Landscaping would incorporate native plants to combat invasive species.

INVS-B: Certified weed-free or weed-seed-free hay or straw shall be used where such material is required for BMPs or other practices.

Alternative 2: No Build Alternative

There would be no impacts to invasive species as a result of the No Build Alternative; consequently, no avoidance, minimization, and/or mitigation measures are proposed.

2.17 CUMULATIVE EFFECTS

Cumulative effects are those that result from past, present, and reasonably foreseeable future actions, combined with the potential effects of the proposed action. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time. Section 1.6 discusses related projects in the vicinity of the proposed project, and Table 1-2 includes projects in the vicinity of the proposed project that are planned, approved, or being constructed.

2.17.1 Land Use and Community Impacts

The proposed project would not result in adverse effects to land use as the bridge would be compatible with land use designations and zoning as well as nearby surrounding land uses. The proposed bridge would not conflict with adopted goals or policies of applicable plans or physically divide or disrupt established land use patterns. The proposed project would not result in acquisition of any residential or commercial structures.

Other related projects would be subject to their own environmental review including land use conformity analysis and consistency with policies and goals of applicable land use plans. As the proposed bridge would not result in an adverse land use impact, it would not contribute to a cumulatively considerable effect when combined with other related development.

2.17.2 Utilities/Emergency Services

Local utility lines and infrastructure have adequate capacity to serve the nighttime lighting needs of the proposed project. Solid waste generated during construction would be handled in accordance with the City's policies, and wastewater would be managed subject to Caltrans' SWPPP/WPCP requirements. The project would consume water and electricity during construction; however, the existing system has adequate capacity to accommodate these activities. At construction completion, the proposed project would improve regional circulation and, with the other CVC Corridor segments currently under

construction and completed, would cumulatively improve emergency response times. As the proposed project would not result in an adverse impact to utilities and emergency services, it would not contribute to a cumulatively considerable effect when combined with other related development.

2.17.3 Traffic and Transportation/Pedestrian and Bicycle Facilities

The proposed project would result in an improvement in permanent traffic circulation within the Santa Clarita Valley and thus would not result in a cumulatively adverse impact to traffic when considered in conjunction with other projects in the area. Temporary impacts to traffic during construction would be negligible given the project's location off the existing street network. As the proposed project would not result in a adverse traffic impact, it would not contribute to a cumulatively considerable effect when combined with other related development, either during construction or operation.

2.17.4 Visual/Aesthetics

Potential cumulative impacts to aesthetic resources would occur in the event that other projects, in combination with the proposed project, cumulatively contribute to the degradation or deterioration of the visual setting, or result in damage to scenic views or vistas. The impact area for cumulative visual effects would include the general vicinity of the project area, including those areas that can be viewed from, or have views of, the bridge site.

The proposed action would create a new feature in the visual environment and would be visible from Soledad Canyon Road, along with the adjacent Riverpark construction. However, the structure would not be out of place in an increasingly urbanized setting and with the crossing of a large river. Likewise, visual impacts during construction would not be out of place for the setting. As such, there would be no cumulative effect on aesthetics from the proposed project..

2.17.5 Hydrology and Floodplain

The proposed bridge would be compatible with the NRMP and would be consistent with the local, state, and federal regulations for the 100-year floodplain. As such, there would be no down- or upstream effect on hydrology or floodplain. Related projects spanning the Santa Clara River in the vicinity of the proposed bridge have been analyzed in the NRMP. These projects and others adjacent to the floodplain would be required to adhere to FEMA regulations to avoid the 100-year floodplain. As such, there would be no cumulative effect on hydrology and floodplain resulting from the proposed project.

2.17.6 Water Quality and Stormwater Runoff

The proposed project would not result in adverse effects on water quality and stormwater runoff. For most of the year, there is little water flow in the Santa Clara River and therefore limited situations where discharge into the water system would occur. The proposed bridge, as well as reasonably foreseeable development, would be required to comply with NPDES requirements limiting offsite discharges to predevelopment levels. As such, cumulative water quality and stormwater effects would be avoided.

2.17.7 Geology/Soils/Seismic/Topography

Potential cumulative geologic impacts pertain to the disturbance of unique geologic formations and exposure of persons or property to seismic hazards and are localized in nature. The proposed bridge, in conjunction with other projects in the area, would result in the construction of new structures that would be subject to seismic hazards. All new structures would incorporate the required seismic safety standards and project-specific design requirements to reduce impacts associated with seismic hazards to below adverse levels. The project would not create or worsen geology and soils impacts at any of the related project sites; therefore, no cumulative effects would occur.

2.17.8 Hazardous Waste and Materials

Potential impacts related to hazardous waste and materials would be reduced during project construction through compliance with applicable rules and regulations. None of

the related projects include hazardous waste-generating facilities or activities that would create new safety hazards. No long-term impacts would occur, since the project would not result in any new uses that would generate hazardous waste. The proposed project and other related projects are not expected to use large quantities of hazardous materials that would create a potential risk to public health and safety. Other related projects in the area would also be expected to comply with applicable code requirements and regulations for hazardous materials contamination, handling, and storage. When considered together with other related projects, hazardous materials effects would not be cumulatively considerable as a result of the proposed project.

2.17.9 Air Quality

The Los Angeles County portion of the South Coast Air Basin is currently classified as federal and state nonattainment for O₃, PM_{2.5}, and PM₁₀, and federal nonattainment for CO. Development forecasted for the Santa Clarita Valley will generate increased emissions from transportation and stationary sources resulting in an adverse cumulative impact to air quality. Combined emissions from other developed portions of the South Coast Air Basin are expected to continue to exceed federal and state standards. Cumulative air quality impacts will be partially reduced by the implementation and achievement of emission levels identified in the SCAQMD AQMP, for O₃ precursors. To achieve these goals, the AQMP requires implementation of control measures to reduce emissions.

The proposed action was analyzed for regional air quality impacts by SCAG as part of the RTPs, which were found to conform to the AQMP and the SIP. The proposed bridge was analyzed for local air quality impacts in accordance with the Transportation Project-Level Carbon Monoxide Protocol (UC Davis Institute of Transportation Studies 1997) and recent U.S. EPA guidance for analysis of local PM₁₀ impacts. The proposed bridge would not generate traffic, increase cold starts, or worsen congestion. There would be no adverse local air quality effects, nor contribution to the existing air quality violations. Therefore, the proposed action would not contribute to cumulative air quality effects.

2.17.10 Noise

The proposed action would not result in adverse noise effects, as there are no sensitive receptors within the vicinity of the proposed bridge that would be affected by noise during construction or operations. Foreseeable future development in the vicinity of the project would likewise not result in sensitive noise receptors along the roadway; therefore, no cumulative noise effects are anticipated.

2.17.11 Natural Communities

Implementation of the proposed action, as well as other projects within the region, would contribute to cumulative effects to natural communities through direct, incremental loss of habitat and increasing indirect pressures on remaining dwindling habitats. The NRMP was completed to ensure that all foreseeable impacts to the Santa Clara River were accommodated and mitigated for. Consequently, through the implementation of the mitigation measures outlined in the NMRP, these impacts would be reduced to the greatest extent feasible.

2.17.12 Wetlands and Other Waters

Mitigation requirements for the proposed project's impacts to jurisdictional waters and other waters have already been determined by the permit and agreement issued for the NRMP. Mitigation for jurisdictional areas will be performed at a ratio varying from 1:1 to 3:1 depending upon implementation timing. The NRMP provides mitigation for impacts to wetlands and other waters and also oversees mitigation for other projects planned along the Santa Clara River, including the adjacent Riverpark development currently under construction. Although direct cumulative effects would occur as a result of the proposed action and other related projects, mitigation provided in the NRMP is designed to cumulatively reduce effects.

2.17.13 Plant Species

Implementation of the proposed project, as well as other projects within the region, would contribute to cumulative effects on the plant species discussed in Section 2.13,

through direct, incremental loss of populations and habitat and increasing indirect pressures on remaining dwindling populations. Since these species would not be directly affected by the proposed bridge, the proposed project would not contribute to cumulative effects.

2.17.14 Animal Species

Implementation of the proposed action, as well as other projects in the region, would result in development and incremental loss of habitats suitable for all animal species as discussed in Section 2.14. Incremental loss of habitat adds to the long-term trend of increased disturbance and degradation of habitats suitable for the species. However, through the implementation of the mitigation measures outlined in the MMRP, these impacts would not contribute to cumulative effects.

2.17.15 Threatened and Endangered Species

Mitigation requirements for the bridge's effects on jurisdictional waters and streambed have already been determined by the permit and agreement issued for the NRMP. Adherence to the avoidance, minimization, and mitigation measures in the NRMP would reduce the potential for adverse effects. In addition, the related projects would also be required to adhere to similar measures. As such, impacts to threatened and endangered species would not contribute to cumulative effects.

2.17.16 Invasive Species

The proposed action and related projects would potentially result in a cumulatively adverse effect with regard to the spread of invasive species. However, following the implementation of the suggested mitigation for invasive species, these effects would not be adverse. Related projects would be required to implement similar measures such that cumulative effects from the introduction and/or spread of invasive species would not be adverse.

Chapter 3

Comments and Coordination

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures, and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including project development team meetings. This chapter summarizes the results of the City's efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

The proposed project is a joint project by the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) and is subject to state and federal environmental review requirements. Project documentation, therefore has been prepared in compliance with the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA). The FHWA's responsibility for environmental review, consultation, and any other action required in accordance with NEPA and other applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 USC 327.

As noted in the introduction of this document, CEQA compliance for this project was obtained through the approval of the Riverpark housing development the City Council of Santa Clarita certifying the Final Environmental Impact Report (FEIR) SCH #2002091081, including the mitigation monitoring and reporting program, and adopting a statement of overriding considerations on May 24, 2005. Caltrans reviewed the FEIS and sent notice to the City on March 15, 2007, finding the document to be consistent with the proposed bridge project under assessment within this NEPA document. Caltrans concurred with the cities' level of documentation under CEQA. Caltrans remains responsible for NEPA determination through this document.

Public outreach and Native American consultation for this project was conducted for this project under the Riverpark EIR process and the early Cross Valley Connector environmental process. Letters were sent on November 13, 2002, and December 16, 2002, to the following Native American groups: Chumash, Fernandeno, Gabrielino, Kitanemuk, Serrano, Tataviam, Tongva, Shoshone Paiute, and Yaqui. Individuals indicated the need for caution during the cultural investigations as the area may have been used for Chumash and Tataviam villages and/or Tataviam burial grounds. A response from the Native American Heritage Commission was received on November 6, 2002, indicating that sacred lands were not located within the immediate vicinity of the project area. Additionally, a public scoping meeting for the Cross Valley Connector was held in Santa Clarita on February 24, 2003.

A Preliminary Environmental Study (PES) form was completed for Caltrans on May 10, 2006. Caltrans approved the PES form on May 11, 2006, and the FHWA approved the form on May 18, 2006. An Environmental Assessment (EA) leading to a Finding of No Significant Impact (FONSI) was identified as the appropriate course for the proposed action.

A public hearing will be held on this project on April 23, 2008 at the City of Santa Clarita City Council Chambers. Prior to the hearing, the document will be distributed to those agencies and officials with a stake in the project. The agency/elected official distribution list is noted in Chapter 5 of this document. Additionally, members of the public who submitted comments at the original scoping meeting will be sent a copy of the EA, as well as other interested parties, businesses, and local agencies with the vicinity of the project. Agency and public comments will be collected and incorporated into the final environmental document.

Chapter 4

List of Preparers

This EA was prepared by the City of Santa Clarita and District 7 of Caltrans, with the aid of EDAW, Inc. The following people contributed to the preparation of this EA.

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Chapter 5

Distribution List

This EA was prepared and will be distributed to the following interested Federal and local agencies, as well as elected officials with a high level of interest in the Golden Valley Road Bridge project.

Federal and Local Agencies:

U.S. Fish and Wildlife Offices, Ventura Field Office

U.S. Army Corps of Engineers, Regulatory Branch

Los Angeles Regional Water Quality Control Board

Elected Officials

U.S. Senator Barbara Boxer

U.S. Senator Diane Feinstein

Congressman Howard ‘Buck’ McKeon, 25th Congressional District

California Governor Arnold Schwarzenegger

California Senator George Runner, 17th Senate District

California Senator Tom McClintock, 19th Senate District

California Assemblywoman Sharon Runner, 36th Assembly District

California Assemblyman Cameron Smyth, 38th Assembly District

Los Angeles County Supervisor Michael Antonovich, 5th District

Mayor Bob Kellar, City of Santa Clarita

City Manager Ken Pulskamp, City of Santa Clarita

Councilmembers Tim Ben Boydston, Laurene Weste, and Frank Ferry,

City of Santa Clarita

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