



# **Otay Ranch Villages Two, Three, and a Portion of Village Four Sectional Planning Area (SPA) Plan**

Final Second Tier Environmental Impact Report

Second Tier EIR 02-02

SCH No. 2003091012

May 2006

Final Second Tier Environmental Impact Report  
for Otay Ranch Villages Two, Three,  
and a Portion of Village Four  
Sectional Planning Area (SPA) Plan

Lead Agency

City of Chula Vista  
276 Fourth Avenue  
Chula Vista, CA 91910

May 5, 2006

**TABLE OF CONTENTS**

<b>1.0</b>	<b>Executive Summary .....</b>	<b>1-1</b>
<b>2.0</b>	<b>Introduction .....</b>	<b>2-1</b>
<b>3.0</b>	<b>Project Description .....</b>	<b>3-1</b>
<b>4.0</b>	<b>Environmental Setting .....</b>	<b>4-1</b>
<b>5.0</b>	<b>Environmental Impact Analysis.....</b>	<b>5-1</b>
5.1	Land Use.....	5-1
5.2	Landform Alteration/Aesthetics .....	5-45
5.3	Biological Resources .....	5-71
5.4	Cultural Resources .....	5-130
5.5	Geology and Soils.....	5-142
5.6	Paleontological Resources .....	5-157
5.7	Agriculture.....	5-162
5.8	Housing and Population.....	5-167
5.9	Water Resources and Water Quality .....	5-172
5.10	Traffic, Circulation, and Access .....	5-185
5.11	Air Quality .....	5-243
5.12	Noise.....	5-265
5.13	Public Services and Utilities.....	5-286
5.14	Hazards/Risk of Upset .....	5-347
<b>6.0</b>	<b>Cumulative Impacts .....</b>	<b>6-1</b>
<b>7.0</b>	<b>Growth-Inducing Impacts.....</b>	<b>7-1</b>
<b>8.0</b>	<b>Significant Irreversible Environmental Changes .....</b>	<b>8-1</b>
<b>9.0</b>	<b>Effects Found Not to Be Significant.....</b>	<b>9-1</b>
<b>10.0</b>	<b>Alternatives.....</b>	<b>10-1</b>
<b>11.0</b>	<b>References.....</b>	<b>11-1</b>
<b>12.0</b>	<b>EIR Preparation .....</b>	<b>12-1</b>
<b>13.0</b>	<b>Persons and Organizations Contacted .....</b>	<b>13-1</b>

**FIGURES**

3-1:	Regional Location.....	3-2
3-2:	Otay Valley Parcels of the Otay Ranch GDP/SRP .....	3-3
3-3:	Proposed Project Area .....	3-4
3-4:	Property Ownership.....	3-7
3-5:	Land Use Plan .....	3-14
3-6:	Circulation.....	3-21
3-7:	Conceptual Public Transportation Plan .....	3-22
3-8:	Trails Plan.....	3-24
3-9:	Phasing.....	3-25
3-10:	Relocation of the City of San Diego Waterline Option.....	3-27
3-11:	Composite Tentative Map.....	3-30
3-12:	Proposed Boundary Adjustment to the Chula Vista MSCP Preserve.....	3-32
3-13:	1995 Agreement Preserve Modifications.....	3-33
3-14:	Proposed Boundary Adjustment to the Chula Vista RMP Preserve .....	3-36
5.1-1:	Adopted GDP Land Use Map .....	5-7
5.1-2:	GDP Land Use Amendment .....	5-9
5.2-1:	Aerial Photograph of Project and Vicinity .....	5-46
5.2-2:	Existing Landform.....	5-47
5.2-3:	Steep Slopes Map .....	5-48
5.2-4:	Project Simulation Camera Locations .....	5-59
5.2-5:	Project Simulation View: Looking Towards Village Two West from Intersection of Heritage Road and D Street.....	5-60
5.2-6:	Project Simulation View: Looking Northwest Towards Project from Community Park .....	5-61
5.2-7:	Conceptual Grading Plan .....	5-65
5.2-8:	Cut and Fill Plan .....	5-66
5.3-1:	Village Two and a Portion of Village Four Existing Biological Resources ..	5-73
5.3-2:	Village Three Existing Biological Resources .....	5-74
5.3-3:	Existing Vernal Pool Locations within Village Two .....	5-87
5.3-4:	Existing Vernal Pool Locations within Village Three .....	5-89
5.3-5:	Proposed RMP Boundary Modifications.....	5-91
5.3-6:	Wolf Canyon and Poggi Canyon Wildlife Corridor.....	5-102
5.3-7:	Proposed MSCP Boundary Modifications .....	5-104
5.5-1:	Geology Map for Village Two .....	5-144
5.5-2:	Geology Map for Village Three.....	5-145
5.5-3:	Geology Map for Village Four.....	5-146
5.9-1:	Existing Drainage Conditions for the SPA Plan Area .....	5-173
5.9-2:	Storm Drainage Plan .....	5-177
5.10-1:	Existing and Proposed Roadways.....	5-187
5.10-2:	Existing Traffic Volumes .....	5-194
5.10-3:	Year 2005 ADT .....	5-213
5.10-4:	Year 2010 ADT .....	5-214
5.10-5:	Year 2020 ADT .....	5-215
5.10-6:	Year 2030 ADT .....	5-216
5.10-7:	Buildout ADT .....	5-217
5.10-8:	Proposed Project Volumes at Buildout.....	5-227
5.10-9:	PFFP Roadways.....	5-231
5.10-10:	Intersection Configurations with and without Rock Mountain Road .....	5-233
5.10-11:	Access Intersection Geometry.....	5-240
5.12-1:	Future Project Noise Contours at Buildout .....	5-270
5.12-2:	Modeled Receiver Locations .....	5-271
5.12-3:	Football Stadium and Adjacent Residential Receivers.....	5-275
5.12-4:	Proposed Noise Barriers for General Plan Traffic .....	5-282

**FIGURES (cont.)**

5.12-5:	Football Stadium, Adjacent Residential Receivers, and Proposed Noise Barriers .....	5-285
5.13-1:	Existing and Proposed On-site Water Facilities .....	5-288
5.13-2:	Reservoirs in the 624 Zone .....	5-289
5.13-3:	Existing and Proposed Recycled Water Facilities .....	5-315
5.13-4:	Existing and Proposed Sewer Facilities .....	5-319
6-1:	Major Projects in Vicinity of SPA Plan area .....	6-7
10-1:	Reduced Alternative A .....	10-6
10-2:	Reduced Alternative B .....	10-15
10-3:	Reduced Alternative C .....	10-21

**TABLES**

1-1:	Environmental Documents Incorporated By Reference .....	1-8
1-2:	Summary of Impacts and Mitigation .....	1-11
2-1:	CEQA-Required EIR Contents .....	2-7
3-1:	Land Uses Within Villages Two and Four for the Proposed Project .....	3-11
3-2:	Land Uses Within Village Three for the Proposed Project .....	3-13
3-3:	Description of Land Use Designations .....	3-15
3-4:	Circulation Element Roadways .....	3-20
3-5:	Actions Required From Other Agencies .....	3-38
5.1-1:	Consistency of the Proposed Project with the General Plan Elements .....	5-22
5.1-2:	SPA Plan Conformance with the Otay Ranch GDP .....	5-25
5.1-3:	Comparison of GDP Land Uses and the Proposed SPA Plan Land Uses Within Villages Two and Three .....	5-34
5.2-1	Relevant General Plan Update Landform and Visual Policies .....	5-53
5.2-2:	Steep Slope Allocation for the Project Area .....	5-56
5.2-3:	Proposed Spa Plan Earthwork Quantities .....	5-67
5.3-1:	Acreages of Existing Vegetation Community and Land Cover Types .....	5-75
5.3-2:	Impacts by Habitat Type .....	5-95
5.3-3:	RMP Boundary Modification Change in Preserve Acreage .....	5-100
5.3-4:	Vegetation in MSCP Preserve Versus Village Two/Three Boundary Adjustment .....	5-103
5.4-1:	Archaeological Sites by Report .....	5-131
5.4-2	Archaeological Site Evaluations and Test Results .....	5-132
5.4-3:	Artifacts By Site .....	5-137
5.5-1:	Deterministic Site Parameters for Selected Active Faults .....	5-143
5.9-1:	Summary of Peak 100-Year Flows .....	5-178
5.10-1:	Existing Peak Hour Intersection Operations .....	5-190
5.10-2:	Existing Segment Operations .....	5-193
5.10-3:	Freeway Mainline Operations Existing Conditions .....	5-195
5.10-4:	Trip Generation Analyzed (Worst-Case) Project .....	5-200
5.10-5:	Trip Generation Proposed Project .....	5-201
5.10-6:	Comparison of Proposed Project and Analyzed (worst-case) Project Trip Generation .....	5-202
5.10-7	Internal Trips Proposed Project .....	5-205
5.10-8:	Existing Conditions Plus the Proposed Project Peak Hour Intersection Operations .....	5-208
5.10-9:	Existing Conditions Plus the Proposed Project – Segment Operations .....	5-209
5.10-10:	Freeway Mainline Operations Existing Conditions Plus Project Conditions .....	5-211

**TABLES (cont.)**

5.10-11:	Peak Hour Intersection Operations .....	5-218
5.10-12:	Segment Operations.....	5-221
5.10-13:	PFFP Thresholds.....	5-230
5.10-14:	Significance of Impacts at Intersections .....	5-235
5.10-15:	Significance of Impacts at Segments .....	5-236
5.10-16:	Project Driveway Intersection Turn Lane Storage .....	5-238
5.11-1:	Ambient Air Quality Standards .....	5-245
5.11-2:	Criteria Pollutants - Sources and Health Effects .....	5-247
5.11-3:	Ambient Air Quality Summary – San Diego Air Basin .....	5-252
5.11-4:	Summary of Air Quality Measurements Recorded at the Chula Vista Monitoring Station.....	5-253
5.11-5:	SCAQMD Thresholds .....	5-256
5.11-6:	Exhaust Emissions Factors from Typical Construction Equipment .....	5-258
5.11-7:	Projected Daily Construction Emissions By Year .....	5-259
5.11-8:	Project Emissions to the San Diego Air Basin.....	5-260
5.12-1:	Noise and Land Use Compatibility .....	5-268
5.12-2:	GPU Traffic Buildout Noise Levels .....	5-272
5.12-3:	Projected Football Stadium Noise Levels at Modeled Receivers .....	5-277
5.12-4:	Distance to Noise Contours for Heritage Road, South of Birch.....	5-279
5.13-1:	Otay Ranch Villages Two, Three, and a Portion of Four Projected Potable Water Demands.....	5-303
5.13-2:	OWD Water Demand.....	5-305
5.13-3:	OWD Project Water Supply and Demand During Single- and Multi-Year Dry Period .....	5-305
5.13-4:	SDCWA Projected Regional Water Supplies .....	5-305
5.13-5:	OWD Water Demand Based on 2005 UWMP .....	5-306
5.13-6:	Projected Normal Year Supply and Demand Comparison Based on 2005 UWMP .....	5-307
5.13-7:	Projected Single Dry-Year Supply and Demand Comparison Based on 2005 UWMP .....	5-307
5.13-8:	Projected Supply and Demand Comparison During Multiple Dry-Year Period Ending in 2010 Based on 2005 UWMP .....	5-308
5.13-9:	Projected Supply and Demand Comparison During Multiple Dry-Year Period Ending in 2015 Based on 2005 UWMP .....	5-308
5.13-10:	Otay Ranch Villages Two, Three, and a Portion of Four Projected Recycled Water Demands.....	5-314
5.13-11:	Otay Ranch Village Two, Three, and a Portion of Four Wastewater Flow Projections .....	5-322
5.13-12:	Otay Ranch Village Two Poggi Canyon Basin EDU Projection.....	5-324
5.13-13:	Poggi Canyon Interceptor Capacity Threshold Analysis .....	5-324
5.13-14:	Wolf Canyon/Salt Creek Interceptor EDU Projections from Current Land Use Plan .....	5-325
5.13-15:	Poggi Canyon Interceptor Pumped Flow Analysis Summary for the Village Four Community Park.....	5-526
5.13-16:	Solid Waste Generation Rates .....	5-529
5.13-17:	Proposed Project Estimated Solid Waste Generation .....	5-530
5.13-18:	Student Generation Rates for the Proposed Project .....	5-539
5.14-1:	Matrix of Regulatory Agency Responsibility .....	5-349
6-1:	Cumulative Projects.....	6-3
10-1:	Comparison of the Reduced Development Alternatives.....	10-4
10-2:	Adopted General Plan Alternative Land Uses Within Village Two .....	10-5
10-3:	Student Generation Rates for Adopted General Plan (No Project Alternative 2).....	10-10

**TABLES (cont.)**

10-4:	Proposed General Plan Update Alternative Land Uses Within Village Two .....	10-13
10-5:	Student Generation Rates for Adopted General Plan (No Project Alternative 3).....	10-19
10-6:	Reduced Development Alternative Land Uses Within Village Two .....	10-22
10-7:	Reduced Development Alternative Summary of Peak 100-Year Flows ...	10-25
10-8:	Student Generation Rates for Plan A .....	10-27
10-9:	Comparison Of Project Alternatives .....	10-30

**PHOTOGRAPHS**

5.2-1:	Existing View: Looking South from Olympic Parkway .....	5-50
5.2-2:	Existing View: Looking West from La Media Road .....	5-51
5.2-3:	Existing View: Looking North from Future Community Park Site.....	5-52

**APPENDIXES (bound under separate cover)**

A:	Notice of Preparation and Responses
B-1:	Biological Resources Report and Impact Assessment for Otay Ranch Villages Two & Three (Dudek & Associates)
B-2:	Biological Resources Report for the Portions of Village Three/Planning Area 18b Owned by Flat Rock Land Company (URS Corporation)
B-3:	Conveyance Plan Analysis
B-4:	1995 Letter Agreement
C-1:	Report of an Archaeological Evaluation of Cultural Resources at the Otay Ranch Village Two SPA and the Village Seven Disposal Site
C-2:	Archaeological Investigations and Cultural Resource Evaluations for the Otay Ranch Company's Property within Village Three of Otay Ranch
C-3:	Archaeological Investigations and Cultural Resource Evaluations for the Otay Land Company's Ownership within Village Three of Otay Ranch
D-1:	Preliminary Geotechnical Investigation for Village Two (GEOCON, Inc.)
D-2:	Preliminary Geotechnical Investigation for Village Three (GEOCON, Inc.)
D-3:	A Preliminary Geotechnical Investigation for the Parcel A Portion of Village Three (Pacific Soils Engineering, Inc)
D-4:	Geotechnical Investigation, Otay Ranch Village 7, R-2 and Village 4 Community Park, (GEOCON, Inc.)
E-1:	Master Drainage Study for Otay Ranch SPA Villages 2, 3, and 4 (Hunsaker and Associates)
E-2:	Preliminary Water Quality Technical Report for Otay Ranch Villages 2, 3, and 4 (Hunsaker and Associates)
F:	Traffic Report (Linscott, Law & Greenspan Engineers)
G:	Air Quality Report for the Otay Ranch Villages Two and Three, Planning Area 18b, and a Portion of Village Four Sectional Planning Area Plan (RECON)
H:	Noise Technical Report for Otay Ranch Villages Two, Three and Planning Area 18b, and a portion of Village Four (RECON)
I-1:	Overview of Water Service for the Otay Ranch Company Villages Two, Three, and Planning Area 18b (Dexter Wilson Engineering, Inc.)
I-2:	Otay Ranch Villages 2, 3 and a Portion of 4, II.8 Water Conservation Plan, (Dexter Wilson Engineering, Inc.)
I-3:	WSA&V Report (Otay Water District)
J:	Overview of Sewer Service for Otay Ranch Villages 2, 3 and a Portion of 4.

**APPENDIXES (cont.)**

- K-1: Phase I Assessment for Village Two East (GEOCON, Inc.)
- K-2: Phases I and II Assessments for Village Two (GEOCON, Inc.)
- K-3: Revised Report of Additional Assessment and Remedial Excavation for Village Two Former Ranch Operations Center (GEOCON, Inc.)
- K-4: Phase I Assessment for Village Three (GEOCON, Inc.)
- K-5: Phase I Assessment for the Community Park Site in Village Four (GEOCON, Inc.)
- K-6: Phase I Assessment for the Parcels of Land Owned by the Otay Land Company within Village Three and Planning Area 18b (URS)
- K-7: Phase II Assessment for Parcels of Land Owned by the Otay Land Company within Village Three and Planning Area 18b (URS)
- K-8: A Phase I assessment of the 19 acres in the Southern Portion of Village Three (URS)

## **1.0 EXECUTIVE SUMMARY**

This Environmental Impact Report (EIR) is an informational document intended for use by the City of Chula Vista, other public agencies, and members of the general public in evaluating the potential environmental effects of the Villages Two, Three, and a portion of Village Four Sectional Planning Area (SPA) Plan located in Otay Ranch, Chula Vista, California. The SPA Plan is a document that refines and implements the land use plans, goals, and objectives of the Otay Ranch General Development Plan (GDP) for the development of Villages Two, Three, and a portion of Village Four. This EIR tiers from the Otay Ranch GDP Program Final EIR (EIR 90-01, SCH #89010154), in accordance with CEQA Section 21093. This EIR focuses on the actual environmental effects associated with development of the proposed SPA Plan that were not evaluated at a project level in the Otay Ranch GDP Program EIR and updates information in the Otay Ranch GDP Program EIR pertaining to the SPA Plan area to reflect any changes in the project or its circumstances since original approval of the Otay Ranch GDP Program EIR.

This summary provides a brief synopsis of the project description, project alternatives considered, and results of the environmental analysis contained in this EIR. By necessity, this summary does not contain the extensive background and analysis found in the document. Therefore, the reader should review the entire document to fully understand the project and its environmental consequences.

### **1.1 Project Location and Setting**

Otay Ranch lies within the East Planning Area of the city of Chula Vista. Interstate 805 (I-805) bounds the East Planning Area on the west, San Miguel Mountain and State Route 54 on the north, the Otay Reservoirs and the Jamul foothills on the east, and the Otay River valley on the south. The SPA Plan area is located roughly in the center of the East Planning Area.

The SPA Plan area is located at the western edge of the Otay Valley Parcel of the Otay Ranch GDP area. The SPA Plan area is bounded by Olympic Parkway to the north and La Media Road to the east. Village Two occupies the northern portion of the area located to the east of Heritage Road. A portion of Village Two, "Village Two West," is located to the west of Heritage Road. Village Three is located in the southern portion of the SPA Plan area on the east and west sides of Heritage Road. Village Four is located to the south of Village Two proper.

The SPA Plan area is topographically diverse with elevations ranging from 240 feet above mean sea level (AMSL) in the southern portions to 535 feet AMSL in the northeastern portion. The Project area consists of rolling hills in its central portion and relatively steep tributary canyons in its northern and southern portions. Numerous

drainages trend north to south into Wolf Canyon, and one east/west-trending drainage occurs in the northeastern portion of the site. The predominate land uses onsite are cattle grazing and vacant land. There are a number of dirt roads traversing the project site.

The project area is surrounded by other Otay Ranch development areas including Villages One and Five located to the north of Olympic Parkway and Villages Six and Seven located to the east of La Media Road. The Otay Landfill is located south of Village Two West and west of Heritage Road.

## **1.2 Project Background**

Villages Two, Three, and Four are a part of the designated fourteen villages and five planning areas within the Otay Ranch GDP area. Otay Ranch is a master-planned community encompassing approximately 23,000 acres and includes a broad range of residential, commercial, retail, and industrial development. Civic and community uses—such as libraries, parks, and schools—and about 11,375 acres of open space are also included in the community.

The Otay Ranch GDP was adopted by the City Council of the City of Chula Vista and the Board of Supervisors of the County of San Diego in October 1993. Both agencies were involved in the development and approval of the plan because the planning area included land falling within the jurisdiction of both agencies. The Otay Ranch GDP established goals and objectives for the development of the area. As part of the review and approval process for the Otay Ranch GDP, a Program EIR was prepared. Under the implementation program for the Otay Ranch GDP, SPA plans are required to be approved before final development entitlements can be considered. The proposed SPA plan will further refine the development standards, land plans, goals, objectives, and policies for Villages Two, Three, and a portion of Village Four.

The Otay Ranch GDP calls for a mixture of residential densities in Village Two, combined with parks, community purpose facilities, schools, and commercial areas. Village Two is located between two scenic canyons and adjacent to the Otay Landfill. There is a 1,000-foot landfill buffer area located at the southern edge of Village Two West, and the western edge of Village Two proper. The adopted Otay Ranch GDP, as well as a landfill agreement between the City of Chula Vista and the County of San Diego, currently specify that only industrial development and public, quasi-public, and open space (parks and recreation facilities and open space, agriculture, and reserve) are allowed within the landfill buffer area. The adopted Otay Ranch GDP includes industrial uses in Village Three.

This document is a Second Tier EIR addressing the adoption of a SPA Plan for Villages Two, Three, and a portion of Village Four of the Otay Ranch GDP. The document was

prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 as amended and the guidelines of the City of Chula Vista.

### 1.3 **Project Description**

The proposed SPA Plan is comprised of the following land use components: 2,786 dwelling units (986 single-family and 1,800 multi-family units) on approximately 335.1 acres and three industrial areas on 87.9 acres within Village Two and a 176.5-acre business park within Village Three. Village Four contains a 44.2-acre community park site. The remaining acres would be developed with non-residential uses, including community purpose facilities, schools, public parks, commercial uses, open space, two pedestrian bridges, and circulation rights-of-way.

The proposed project would require an amendment to the City of Chula Vista General Plan, the Otay Ranch GDP, the Phase 1 and 2 Resource Management Plan (RMP), a Chula Vista MSCP Subarea Plan Boundary Adjustment and an amendment to the County of San Diego Otay Subregional Plan (SRP) and County adopted RMP Preserve Conveyance Plan. The discretionary actions which this EIR applies and the agency responsible are listed below:

#### **City of Chula Vista:**

- **Adoption of the SPA Plan and Associated Documents of the SPA Plan.** The associated documents in the SPA Plan include: the Public Facilities Financing Plan; Village Design Plan; Planned Community (PC) District Regulations; Air Quality Improvement Plan; Water Conservation Plan; and the Non-Renewable Energy Conservation Plan for Villages Two, Three, and a portion of Village Four.
- **City of Chula Vista General Plan Amendment.**

The proposed Chula Vista General Plan Amendment includes provisions to:

- 1) Process a boundary adjustment to the Chula Vista MSCP Preserve to accommodate proposed grading limits for Village Two, as well as to include additional lands in the MSCP Preserve within the northern portion of Wolf Canyon. The proposed project places fill in an area within the boundaries of the MSCP Subarea Preserve; therefore, approval of this project requires the modification of the boundary of the preserve area;
- 2) Pursuant to the 1995 agreement with the Wildlife Agencies incorporated in the County of San Diego MSCP Subarea Plan and consistent with the City's Subarea Plan, amend the Phase 1 and Phase 2 RMP to delete Preserve areas in Village Two West. In anticipation of the eventual enactment of MSCP

Subarea Plans for both the City and the County, the applicant's predecessor in interest (The Baldwin Company) negotiated a modification of the Otay Ranch GDP to meld the RMP and MSCP into a single regulatory plan. Some of the basic elements were the removal of a "potential avian corridor" between Wolf Canyon and Village Two West, and elimination of the coastal sage scrub restoration requirements. These amendments are required to bring the General Plan into consistency with the terms of the 1995 agreement.

- **Otay Ranch General Development Plan Amendment.**

The proposed Otay Ranch General Development Plan Amendment includes provisions to:

- 1) Adjust the permissible number of units in Village Two from a maximum of 2,510 units to 2,786 units in order to reflect the above-referenced amendments and SPA Plan;
- 2) Refine the Otay Ranch GDP development/preserve boundaries within Wolf Canyon to accommodate proposed grading limits for Village Two, and include additional lands in the MSCP preserve within the northern portion of Wolf Canyon;
- 3) Pursuant to the 1995 agreement with the Wildlife Agencies, amend the Otay Ranch Phase 1 and Phase 2 RMP to delete Preserve areas in Village Two West by removing the "potential avian corridor" between Wolf Canyon and Village Two West and eliminating the coastal sage scrub restoration requirements; and
- 4) Permit Villages Two, Three, and all subsequent Villages to convey any Otay Ranch Preserve lands in satisfaction of each Village's conveyance requirement.

- **Phase One and Two Resource Management Plan Amendment.** An amendment to the Phase One and Two Resource Management Plan to:

- 1) Refine the Otay Ranch RMP preserve boundary to accommodate proposed grading limits for Village Two, and to include additional lands in the RMP preserve within the northern portion of Wolf Canyon. The proposed project places fill in an area within the boundaries of the MSCP Subarea preserve. Approval of this project requires the modification of the boundary of the Preserve area.

- 2) Amendments to the RMP are proposed to reflect the modified Preserve boundaries resulting from the 1995 Wildlife Agencies Agreement. In anticipation of the eventual enactment of MSCP Subarea Plans for both the City of Chula Vista and the County of San Diego, the applicant's predecessor in interest (The Baldwin Company) negotiated with City of Chula Vista, the County of San Diego, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game to modify the GDP to meld the RMP and MSCP into a single regulatory plan.

The basic elements of the letter agreement were: (1) elimination and reduction of development areas in the Proctor Valley and San Ysidro Mountain parcels; (2) increases in development footprints on the Otay Valley Parcel; (3) realignment of Otay Valley Road/Hunte Parkway; (4) apportionment of Preserve management responsibilities; (5) elimination of the special study area in Village 13; (6) removal of a "potential avian corridor" between Wolf Canyon and Village Two West; and (7) elimination of the requirements for restoration of coastal sage scrub.

The Preserve design depicted in the MSCP Subarea Plans for both the City of Chula Vista and County of San Diego reflect the Preserve boundary considerations from the 1995 Wildlife Agencies Agreement. However, an amendment to the RMP to address the elimination of the coastal sage scrub restoration requirements is required to bring the RMP into consistency with the terms of the agreement. As a result of the 1995 agreement with the Wildlife Agencies, the Otay Ranch GDP was previously amended for items b, c, and d below; however, the Otay Ranch RMP was not amended at that time. The following actions are required to bring the RMP into compliance with the 1995 agreement and the Otay Ranch GDP. The following Otay Ranch RMP amendments are proposed:

- a) Delete the "Potential Avian Corridor" between Village Two West and Wolf Canyon;
- b) Eliminate three development areas totaling approximately 139 acres at the east end of Village 13, and thereby convert the land to open space preserve;
- c) Eliminate the development designation from approximately 98 acres at the southwest edge of Village 15, and thereby convert the land to open space preserve;
- d) Expand the development area by approximately 62 acres within Village One and Village One West;

- e) Delete Preserve areas in Village Two West; and
  - f) Eliminate the Otay Ranch RMP coastal sage scrub restoration requirement.
- 3) Amend the Phases 1 and 2 of the RMP to permit Villages Two, Three, and all subsequent Villages to convey any Otay Ranch Preserve lands in satisfaction of each Village's conveyance requirement. The applicant is proposing to amend the GDP, the RMP, and the Phase 2 RMP to permit Villages Two, Three, and all subsequent Villages to convey any Otay Ranch Preserve lands in satisfaction of each village's conveyance requirement. This amendment reflects: (1) changes in the circumstances related to the Otay Ranch project (as further discussed in Section 3.1 Land Use) since the adoption of the current conveyance schedule (hereinafter referred to as the "SPA One Conveyance Schedule") and (2) the fact that over 75 percent of the Preserve land included in the SPA One Conveyance Schedule is now, or is approved to be, offered for dedication to the Preserve Owner Manager ("POM").
- **City of Chula Vista Multiple Species Conservation Program.** Concurrent with the processing of the SPA Plan, the project includes a Chula Vista MSCP boundary adjustment to accommodate proposed grading limits for Village Two, as well as to include additional lands in the MSCP preserve within the northern portion of Wolf Canyon.
  - **Tentative Subdivision Maps.** Concurrent with the processing of the SPA Plan, the project applicant is processing a composite tentative map for Village Two and the park within a portion of Village Four within the Otay Ranch Company and the Stephen and Mary Birch Foundation ownership. Potential impacts resulting from implementation of the proposed composite tentative map are also evaluated as part of this EIR.

#### **County of San Diego:**

- **County of San Diego, Otay Subregional Plan, Volume 2 and County RMP Preserve Conveyance Plan.** Amend the RMP to accomplish one of the following: (a) modify the conveyance guidelines and schedule to, among other things, address conveyance issues created by the multiple ownership of preserve land; or (b) expand the currently adopted conveyance schedule to include additional preserve land.

- **County Department of Environmental Health – Voluntary Assistance Program.** Program to ensure that contaminated soils are disposed of in accordance with local requirements.

**Army Corps of Engineers:**

- **Issuance of a Section 404 Permit.** Regulating discharge of fill into waters of the U.S.

**California Department of Fish and Game:**

- **Issuance of a Streambed Alteration Agreement.** Ensuring compliance with Section 1602 of the California Fish and Game Code.

**Regional Water Quality Control Board:**

- **Issuance of Section 401 Certification and National Pollutant Discharge Elimination System (NPDES) General Construction Permit.** Ensuring compliance with federal, state, and local water quality regulations such as the Clean Water Act and NPDES permit regulations.

With the adoption of a SPA Plan, specific development can occur only after the approval of a variety of permits and maps. Subsequent environmental review may be required for these actions.

The Planned Community District Regulations provide the applicable zoning regulations for the SPA Plan. The regulations are intended to implement the goals and policies of the Chula Vista General Plan, the Otay Ranch GDP, and the SPA Plan by establishing land use districts and standards for each district. The regulations provide the basis by which the City would review and evaluate the preliminary and final drawings for subsequent development applications, and provide guidance at the design review level.

There are currently four land owners within the SPA Plan boundary: (1) the Otay Project, L.P.; (2) the Stephen and Mary Birch Foundation; (3) Otay Ranch Investments, LLC; and (4) the Flat Rock Company. Concurrently with the SPA Plan for Villages Two, Three, and a portion of Village Four, the project applicant is processing a Composite Tentative Map for Village Two and the park within a portion of Village Four within the Otay Project, L.P. and Otay Ranch Investments, LLC ownerships.

## 1.4 Environmental Analysis

Section 21002 of CEQA requires that an environmental impact report identify the significant effects of a project on the environment and provide measures or alternatives that can mitigate or avoid those effects.

Pursuant to Sections 15163 and 15152 of the CEQA Guidelines, this document incorporates by reference, or is tiered off of, previous environmental documents covering environmental issues relevant to the approval and development of the SPA Plan. Table 1-1 provides a summary of the previous environmental documents from which this EIR has been tiered or which have been incorporated by reference. The Public Facilities Finance Plan (PFFP) (Burkett and Wong 2006) documents the timing and nature of many activities associated with the proposed project and required mitigation measures. This EIR references elements of that PFFP throughout this document and incorporates that PFFP by reference.

**TABLE 1-1  
ENVIRONMENTAL DOCUMENTS INCORPORATED BY REFERENCE**

Date	Document	Project
1989	City of Chula Vista General Plan EIR	General Plan Update
1993	Final Program EIR for the Otay Ranch General Development Plan/Sub-Regional Plan EIR (90-01)	Otay Ranch General Development and Subregional Plan
1995	City of Chula Vista Sphere of Influence Update Final Program EIR (94-03)	Amend the City of Chula Vista's Sphere of Influence to include Planning Areas 1, 2, 3, & 4
1995	Otay Ranch SPA One and Annexation Final Second Tier EIR (95-01)	SPA Plan EIR for SPA One
1998	Final Second Tier EIR for Otay Ranch SPA One and GDP/SRP Amendments (EIR 97-03)	SPA Plan EIR for SPA One West
1996	Otay Water District Water Resources Master Plan, Final Master EIR (EIR 97-04)	Update of Water Resources Master Plan, Programmatic EIR
1999	Olympic Parkway Mitigated Negative Declaration (IS 00-33)	Extension of Olympic Parkway
2000	Chula Vista MSCP Subarea Plan Final EIR/EIS	Chula Vista MSCP Subarea Plan
2002	Revised Chula Vista MSCP Subarea Plan Supplemental EIR/EA	Revised Chula Vista MSCP Subarea Plan
2005	Villages Two and Three and a portion of Village Four SPA Plan	SPA Plan for Villages Two and Three and a portion of Village Four
2005	City of Chula Vista General Plan Update EIR	General Plan Update

The environmental issues identified in the Initial Study for assessment in the EIR include land use planning and zoning, circulation and access, land use/urban design, air quality,

noise, landform alteration/visual quality, agriculture, public services and utilities, biological resources, cultural resources, paleontology, geology and soils, hydrology/water quality, housing and population, hazards/risk of upset, growth inducement, and cumulative impacts.

Table 1-2 summarizes the potentially significant environmental impacts and proposed mitigation measures by major issue as analyzed in Section 5.0 of this EIR. Please refer to this section for detailed information on impacts and specific mitigation measures. The last column of this table indicates whether the impact would be reduced to below a level of significance with implementation of proposed mitigation.

## 1.5 Project Alternatives

Alternatives to the proposed project are evaluated in Section 10.0 of this EIR in terms of their ability to meet the primary objectives of the proposed project and eliminate or further reduce its significant environmental effects. The alternatives considered are no development (No Project Alternative) and three reduced development alternatives (Reduced Development Alternatives A, B, and C). Alternative site locations were considered as part of the analysis for the Otay Ranch GDP and were addressed in the Otay Ranch GDP Program EIR.

The No Development/No Project alternative assumes that the area within the SPA Plan would not be developed. Limited agriculture could be reintroduced. Population growth that would have been accommodated at this location would occur elsewhere.

The Reduced Development Alternative A designates the proposed SPA Plan area for low-medium residential at three to six dwelling units per acre, distributed around a Village Core, which includes higher density single- and multi-family residential use, an elementary school site, a community park site, a mixed-use site, two neighborhood park sites, and research and limited industrial uses. Under the Reduced Development Alternative A 1,133 single-family and 586 multi-family units would be designated within the project area. A total of 335.3 acres would be designated for residential use, with 266.9 acres planned for industrial uses, 348.0 acres for open space, and 18.7 acres for commercial use, 35.0 park acres, 8.1 CPF acres, and 10.0 acres for a school. There would be no development within Wolf Canyon for this alternative.

The Reduced Development Alternative B designates Village Two as a “transit village” served by the future extension of the Bus Rapid Transit, which integrates SANDAG’s adopted *Transit First!* Strategy into the Otay Ranch and locates a station within Village Two. The station location in Village Two would serve as a vital stop for travel to other Otay Ranch and regional destinations. The Reduced Development Alternative B would designate 709 single-family units and 1,801 multi-family units within the project area including 361.8 acres for residential use, 11.9 acres for commercial use, 266.9 acres for

industrial uses, 379.5 acres for open space, 58.6 acres for a park, and 9.7 CPF acres. There would be 10.1 acres planned for a school. There would be no development within Wolf Canyon for this alternative.

The Reduced Development Alternative C includes approximately 2,393 residential units, of which 1,130 units are single-family and 1,263 units are multi-family and approximately 255.1 acres of industrial development. Approximately 50.6 acres of Industrial land would be situated on the southern portion of Village Two West within the landfill buffer area; the remainder of Village Two West, which is not located in the landfill buffer, would be single-family residential. Approximately 28 acres of industrial land would also be located on the westernmost portion of Village Two proper within the landfill buffer. The Industrial uses proposed within the landfill buffer are consistent with the adopted GDP. The remaining acres would be developed with non-residential uses, including community purpose facilities, schools, a public park, commercial uses, open space, and circulation rights-of-way. This alternative would include two neighborhood parks, the park in Village Four, and a single two-laned spine road connecting La Media and Heritage Roads. There would be no development within Wolf Canyon for this alternative.

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION**

Impact	Mitigation Measures	Significance after Mitigation
<p><b>Land Use</b> The SPA Plan area is currently undeveloped, but is planned for development in the City's General Plan and the Otay Ranch GDP. The proposed design and layout of land uses for the SPA Plan would be compatible with one another, as well as be compatible with surrounding communities. The area surrounding the proposed SPA Plan area consists of recently developed or planned development, and therefore, development of the proposed SPA Plan would not physically divide an established community. However, consistent with the conclusion in the Program EIR, development of the SPA Plan and composite TM would result in a significant change in the character of the site from undeveloped to developed urban use. This impact would remain a significant unavoidable impact.</p>	<p>No feasible mitigation measures have been identified to reduce this impact to less than significant levels.</p>	<p>Significant and not mitigable.</p>
<p>The proposed GDP/RMP amendment to eliminate the SPA One Conveyance Schedule at this time allows for additional Preserve land area outside the adopted SPA One Conveyance Schedule to be conveyed, which would provide important habitat linkages to other Preserve areas identified in the MSCP and Chula Vista Subarea Plan, and facilitates completion of the Otay Ranch Preserve over the long-term. There would be no significant land use impact resulting from the elimination of the SPA One Conveyance Schedule.</p>	<p><u>No mitigation measures are required because no significant impacts were identified.</u></p>	<p></p>
<p>With adoption of the proposed General Plan and Otay Ranch GDP amendments, implementation of the SPA Plan would not conflict with an adopted plan, policy or regulation established to avoid environmental effects.</p>	<p>No mitigation measures are required because no significant impacts were identified.</p>	<p></p>
<p>The proposed RMP amendments would not adversely affect the ability to meet all of the objectives, policies, standards and guidelines related to conservation of biological resources and design and configuration of the Otay Ranch Preserve. The modified preserve design provides for better contiguity of habitat and includes areas that are already being managed for recovery (maritime succulent scrub revegetation area), that were not included in the original Preserve design. As a result, the proposed Boundary Adjustment provides for higher biological value of the Preserve, and, therefore, no significant impacts would result.</p>	<p>No mitigation measures are required because no significant impacts were identified.</p>	<p></p>

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Land Use (cont.)	Impact	Mitigation Measures	Significance after Mitigation
<p>Conservation thresholds for CSS in the Program EIR have nearly been satisfied. Anticipated impacts to CSS have been reduced because of acquisition and preservation of land that had previously been planned for development. There would be no significant land use impacts resulting from the elimination of the CSS restoration requirement.</p>	<p>No mitigation measures are required because no significant impacts were identified.</p>		
<p><b>Landform Alteration/Aesthetics</b> The Otay Ranch GDP Program EIR concluded that the overall change to the original Otay Ranch topography and the change from a rural to more urban use constitute a significant, unavoidable landform and aesthetic impact. While the proposed SPA Plan would be in accordance with the adopted GDP and consistent with adjacent and planned development, a significant visual character and landform impact would result from implementation of the proposed SPA Plan and Composite TM.</p>	<p>5.2-1 Development would require grading of the project area. Grading of the site would involve the cut and fill of approximately 18,428,000 cubic yards. This grading would permanently alter the natural landform of the site which would be significant. A portion of Wolf Canyon would be filled to a height of 400 feet, approximately 90 to 100 feet above the canyon bottom. A 100-foot-high slope would be created within Wolf Canyon. The ranch-wide steep slope preservation standard would be met, therefore, avoiding a significant impact. However, the filling of Wolf Canyon is considered significant landform alteration impact.</p>	<p>No mitigation is available to lessen the impact of changing from a rural to more urban use.</p>	<p>Significant and not mitigable</p>
<p>5.2-1 Development would require grading of the project area. Grading of the site would involve the cut and fill of approximately 18,428,000 cubic yards. This grading would permanently alter the natural landform of the site which would be significant. A portion of Wolf Canyon would be filled to a height of 400 feet, approximately 90 to 100 feet above the canyon bottom. A 100-foot-high slope would be created within Wolf Canyon. The ranch-wide steep slope preservation standard would be met, therefore, avoiding a significant impact. However, the filling of Wolf Canyon is considered significant landform alteration impact.</p>	<p>5.2-1 Development would require grading of the project area. Grading of the site would involve the cut and fill of approximately 18,428,000 cubic yards. This grading would permanently alter the natural landform of the site which would be significant. A portion of Wolf Canyon would be filled to a height of 400 feet, approximately 90 to 100 feet above the canyon bottom. A 100-foot-high slope would be created within Wolf Canyon. The ranch-wide steep slope preservation standard would be met, therefore, avoiding a significant impact. However, the filling of Wolf Canyon is considered significant landform alteration impact.</p>	<p>Prior to approval of grading plans, the applicant(s) shall prepare grading and building plans that conform to the landform grading guidelines contained in the proposed SPA Plan and the City of Chula Vista grading ordinance, the Otay Ranch GDP, and General Plan. The plans shall be prepared to the satisfaction of the Director of Planning and Building and the City Engineer.</p>	<p>Less than significant</p>
<p>5.2-2 Development of the proposed SPA Plan and the Composite TM would result in long-term direct potentially significant nighttime view impacts. The direct lines of sight to the field lighting and the general illumination over the stadium and baseball field would also have long-term direct and indirect potentially significant nighttime impacts.</p>	<p>5.2-2 Development of the proposed SPA Plan and the Composite TM would result in long-term direct potentially significant nighttime view impacts. The direct lines of sight to the field lighting and the general illumination over the stadium and baseball field would also have long-term direct and indirect potentially significant nighttime impacts.</p>	<p>Prior to approval of the site-specific master plan for the community park in Village Four, the applicant(s) shall provide funding through the payment of PAD fees for the preparation of a lighting plan that shows the proposed height, location, and intensity of sport field and court lighting on-site. Current sport facility lighting technologies including reflector devices that serve to reduce the occurrence of light spill and glare shall be used where appropriate. The plan shall be completed to the satisfaction of the Director of Planning and Building and Director of General Services.</p>	<p>Less than significant</p>

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Impact	Mitigation Measures	Significance after Mitigation
Landform Alteration/Aesthetics (cont.)		
Sound barriers built as part of the project would represent a significant visual impact if the portion of the barrier that is constructed as a wall is higher than eight feet.	<p>5.2-3 Prior to the approval of the first rough grading permit, or first B-map, the applicant(s) shall have prepared, submitted to, and received approval from the Director of General Services of a comprehensive Landscape Master Plan (LMP). Landscaping shall occur with each phase of development in accordance with the LMP. The contents of the LMP shall conform to the City staff checklist and include the following major components:</p> <ul style="list-style-type: none"> <li>a. Maintenance Responsibility Plan</li> <li>b. Master Irrigation Plan</li> <li>c. Master Planting Plan</li> <li>d. Brush Management Plan</li> <li>e. Hardscape Concept and Trail Plan</li> <li>f. Utility Coordination Plan</li> <li>g. Conceptual Wall and Fence Plan, and</li> <li>h. Monumentation and Signage Plan</li> </ul>	Less than significant

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Biological Resources	Impact	Mitigation Measures	Significance after Mitigation
<p>The project would have a substantial adverse effect, both directly and through habitat modifications, on species identified as candidate, sensitive, and special status species in the Otay Ranch RMP, the City's MSCP Subarea Plan, and by CDFG and USFWS. The project would have a substantial adverse effect on riparian habitats and other sensitive natural communities identified in the Otay Ranch RMP, the City's MSCP Subarea Plan, and by CDFG and USFWS.</p> <p>The project will result in impacts to non-native grasslands and agricultural lands that would contribute to impacts to regional raptor foraging habitat.</p>		<p><b>Mitigation for Effects on Sensitive Species and Habitats, including Riparian Habitats</b></p> <p>5.3-1 Prior to recording each final map, the property owner (s) shall either convey land within the Otay Ranch RMP Resource Preserve at a ratio of 1.188 acres for each acre of development area or pay a fee in lieu.</p> <p>5.3-2 Prior to issuance of land development permits, including clearing or grubbing and grading permits, permits for areas with salvageable resources, including Narrow Endemic Species, <i>Platago erecta</i> (QCB larval host plant), south coast saltscale, and smooth-stemmed fagonia (including plant materials and soils/seed bank), the project property owner (s) shall be required to develop and implement a Resource Salvage Plan. The Resource Salvage Plan shall, at a minimum, evaluate options for plant salvage and relocation, including native plant mulching, selective soil salvaging, application of plant materials on manufactured slopes, and application/relocation of resources within the preserve. The Resource Salvage Plan shall include incorporation of relocation efforts for non-covered species, including south coast saltscale and smooth-stemmed fagonia. Relocation efforts may include seed collection or transplantation to a suitable receptor site and will be based on the most reliable methods of successful relocation. The program shall also contain a recommendation for method of salvage and relocation/application based on feasibility of implementation and likelihood of success. The program shall include, but not be limited to, an implementation plan, maintenance and monitoring program, estimated completion time, and any relevant contingency measures. The program shall be subject to review and approval of the City's Director of Planning and Building.</p>	<p>Significant and unmitigable impacts to regional raptor foraging habitat. All other identified direct and indirect impacts- less than significant.</p>
	<p>5.3-3 Pursuant to the requirements of the RMP, mitigation beyond the conveyance requirements for impacts to maritime succulent scrub shall consist of on-site restoration at 1:1 ratio. If final design plans indicate that impacts will be avoided, this measure will not be applicable. Prior to issuance of land development permits, including clearing or grubbing and grading permits, that impact maritime succulent scrub resources, the developer(s) shall prepare and implement a restoration plan to restore 3.4 acres of maritime succulent scrub (1.5 acres from Rock Land Company ownership and 1.9 acres within the Flat requirements. The maritime succulent scrub restoration plan shall be approved by the City's Director of Planning and Building, and shall include an implementation plan, maintenance and monitoring program, estimated completion time, and any relevant contingency measures.</p>		

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Biological Resources (cont.)	Impact	Mitigation Measures	Significance after Mitigation
	5.3-4	<p>Prior to issuance of land development permits, including clearing or grubbing and grading permits in portions of the SPA Plan area that are adjacent to the Preserve, the property owner install fencing in accordance with CVMC 17.35.030.</p>	
	5.3-5	<p>Prior to issuance of grading permits, a Storm Water Pollution Prevention Plan (SWPPP) shall be developed, approved, and implemented during construction to control storm water runoff, such that erosion, sedimentation, pollution, etc. are minimized. The following measures contained in the Edge Plans shall be implemented to avoid the release of toxic substances associated with urban runoff:</p> <ul style="list-style-type: none"> <li>• Sediment shall be retained on-site by a system of sediment basins, traps, or other appropriate measures.</li> <li>• Where deemed necessary, storm drains shall be equipped with silt and oil traps to remove oils, debris and other pollutants. Storm drain inlets shall be labeled "No Dumping-Drains to Ocean." Storm drains shall be regularly maintained to ensure their effectiveness.</li> <li>• The parking lots shall be designed to allow storm water runoff to be directed to vegetative filter strips and/or oil-water separators to control sediment, oil, and other contaminants.</li> <li>• Permanent energy dissipaters shall be included for drainage outlets.</li> <li>• The SPA Plan area drainage basins shall be designed to provide effective water quality control measures. Design and operational features of the drainage basins shall include design features to provide maximum detention time for settling of fine particles; maximize the distance between basin inlets and outlets to reduce velocities; and establish maintenance schedules for periodic removal of sedimentation, excessive vegetation and debris.</li> </ul>	

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Biological Resources (cont.)	Impact	Mitigation Measures	Significance after Mitigation
5.3.6	<p>Prior to issuance of land development permits, including clearing or grubbing and grading permits, the following notes shall be included on the plans to the satisfaction of the Environmental Review Coordinator:</p> <ol style="list-style-type: none"> <li>(1) A qualified biologist shall be on-site to monitor all vegetation clearing and periodically thereafter to ensure implementation of appropriate resource protection measures.</li> <li>(2) Dewatering shall be conducted in accordance with standard regulations of the RWQCB. A permit to discharge water from dewatering activities will be required. This will minimize erosion, siltation, and pollution within sensitive communities.</li> <li>(3) During construction, material stockpiles shall be placed such that they cause minimal interference with on-site drainage patterns. This will protect sensitive vegetation from being inundated with sediment-laden runoff.</li> <li>(4) Material stockpiles shall be covered when not in use. This will prevent fly-off that could damage nearby sensitive vegetation communities.</li> <li>(5) Graded area shall be periodically watered to minimize dust affecting adjacent vegetation.</li> </ol>		
5.3-7	Lighting of all developed areas adjacent to the Preserve shall be directed away from the Preserve, wherever feasible and consistent with public safety. Where necessary, development shall provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the Preserve and sensitive species from night lighting. Consideration shall be given to the use of low-pressure sodium lighting. In compliance with the Chula Vista MSCP Subarea Plan, all lighting shall be shielded and directed away from the Preserve. Prior to issuance of improvement plans, a lighting plan and photometric analysis shall be submitted to the City's Environmental review Coordinator for review and approval. The lighting plan shall illustrate the location of the proposed lighting standards and type of shielding measures. In compliance with the Chula Vista MSCP Subarea Plan, low-pressure sodium lighting shall be used if feasible and shall be subject to the approval of the City's Environmental Review Coordinator and City Engineer. <u>No nighttime construction lighting shall occur within the Preserve Edge.</u>		

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Biological Resources (cont.)	Impact	Mitigation Measures	Significance after Mitigation
5.3-8	Noise impacts adjacent to the Preserve lands shall be minimized. Berms or walls shall be constructed adjacent to commercial areas and any other uses that may introduce noises that could impact or interfere with wildlife utilization of the Preserve. Construction activities shall include noise reduction measures or be conducted outside the breeding season of sensitive bird species. Based on current information, these conditions would be limited to areas within 500 feet of Wolf Canyon. When clearing, grading or grubbing activities occur during the breeding season for coastal California gnatcatcher (February 15 to August 15, annually) or raptors (January 15 to July 31, annually), nesting bird surveys shall be conducted by a qualified biologist to identify active nest locations. Construction activities shall be restricted such that noise levels related to those activities are below 60 L <sub>eq</sub> at the location of the active nest site.		
5.3-9	Prior to issuance of land development permits, including clearing or grubbing and grading permits, the property owner shall submit evidence showing that the following features of the Preserve Edge Plan have been incorporated into grading and landscaping plans:		
	(1) No invasive, non-native plant species shall be introduced into areas immediately adjacent to the Preserve. All slopes immediately adjacent to the Preserve shall be planted with native species per the Preserve Edge Plan, that reflect the adjacent native habitat.		
	(2) All fuel modification shall be incorporated into development plans and shall not include any areas within the Preserve.		
5.3-10	Prior to issuance of grading permits, the property owner shall submit wall and fence plans depicting appropriate barriers to prevent unauthorized access into the Preserve. The wall and fence plans shall illustrate the locations and cross-sections of proposed walls and fences along the Preserve boundary, subject to the approval of the City's Director of Planning and Building.		

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Biological Resources (cont.)	Impact	Mitigation Measures	Significance after Mitigation
<p>The project would have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act, including jurisdictional waters and vernal pools.</p>		<p><b>Mitigation for Effects on Federal and State Protected Wetlands</b></p>	<p>Less than significant.</p>
<p>5.3-11</p>	<p>The City requires that impacts to wetlands be avoided to the maximum extent possible. When avoidance is not feasible, the property owner(s) shall be required to minimize impacts to the greatest extent possible and mitigate for loss of wetland habitat, including wetland habitat creation of at a 1:1 ratio for unvegetated waters of the U.S. and 3:1 for impacts to alluvial scrub. To mitigate direct impacts to jurisdictional waters, the following conditions would be required prior to issuance of land development permits, including clearing or grubbing and grading permits, for any area impacting jurisdictional waters:</p>	<ul style="list-style-type: none"> <li>• A total of 1.1 acres of wetlands shall be created Prior to issuance of land development permits, including clearing or grubbing and grading permits that impact jurisdictional waters, the developer(s) shall prepare a Wetlands Mitigation Plan to the satisfaction of the wetland resource agencies and the City's Director of Planning and Building. This plan shall include, but not be limited to, an implementation plan, maintenance and monitoring program, estimated completion time, and any relevant contingency measures.</li> <li>• Prior to issuance of land development permits, including clearing or grubbing and grading permits for areas that impact jurisdictional waters, the property owner shall provide evidence that all required regulatory permits, such as those required under Section 404 of the federal Clean Water Act, Section 1600 of the California Fish and Game Code, and the Porter Cologne Water Quality Act.</li> </ul>	
<p>5.3-12</p>	<p>One of the following options shall be implemented by the property owner(s) prior to issuance of land development permits, including clearing or grubbing and grading permits for areas impacting vernal pools:</p>	<p>(1) <b>Option #1:</b> The property owner(s) shall restore 406 square feet of vernal pools within the J23, 24 or 25 pools (eastern Olay Mesa) or within the Village 13 (resort) planning area. The restoration would involve reconfiguration and reconstruction of the mima mounds and basins, removal of weedy vegetation, revegetation of the mounds with upland sage scrub species and inoculation of the pools with vernal pool species. The property owner shall prepare a Vernal Pool Mitigation Plan to the satisfaction of the resource agencies (if applicable/jurisdictional) and the City's Director of Planning and Building. The Plan shall include, but not be limited to an implementation plan, maintenance and monitoring program, estimated completion time, and any relevant contingency measures.</p>	

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Impact	Mitigation Measures	Significance after Mitigation
<p><b>Biological Resources (cont.)</b></p>	<p>(2) <b>Option #2:</b> The project property owner(s) shall purchase vernal pool mitigation bank credits within an approved mitigation bank. Evidence of the purchase and appropriate monitoring and maintenance requirements shall be provided to the Director of Planning and Building.</p>	<p>Less than significant</p>
<p><b>Cultural Resources</b></p> <p>There were 16 prehistoric sites identified within the SPA Plan area. As a result of the testing of these sites, only one site, CA-SDI-12,291B, was determined to be a significant historic resource. Impacts to CA-SDI-12,291b would be considered significant. The remaining 15 sites were determined not to be significant historic resources, however, grading and excavation activities associated with the proposed project could result in significant archaeological impacts to unknown subsurface deposits.</p>	<p>Preservation is the preferred means of avoiding impacts to archaeological site SDI-12,291B. This approach would involve redesign of the project to avoid impacts to Site SDI-12,291B. The following measures outline a procedure for ensuring that adverse impacts are avoided for the proposed SPA Plan.</p> <p>5.4-1 In the event that in place preservation is infeasible, the following data recovery program will mitigate adverse impacts to SDI-12,291b. These tasks need to be completed prior to the issuance of grading permits for the portion of Village Three/18b on which the site is located.</p> <p>a) Prior to the issuance of grading permits, a Registered Professional Archaeologist (RPA) shall prepare a research design for the data recovery of Site SDI-12,291b to the satisfaction of the Environmental Review Coordinator. This research design shall identify specific research questions to be addressed through the data recovery process, the data collection and analyses needed to address those questions, and the means and location of curation of recovered materials. This research design shall be prepared prior to the initiation of the field investigation to the satisfaction of the Environmental Review Coordinator of the City of Chula Vista.</p> <p>b) Based on the approved research design, an excavation program shall be implemented that will result in a reliable sample of the site. It is anticipated that between two and four percent of the surface area of the mapped resource would be excavated, and that excavation would be completed by hand excavated one-by-one meter units, unless the questions developed for the research design require a modified sampling strategy. All materials should be passed through a one-eighth-inch mesh screen, with all recovered materials catalogued and analyzed. If datable materials, faunal or floral remains, pollen, or other cultural significant materials are found, appropriate special analysis shall be completed.</p> <p>c) A detailed report of findings shall be completed and the results made available to the public and scientific community. Curation of recovered materials shall be accomplished to the satisfaction of the Environmental Review Coordinator of the City of Chula Vista. <u>Curation of collections from the project will be curated in a facility approved in advance by the City.</u></p>	<p>Less than significant</p>

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Impact	Mitigation Measures	Significance after Mitigation
<p><b>Cultural Resources (cont.)</b> There was one historic site identified within the SPA Plan area. The historic site, located on the Village Two project area, consists of the remains of the Otay Ranch Farm Complex. Appendix I, of the February 2004 report for cultural resources at the Otay Ranch Village Two SPA, concluded that no historically significant remaining components were visible during site testing. However, the proposed project could result in significant archaeological impacts because the site may contain masked subsurface deposits that may be encountered during grading and excavation activities for the proposed project.</p>	<p>5.4-2 A qualified archaeological monitor shall be on-site during initial grading of CA-SDI-11,384H)the site. If historic archaeological material is encountered during grading, all grading in the vicinity as determined and defined by the archaeologist shall stop and its importance shall be evaluated, and suitable mitigation measures shall be developed and implemented, if necessary. Cultural material collected shall be permanently curated at an appropriate repository. <u>Curation of collections from the project will be curated in a facility approved in advance by the City.</u></p>	<p>No impacts</p>
<p>Implementation of the proposed SPA Plan and the Composite TM would not disturb any human remains, including those interred outside of formal cemeteries. There are no known or expected human remains on the SPA property.</p>	<p>No impacts were identified and no mitigation is required.</p>	<p>No impacts</p>
<p><b>Geology</b> Significant impacts could result to geology and soils from project development on compressible and expansive soils. Additionally, the current conceptual design would require mass grading above portions of the tunnel that contains the San Diego waterline, including excavation of formational soils and the placement of fill soils. A potentially significant impact could result from the grading above portions of the existing City of San Diego waterline. Implementation of project-specific design mitigation measures would reduce or avoid significant impacts. Impacts resulting from the grading above portions of the waterline would be eliminated if the waterline were relocated.</p>	<p>5.5-1 Prior to the issuance of the grading permit, the applicant(s) shall verify that the applicable recommendations of the preliminary geotechnical investigations for Villages Two and Three prepared by Geokon (August 18, 2003 and September 3, 2003, respectively) and the preliminary geotechnical investigation for the Parcel A portion of Village Three, prepared by Pacific Soils Engineering, Inc. (October 24, 2003) have been incorporated into the project design and construction documents to the satisfaction of the City Engineer. Recommendations include, but are not limited to:</p> <ul style="list-style-type: none"> <li>a) During construction liquefiable soils within the colluvium/alluvium shall be removed and replaced with compacted fill.</li> <li>b) During construction highly expansive soils shall be kept below finish grade. Where excavations expose highly expansive materials at finish grade, these materials shall be excavated a minimum of four feet below finish grade. Where excavations expose very highly expansive material at finish grade, these materials shall be excavated a minimum of five feet below finish grade. The excavations shall be replaced with a compacted fill soil that has a low to moderate expansion potential.</li> </ul>	<p>Less than significant</p>
<p>Implementation of project-specific design mitigation measures would be required to reduce or avoid significant impacts resulting from compressible and expansive soils. Potential impacts resulting from geologic hazards would be reduced below a level of significance through project design measures, including compliance with the requirements of the governing jurisdictions, building codes (e.g., Title 24 of the California Code of Regulations, and the UBC) and standard practices of the Association of Structural Engineers of California.</p>		

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Geology (cont.)	Impact	Mitigation Measures	Significance after Mitigation
		<ul style="list-style-type: none"> <li>c) During construction, the developer shall remove loose, compressible soils and replace as compacted fill in areas that will be subjected to new fill or structural loads.</li> <li>d) During grading the developer shall construct earthen buttresses on unstable slopes with drains installed, as warranted, at the rear of the buttresses to control groundwater.</li> <li>e) Grading of building pads shall be designed so that foundations bear entirely on a relatively uniform depth of compacted fill. This may be accomplished by overexcavating the cut portion of the building pad.</li> </ul>	Less than significant
5.5-2		<p>If the existing City of San Diego waterline is not relocated, the following mitigation measure shall be required to reduce impacts associated with grading above portions of the existing waterline.</p> <p>Prior to the issuance of grading permits, the applicant(s) shall consult with a pipeline specialist to evaluate the structural integrity of the pipe and tunnel and the effect of the fill loads. A deformation analysis shall be performed once final grades have been determined.</p>	
5.5-3		<p>Prior to the issuance of the grading permit, the applicant(s) shall verify that the design of any structures would comply with the requirements of the Uniform Building Code and standard practices of the Association of Structural Engineers of California.</p>	

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

	Impact	Mitigation Measures	Significance after Mitigation
Paleontology			
	Grading for the proposed SPA Plan and the Composite TM would not impact any known paleontological resources; proposed construction, however, may impact fossils potentially buried in the underlying formations. The occurrence of fossils within the covered bedrock cannot be evaluated prior to exposure. Areas of the Otay Formation with accumulations of colluvial and alluvial deposits in the drainage course bottoms, the San Diego Formation, the Sweetwater Formation, and Terrace Deposits may be exposed during grading and construction activities. The proposed grading of the Otay Formation sandstone, the San Diego Formation, and the Sweetwater Formation would move material with high sensitivity for paleontological resources. Exposure of these formations would likely result in the unearthing of fossil remains, which could damage the fossils if they were not recovered and salvaged. Destruction of the paleontological resources from these formations would be a direct, long-term, potentially significant impact.	5.6-1 Prior to approval of the grading permit, the applicant(s) shall incorporate into grading plans to the satisfaction of the City Engineer and Environmental Review Coordinator, the following:  a) Prior to issuance of any grading permits, the applicant(s) shall confirm to the City of Chula Vista that a qualified paleontologist has been retained to carry out the following mitigation program. The paleontologist shall attend pregrade meetings to consult with grading and excavation contractors. (A qualified paleontologist is defined as an individual with a M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.)  b) A paleontological monitor shall be on-site at all times during the original cutting of previously undisturbed sediments of highly sensitive geologic formations (Otay, Sweetwater, and San Diego Formations) to inspect cuts for contained fossils. The paleontological monitor shall work under the direction of a qualified paleontologist. The monitor shall be on-site on at least a half-time basis during the original cuts in deposits with a moderate resource sensitivity (Terrace Deposits and the Mission Valley Formation). (A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials.)	Less than significant
		In the event that fossils are discovered in unknown sensitive formations, it may be necessary to increase the per-day field monitoring time. Conversely, if fossils are not discovered, the monitoring should be reduced.	
		c) When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In instances where recovery requires an extended salvage time, the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner. Where deemed appropriate by the paleontologist (or paleontological monitor), a screen-washing operation for small fossil remains shall be set up.	
		d) Prepared fossils, along with copies of all pertinent field notes, photographs, and maps, shall be deposited (with the applicant's permission) in a scientific institution with paleontological collections such as the San Diego Natural History Museum. A final summary report shall be completed which outlines the results of the mitigation program. This report shall include discussion of the methods used, stratigraphy exposed, fossils collected, and significance of recovered fossils.	

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Impact	Mitigation Measures	Significance after Mitigation
<p><b>Agriculture</b></p> <p>Development of the SPA Plan and the Composite TM would result in a significant impact to agricultural resources, due to the loss of 858.8 acres of Farmland of Local Importance and the conversion of 321.72 acres of Grazing Land to urban uses. The loss of agricultural land and land suitable for the production of crops would result in a significant unavoidable impact due to the incremental and irreversible loss or impairment of limited agricultural resources. This was previously addressed in the Otay Ranch GDP Program EIR and was determined to be significant and not fully mitigated. A statement of overriding considerations was adopted for this impact. Furthermore, noise, odors, insects, rodents, and chemicals associated with agricultural operations would create indirect, short-term, potentially significant impacts between the agricultural uses and urban uses.</p>	<p>5.7-1 The agricultural plan included in the SPA Plan shall be implemented for the area as development proceeds in the proposed SPA Plan area. The following measures shall be implemented by the developer to the satisfaction of the City's Director of Planning and Building:</p> <ul style="list-style-type: none"> <li>a) A 200-foot buffer between developed property and ongoing agriculture operations shall be maintained. The use of pesticides shall comply with federal, state, and local regulations;</li> <li>b) Vegetation shall be used to shield adjacent urban development (within 400 feet) from agriculture activities where pesticides are to be applied;</li> <li>c) Notification shall be given to adjacent property owners of potential pesticide application through newspaper advertisements; and</li> <li>d) Fencing shall be installed, where necessary, to ensure the safety of the SPA Plan area residents.</li> </ul>	<p>Direct impacts are less than significant Cumulative impacts remain significant and unmitigated</p>
<p><b>Housing and Population</b></p> <p>The Otay Ranch GDP planned for the development of the SPA Plan area as well as corresponding services and infrastructure to support the community. The proposed SPA Plan would only result in an increase in population of 0.01 percent over the adopted Otay Ranch GDP. This increase would not result in a substantial change, therefore, it does not represent substantial population growth or a significant direct impact on the environment. The proposed SPA Plan would not displace substantial numbers of existing housing or people necessitating the construction of replacement housing elsewhere. Therefore, no significant impacts on the environment would result.</p>	<p>Because no significant housing or population impacts were identified for the proposed SPA Plan or the Composite TM, no mitigation measures are required</p>	<p>No impacts</p>

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Impact	Mitigation Measures	Significance after Mitigation
<p><b>Water Resources and Water Quality</b></p> <p>The proposed SPA Plan and Composite TM would convert an existing undeveloped site to an urban landscape with multiple land uses. In doing so, impermeable surfaces would be introduced to the project site, as well as new pollutant sources, such as automobiles and household products. Impermeable surfaces would decrease the amount of infiltration occurring at the project site and would lead to runoff rates and the potential for pollutants to be introduced to water sources. Therefore, the proposed SPA Plan and Composite TM has the potential to contribute to significant water quality impacts. Drainage at the site would be altered to direct stormwater runoff into the municipal storm drain system.</p>	<p>5.9-1 Prior to issuance of a grading permit, a detailed drainage system design study shall be prepared to the satisfaction of the City Engineer and shall include <u>but not be limited to:</u></p> <ul style="list-style-type: none"> <li>a) Peak runoff at each inlet, outlet, interceptor, concentration, or confluence point, both predevelopment and postdevelopment conditions;</li> <li>b) The integration of the proposed system with the existing and proposed downstream drainage facilities to effectively control flows within the entire system; and</li> <li>c) Maps showing existing and postdevelopment conditions for existing topography and proposed grading plans incorporating a drainage system design with main lines and detention/desilting facilities pursuant to Section 3-202.1 of the Chula Vista Subdivision Manual; and on-site detention/desilting facilities shall be incorporated in the design for the various phases of construction and postconstruction.</li> </ul>	<p>Less than significant</p>
<p>5.9-2</p>	<p>Prior to the issuance of the first grading permit, the applicant(s) shall submit a SWPPP including assignment of maintenance responsibilities for review and approval by the City Engineer and the Director of Public Works. The SWPPP shall be consistent and fully comply with the requirements of the Clean Water Act and all requirements set forth in the General Construction Permit, the City of Chula Vista Storm Water Management and Discharge Control Ordinance (Storm Water Management Manual Ordinance), the City of Chula Vista Standard Urban Development and Redevelopment Projects Storm Water Management Standards Requirements Manual (Storm Water Management Manual). BMPs identified in the SWPPP shall include but shall not be limited to the following:</p> <ul style="list-style-type: none"> <li>a) Temporary erosion control measures designed in accordance with the Chula Vista Grading Ordinance shall be employed for disturbed areas and shown on the grading plans.</li> <li>b) No disturbed surfaces shall be left without erosion control measures in place during the winter and spring months.</li> </ul>	

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Impact	Mitigation Measures	Significance after Mitigation
Water Resources and Water Quality (cont.)		
	<p>c) Sediment will be retained on-site by a system of sediment basins, traps, or other appropriate measures, and shown on the grading plans.</p>	
	<p>d) Silt and oil and other contaminants will be prevented from entering the storm drain system or removed from the system, by a means acceptable to the City Engineer. Storm drain inlets shall be labeled "No Dumping—Drains to Ocean."</p>	
	<p>e) All parking lots shall be designed to allow storm water runoff to be directed to vegetative filter strips or oil-water separators to control sediment, oil, and other contaminants.</p>	
	<p>f) Permanent energy dissipaters will be included for drainage outlets.</p>	
	<p>g) A combination of on-site structural and non-structural BMPs for the treatment of urban pollutants in compliance with the Municipal Permit.</p>	
5.9-3	<p>Prior to issuance of all subsequent permits and approvals associated with the project including but not limited to improvement plan approvals, construction permits, site plan approvals, design review approvals, conditional use permits, grading permits, the applicant of such permits and/or approvals shall comply with the Clean Water Act, the Municipal Permit, the General Construction Permit and the Storm Water Management Ordinance and submit a SWPPP prior to the issuance of such permits and/or approvals in compliance with the City's Storm Water Management Manual and the SUSMP.</p>	Less than significant
5.10-1	<p>Prior to issuance of building permits, the applicant(s) shall pay the applicable Transportation Development Impact Fee (TDIF), as amended to design, construct, and secure a fully actuated traffic signal, including interconnect wiring, mast arms, signal heads and associated equipment, underground improvements, standards and luminaries at the Rock Mountain Road/La Media Road intersection. The design of the signal shall be to the satisfaction of the City Engineer. Turn lane storage lengths shall be provided as indicated in Table 5.10-16.</p>	Less than significant
5.10-2	<p>Prior to issuance of building permits, the applicant(s) shall pay the applicable Transportation Development Impact Fee (TDIF), as amended, towards widening Rock Mountain Road from La Media Road to Eastlake Parkway to six lanes or toward an intersection improvement along Rock Mountain Road to the satisfaction of the City Engineer by year 2015.</p>	Less than significant

Traffic, Circulation, and Access

Direct Impact

The proposed SPA Plan and the Composite TM would result in a direct, significant impact to the Rock Mountain Road/La Media Road intersection.

Cumulative Impacts

The proposed SPA Plan and the Composite TM would result in a cumulative impact along two segments of Rock Mountain Road by year 2015: from La Media Road to SR-125 and from SR-125 to Eastlake Parkway.

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Traffic, Circulation, and Access (cont.)	Impact	Mitigation Measures	Significance after Mitigation
<p>The proposed SPA Plan and the Composite TM would result in cumulative impacts along three segments of Rock Mountain Road by year 2030: from SR-125 to Eastlake Parkway, from La Media Road to SR-125, and from Main Street to La Media Road.</p>	<p>5.10-3</p>	<p>Prior to issuance of building permits, the applicant(s) shall pay the applicable Transportation Development Impact Fee (TDIF), as amended, toward widening Rock Mountain Road from Main Street to Eastlake Parkway to eight lanes or towards an intersection improvement along Rock Mountain Road, to the satisfaction of the City Engineer by year 2030.</p>	<p>Less than Significant</p>
<p><b>Freeways</b> The proposed SPA Plan and the Composite TM would impact along the following freeway segments:</p>	<p>5.10-4</p>	<p>For the following freeway segments, additional lanes would be required to maintain acceptable LOS. The City of Chula Vista recommends continued freeway planning efforts and deficiency planning by Caltrans and SANDAG will determine mitigation strategies for the regional freeway system.</p> <ul style="list-style-type: none"> <li>• Northbound I-805 from Telegraph Canyon Road to East H Street</li> <li>• Southbound I-805 from East H Street to Telegraph Canyon Road</li> <li>• Southbound I-805 from Olympic Parkway to Main Street</li> <li>• Northbound I-805 from Olympic Parkway to Telegraph Canyon Road</li> <li>• Southbound I-805 from Telegraph Canyon Road to Olympic Parkway</li> <li>• Southbound I-805 from Olympic Parkway to Main Street</li> </ul>	<p>Less than Significant</p>
<p><b>Project Access</b> Access related impacts would occur if appropriate lane configurations are not provided at the project driveways.</p>	<p>5.10-5</p>	<p>Phasing of the following improvements shall be consistent with the project PFFP and to the satisfaction of the City Engineer, with intersection lane geometry per Figure 5.10-11. Prior to the approval of the final map triggering the construction of the intersection improvements, including installation of a traffic signal, the applicant(s) shall enter into an agreement to design, construct, and secure a fully actuated traffic signal including interconnect wiring, mast arms, signal heads and associated equipment, underground improvements, standards and luminaries at the intersections listed below. The design of the signal shall be to the satisfaction of the City Engineer and conform to City standards. The applicant(s) shall provide turn lane storage lengths as listed in Table 5.10-16.</p> <ul style="list-style-type: none"> <li>• Heritage Road/Olympic Parkway</li> <li>• Heritage Road/Main Street</li> <li>• Heritage Road/Street "D"</li> <li>• Heritage Road/Street "F"</li> <li>• Heritage Road/Street "J" North</li> <li>• Heritage Road/Street "J" South</li> <li>• Heritage Road/Main Street</li> <li>• La Media Road/Birch Road</li> <li>• La Media Road/Santa Luna</li> <li>• Olympic Parkway/Street "D"</li> </ul>	<p>Less than significant</p>

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Impact Traffic, Circulation, and Access (cont.) PFFP	Mitigation Measures	Significance after Mitigation
5.10-6	<p>Prior to the approval of the final map containing the EDU threshold triggering the construction of street improvements, as defined by the PFFP, the applicant shall enter into an agreement to design, construct, and secure full street improvements to the street segments listed below. Phasing of improvements shall be consistent with the project PFFP and to the satisfaction of the City Engineer.</p> <p><b>Heritage Road</b>                      Olympic Parkway to Street "D"                      Street "F" to Street "J" North                      Street "J" South to Main Street</p> <p><b>Main Street</b>                      From Heritage Road to existing improvements                      East of Heritage Road to project SPA boundary</p> <p><b>Street "D"</b>                      Heritage Road to Street E                      Street E to State Street                      State Street to Santa Venetia                      Olympic Parkway to Heritage Road</p> <p><b>Street "E"</b>                      Street "D" to Street "B"                      Street "B" to La Media Road</p> <p><b>La Media Road</b>                      Santa Venetia to Birch Road                      South of Birch Road to community park entrance (or Santa Luna Road)</p>	<p>Street "D" to Street "F"                      Street "J" North to Street "J" South                      Heritage Road south of Main Street</p>
5.10-7	<p>No units within the project area shall be constructed which would result in the total number of units within the Eastern Territories exceeding 8,990 units, prior to the construction of SR-125 between SR-54 and the International Border. The City may issue additional building permits if the City Council determines that each of the following conditions have been met: (1) SR-125 is constructed and open between SR-54 and Olympic Parkway; and (2) traffic studies, prepared to the satisfaction of the City Engineer and the City Council, demonstrates that the opening of SR-125 to Olympic Parkway provides additional capacity to mitigate the project's cumulative significant impacts to a level below significance without exceeding Growth Management Oversight Committee traffic threshold standards. Additionally, the City may issue building permits if the City Council has approved an alternative method to implement the City's Growth Management Ordinance, as amended from time to time.</p>	

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Air Quality	Impact	Mitigation Measures	Significance after Mitigation
<p>While the project conforms to many of the measures included in the RAQS "Criteria to Guide the Development of Transportation Control Measures," the proposed SPA Plan project is not consistent with the growth projections of the local regional air quality plan. This is a significant impact. Mitigation of this planning impact would require the updating of the regional plan to reflect the general plan with the proposed project. This effort is the responsibility of SANDAG and outside the role of the City of Chula Vista.</p> <p>The proposed project will result in a cumulatively significant long-term contribution to regional PM<sub>10</sub> and ozone levels as a result of projected emissions of ROG, an ozone precursor. The proposed project will also result in a short-term significant fugitive dust impact as a result of emissions stemming from construction.</p> <p>The proposed project does not place residential uses in the landfill buffer and does not represent a significant air quality-related health risk effect due to the proximity of the proposed project to the landfill. Because the proposed project will not place homes in the vicinity of the landfill, and given the currently low number of odor complaints resulting from existing landfill operations, odor impacts are not considered significant.</p>	<p>5.11-1</p> <p>5.11-2</p>	<p>Prior to the approval of building permits for each phase of the project, the applicant(s) shall demonstrate that air quality control and energy conservation measures outlined in the Sectional Planning Area (SPA) Plan Air Quality Improvement Plan pertaining to the design, construction, and operational phases of the project have been implemented.</p> <p>Prior to the approval of any grading permit, the following measures shall be placed as notes on all grading plans, and shall be implemented during grading of each phase of the project to minimize construction emissions:</p> <ul style="list-style-type: none"> <li>a) Minimize simultaneous operation of multiple construction equipment units;</li> <li>b) Use low pollutant-emitting equipment construction equipment as practical;</li> <li>c) Use electrical construction equipment as practical;</li> <li>d) Use catalytic reduction for gasoline-powered equipment;</li> <li>e) Use injection timing retard for diesel-powered equipment;</li> <li>f) Water the construction areas a minimum of twice daily to minimize fugitive dust;</li> <li>g) Stabilize graded areas as quickly as possible to minimize fugitive dust;</li> <li>h) Pave permanent roads as quickly as possible to minimize dust;</li> <li>i) Use electricity from power poles instead of temporary generators during building, as feasible;</li> <li>j) Apply chemical stabilizer or pave the last 100 feet of internal travel path within the construction site prior to public road entry;</li> <li>k) Install wheel washers adjacent to a paved apron prior to vehicle entry on public roads;</li> <li>l) Remove any visible track-out into traveled public streets within 30 minutes of occurrence;</li> <li>m) Wet wash the construction access point at the end of each workday if any vehicle travel on unpaved surfaces has occurred;</li> <li>n) Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads;</li> <li>o) Cover haul trucks or maintain at least 12 inches of freeboard to reduce blow-off during hauling; and</li> <li>p) Suspend all soil disturbance and travel on unpaved surfaces if winds exceed 25 mph.</li> </ul>	<p>Direct and cumulative impacts remain significant and unmitigated</p>

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Noise	Impact	Mitigation Measures	Significance after Mitigation
<p>Potential sources of noise related to the proposed project include construction noise, traffic-generated noise, noise from the community park, and noise from industrial uses.</p> <p>Construction activities, especially heavy equipment, would create short-term noise increases near construction areas.</p> <p>Noise within the proposed SPA Plan area would be affected by traffic noise on Olympic Parkway, Birch Road, La Media Road, Heritage Road, and several internal streets. The traffic on area streets could generate noise levels greater than the City's residential exterior standard of 65 CNEL at ground-level sensitive receptors adjacent to most of the analyzed major roadways, which could cause a significant impact without mitigation.</p> <p>Proposed residential units to the south of the high school stadium would be affected by activities at the stadium. Exterior noise levels at receivers 2 through 8 in Village 2 are projected to exceed 65 CNEL. This could cause a significant impact without mitigation.</p> <p>Active uses in the community park are not expected to exceed noise ordinance standards for Village Two to the north. However, noise levels may exceed standards for the residential zone to the south of the park. This could cause a significant impact without mitigation.</p> <p>Traffic noise levels are not projected to exceed 75 CNEL in industrial use areas. Noise levels produced on the industrial properties have the potential to affect adjacent residential uses and adjacent wildlife. Depending on the specifics of the industrial uses, this may be a significant impact.</p>	<p><b>Traffic Noise</b> 5.12-1</p>	<p>Noise barriers shall be constructed as shown on Figure 5.12-4 with the following provisions:</p> <ul style="list-style-type: none"> <li>Prior to the issuance of any building permit for those lots within the noise contour of 65 CNEL or greater, the applicant(s) shall construct the noise barriers as shown on Figure 5.12-4. Required barrier heights may be achieved through the construction of walls, berms, or wall/berm combinations. With the construction of barriers ranging from three to six feet along the edge of pad or top of slope as shown in Figure 5.12-4, noise levels at all ground-floor residential usable areas and the community park site would be at or below 65 CNEL. As indicated in Figure 5.12-4, the noise barrier adjacent to the community park may begin just north of the anticipated driveway at the southeast of the park.</li> </ul> <p>A site design for the multi-family residential area is not available at this time. Mitigation of any exterior use areas could also be achieved through the site design by placing the exterior use areas on the sides of the building opposite the major project roadways (Olympic Parkway, Heritage Road and La Media Road). This would ensure that these areas are adequately shielded from roadway noise.</p> <ul style="list-style-type: none"> <li>Prior to issuance of the rough grading permit noise barriers shall be shown on wall and fence plans to the satisfaction of the Director of Building and Planning and the Environmental Review Coordinator.</li> </ul>	<p>Less than significant</p>

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Noise (cont.)	Impact	Mitigation Measures	Significance after Mitigation
5.12-2	<p>Prior to approval of building permits for single-family areas where second floor exterior noise levels exceed 65 CNEL, an acoustical analysis shall be performed ensuring that interior noise levels due to exterior sources will be at or below 45 CNEL. Building plans will be available during design review and will permit the accurate calculation of transmission loss for habitable rooms. (lots 1 through 4, 6, 7 and 9 through 17 in R-6; lots 103, 104, 114, 115, and 129 in R5; lots 11, 12 [or 25-C if this lot will have a building] and 34 in R-25; and lots 3, 5 through 9, 11, 12, 14, 19 and 20 in R-4.) For these lots, it may be necessary for the windows to be able to remain closed to ensure that interior noise levels meet the interior standard of 45 CNEL. Consequently, the design for these units may need to include a ventilation or air conditioning system to provide a habitable interior environment with the windows closed based on the results of the interior acoustical analysis.</p>		
5.12-3	<p>As stated in Title 24 of the State Building Code, prior to approval of design review permits for multi-family areas where first and/or second floor exterior noise levels exceed 60 CNEL, an acoustical analysis shall be performed ensuring that interior noise levels due to exterior sources will be below 45 CNEL. Building plans will be available during design review and will permit the accurate calculation of transmission loss for habitable rooms. (Portions of Neighborhoods R-14, MU-3, R-30, R-13, and R-12.) For these areas, it may be necessary for the windows to be able to remain closed to ensure that interior noise levels meet the interior standard of 45 CNEL. Consequently, the design for buildings in these areas may need to include a ventilation or air conditioning system to provide a habitable interior environment with the windows closed based on the results of the interior acoustical analysis.</p>		

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Noise (cont.)	Impact	Mitigation Measures	Significance after Mitigation
		<p><b>Football Stadium Noise</b> As discussed above, noise levels at receivers 2 through 8 (see Figure 5.12-3) are projected to exceed the applicable noise ordinance standard. The following mitigation measure would reduce ground-floor noise levels to below a level of significance.</p> <p>5.12-4 Prior to the issuance of any building permit for Lots 21, 22, 27, 28, 29, 30, and 53 through 57 (see Figure 5.12-3), the applicant(s) shall construct four-foot-high barriers along the northern property line of the affected lots as shown on Figure 5.12-5.</p> <p><b>Community Park Noise</b> 5.12-5 Prior to approval of a precise grading plan, an acoustical analysis shall be performed ensuring that noise levels do not exceed noise ordinance standards.</p> <p><b>Industrial Noise</b> 5.12-6 Prior to the issuance of a building permit for an industrial use on lots adjacent to residential uses, or adjacent to the Wolf Canyon wildlife area a noise analysis shall be completed demonstrating that the proposed use will not exceed the noise limits set by the City's Noise Control Ordinance.</p>	<p>Less than significant</p>
	<p><b>Public Services/Utilities: Potable Water</b> The proposed SPA Plan would result in an incremental increase in water consumption and place additional demands on water storage and pumping facilities. The impact to water storage and pumping facilities would be significant if construction of facilities does not coincide with the anticipated growth associated with the SPA Plan. However, the increase in demand for water would not have a significant impact on the ability of OWD to provide service to the proposed project.</p> <p>The WSAV Report indicated that the increase in water demand is consistent with the projected water demand included in the OWD 2000 UWMP and the WRMP. The same finding can also be made under the OWD 2005 UWMP. The WSAV Report relied on water supply forecasts based on the projected potable water demands supplied with imported water received from SDCWA. However, as discussed above, the SDCWA relies in part on the IID water transfer and other agreements that are being challenged in court. As a result, the assumption that the IID water transfer and other agreements will be available is questionable due to litigation uncertainty, and it is possible that the identified water supplies may not be available as anticipated, despite the urban water management planning conducted by MWD, SDCWA, and OWD. If the litigation were to invalidate identified and available water supplies, a significant water supply impact would result.</p>	<p>5.13-1-1 Prior to the approval of the first final map, a final Subarea Master Plan (SAMP) shall be required for the project. The SAMP shall include the following:</p> <ul style="list-style-type: none"> <li>• Existing pipeline locations, size, and capacity</li> <li>• The proposed points of connection and system</li> <li>• The estimated water demands and/or sewer flow calculated</li> <li>• Governing fire department's fire flow requirements (flow rate, duration, hydrant spacing, etc)</li> <li>• Agency's Master Plan</li> <li>• Agency's planning criteria (see Sections 4.1 through 4.3 of the Water Agencies' Standards)</li> <li>• Water quality maintenance</li> <li>• Size of system and number of lots to be served</li> </ul> <p>Water facilities improvements shall be financed or installed on-site and off-site in accordance with the SAMP.</p> <p>5.13-1-2 Prior to the approval of the first final map, the applicant(s) shall secure and agree with the Olay Water District to construct all potable water facilities (on-site and off-site) required to serve the project. These water facilities improvements shall be financed or installed on-site and off-site in accordance with the fees and phasing in the approved Public Facilities Finance Plans for the SPA Plan.</p>	<p>Significant and not mitigable</p>

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Impact	Mitigation Measures	Significance after Mitigation
<p><b>Public Services/Utilities: Recycled Water</b></p> <p>The proposed project would result in an incremental increase in the use of recycled water and place additional demands on water storage and pumping facilities. The increase in use of recycled water has been planned for by OWD and will not have a significant impact. However, the impact to recycled water storage and distribution facilities would be significant if construction of new facilities does not coincide with the project's anticipated growth.</p>	<p>5.13.2-1 Prior to the approval of the first final map, a final Subarea Master Plan (SAMP) shall be required for the project. The SAMP shall include the following:</p> <ul style="list-style-type: none"> <li>• Existing pipeline locations, size, and capacity</li> <li>• The proposed points of connection and system</li> <li>• The estimated water demands and/or sewer flow calculated</li> <li>• Governing fire department's fire flow requirements (flow rate, duration, hydrant spacing, etc.)</li> <li>• Agency's Master Plan</li> <li>• Agency's planning criteria (see Sections 4.1 through 4.3 of the Water Agencies' Standards)</li> <li>• Water quality maintenance</li> <li>• Size of system and number of lots to be served</li> </ul> <p>Water facilities improvements shall be financed or installed on-site and off-site in accordance with the SAMP.</p>	<p>Less than significant</p>
<p>5.13.2-2</p>	<p>Recycled water facility improvements shall be financed or installed on- and off-site in accordance with the fees and phasing in the approved PFFP for the Villages Two, Three, and a portion of Four SPA Plan.</p>	<p>Less than significant</p>
<p><b>Public Services/Utilities: Sewer</b></p> <p>Development of the proposed SPA Plan and the Composite TM would result in an increase in sewage generation. There is sufficient capacity in the Poggi Canyon and Wolf Canyon/Salt Creek Interceptors to accommodate the proposed SPA Plan. The Poggi Canyon Interceptor would adequately serve the Village Four community park on an interim basis.</p> <p>The southerly portion of Village Two and Village Three cannot be developed until completion of the Heritage Road sewer line and connection to the Wolf Canyon/Salt Creek Interceptor.</p>	<p>5.13.3-1 Sewer facility improvements shall be financed or installed on- and off-site in accordance with the fees and phasing in the approved Public Facilities Financing Plan.</p> <p>5.13.3-2 Prior to the recordation of the first Final Map or grading permit that creates any parcel located within the Wolf Canyon/Salt Creek Sewer Basin, the City Engineer shall be satisfied that the connections to the gravity sewer system from the southern portion of Village Two have been designed and secured to convey flow to Heritage Road and southerly to the Salt Creek Interceptor.</p> <p>5.13.3-3 In order to ensure the timely construction of the Heritage Road regional facility, prior to the first final map that creates any parcel located within the Wolf Canyon/Salt Creek Sewer Basin, the necessary right-of-way for constructing full street improvements within the SPA Plan boundary shall be granted to the City.</p>	<p>No mitigation measures are required.</p> <p>No impact</p>
<p><b>Public Services/Utilities: Integrated Waste Management</b></p> <p>No significant integrated waste management impacts were identified for the development of the proposed SPA Plan and the Composite TM.</p>	<p>No mitigation measures are required.</p>	<p>No impact</p>

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Impact	Mitigation Measures	Significance after Mitigation
<p><b>Public Services/Utilities: Law Enforcement</b> Development of the proposed SPA Plan and the Composite TM would result in a significant impact to law enforcement because of the predicted increase in calls for service and the additional travel time required to answer these calls.</p>	<p>5.13.5-1 Prior to the approval of each building permit, the applicant(s) shall pay Public Facilities Development Impact Fees (PFDIF). The proposed Public Facilities Financing Plan describes public facilities fees for police services based on equivalent dwelling units by development phase. The applicant(s) shall pay the public facilities fees at the rate in effect at the time building permits are issued.</p> <p>5.13.5-2 The City shall continue to monitor Police Department responses to emergency calls and report the results to the Growth Management Oversight Committee on an annual basis.</p>	<p>Less than significant</p>
<p><b>Public Services/Utilities: Fire Protection and Emergency Medical Services</b> The Chula Vista Fire Department does not currently meet the threshold standard for response time for the City, including the Otay Ranch community. However, as population growth in the service area warrants, fire stations would be constructed within Village Nine of the Otay Valley parcel and within Village Thirteen of the Proctor Valley parcel. These stations would help ensure adequate service within the requirements of the GMOC threshold standards. Impacts to fire and emergency medical services would be significant if construction of these facilities does not coincide with the project's anticipated population growth and increased demand for services.</p>	<p>5.13.6-1 Prior to the approval of each building permit, the applicant(s) shall pay Public Facilities Development Impact Fee (PFDIF) at the rate in effect at the time of building permit issuance.</p> <p>5.13.6-2 The City shall continue to monitor Fire Department responses to emergency fire and medical calls and report the results to the Growth Management Oversight Committee on an annual basis.</p>	<p>Less than significant</p>
<p><b>Public Services/Utilities: Schools</b> Project implementation would result in a significant impact to schools unless construction of facilities coincides with student generation and associated service demands.</p>	<p>Provision of school facilities is the responsibility of the school district when additional demand warrants. Government Code 65995(b) provides that the statutory fees are the exclusive means of considering as well as mitigating for school impacts. It does not just limit the mitigation that may be required, but also limits the scope of review and the findings to be adopted for school impacts. Once the statutory fee is imposed, the impact will be mitigated because of the provision that the statutory fees constitute full and complete mitigation [Government Code 65995(b)]. Therefore, the following measure would reduce the impact to schools to below a level of significance for the proposed SPA Plan and the Composite TM:</p>	<p>Less than significant</p>
	<p>5.13.7-1 Prior to the issuance of building permits, the applicant(s) shall pay all required school mitigation fees or enter into an agreement to help finance the needed facilities and services for the Chula Vista Elementary School District to the satisfaction of the School District.</p> <p>5.13.7-2 Prior to the issuance of building permits, the applicant(s) shall pay all required school mitigation fees or enter into an agreement to help finance the needed facilities and services for the Sweetwater Union High School District to the satisfaction of the School District.</p>	

**TABLE 1-2  
SUMMARY OF IMPACTS AND MITIGATION  
(continued)**

Impact	Mitigation Measures	Significance after Mitigation
<p>Public Services/Utilities: Library Service</p> <p>A significant impact would result from the development of the proposed SPA Plan and the Composite TM if construction of new library facilities and provision of additional documents does not coincide with project implementation and associated population growth.</p>	<p>5.13.8-1 Prior to approval of each building permit, the applicant(s) shall pay Public Facilities Development Impact Fees. Prior to the issuance of building permits, Applicants shall pay required Public Facility Development Impact fees at the rate in effect at the time of permit issuance.</p>	<p>Less than significant</p>
<p>Public Services/Utilities: Parks and Recreation</p> <p>Project implementation of the proposed SPA Plan and the Composite TM would generate increased demand for parks and recreation facilities. A significant impact could result if dedication of parkland and construction of new facilities does not coincide with project implementation and project population growth.</p>	<p>5.13.9-1 Prior to the approval of the first final map, the applicant(s) shall dedicate neighborhood and community parks. Prior to approval of the final map, or for projects not requiring a final map, prior to building permit, the applicant(s) shall pay park development fees; and prior to building permit the applicant(s) shall pay recreation development impact fees in accordance with the fees and phasing approved in the Public Facilities Financing Plan for the SPA Plan.</p>	<p>Less than significant</p>
<p><b>Hazards/Risk of Upset</b></p>		
<p>The extent of petroleum hydrocarbons in soil beneath the former UST on Village Two have been adequately assessed and excavated. Soil samples collected from the bottom and sidewalls of the excavation do not exhibit TPHg/TPHd concentrations at or above the laboratory detection limits and are not considered a risk to public safety or the environment. The Phase I ESA conducted for Village Three concluded that there is a potential for agriculturally developed portions of the subject property to be impacted by residual agricultural, including soil augmenting and chemicals. Elevated levels of organochlorine pesticides were present in the soils at the Village Four site. Fifteen composite soil samples taken from the Village Four Community Park Site exhibited concentrations of toxaphene exceeding one-quarter of the residential PRGs. Concentrations of OCPs exceeding residential PRGs are generally limited to the upper two feet of soil. The concentrations of the pesticides in the soils at the Village Four Community Park Site would be considered a significant risk to public safety and mitigation would be required.</p>	<p>5.14-1 If soil is to be exported from the site during proposed grading and other construction activities, it should be characterized prior to proposed offsite use or disposal and handled in accordance with applicable environmental laws and regulations. In addition, contractors performing proposed grading and construction activities should employ adequate dust control measures to minimize exposure to soil and dust at the site.</p> <p>5.14-2 If soil exhibiting hydrocarbon staining and/or odors are encountered at the site during grading and/or construction, the soil should be evaluated by a qualified professional (such as a professional engineer, registered geologist, or registered environmental assessor experienced in hazardous waste evaluations) and handled in accordance with applicable environmental laws and regulations.</p>	<p>Less than significant</p>
<p>The nearest airport is Brown Field, which is approximately three miles to the south of the project site. The site does not lie on either the runway approach or the departure paths for this airport. Operation of Brown Field Airport would not result in any significant impacts to the proposed project. The proposed SPA Plan includes a FPP as required by Article 86 of the California Fire Code, which requires a FPP for all new development in the Urban Wildland Interface, including the proposed SPA Plan area adjacent to Wolf Canyon. Implementation of the FPP will reduce wildfire potential and therefore, no significant impact would occur.</p>		

## **2.0 INTRODUCTION**

### **2.1 Purpose and Scope of the EIR**

This Second-Tier Environmental Impact Report (EIR) addresses the environmental effects associated with the proposed Sectional Planning Area (SPA) Plan which encompasses Villages Two, Three, and a portion of Village Four of the Otay Ranch General Development Plan/Subregional Plan (GDP/SRP). The EIR also addresses a Composite Tentative Map (TM) for Village Two and portions of Village Four. The EIR was prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.), the State CEQA Guidelines (14 California Code of Regulations Section 15000 et seq.), and the City of Chula Vista's Environmental Review Procedures. The City of Chula Vista (City) is the Lead Agency for the EIR and processing of the proposed project.

This EIR tiers from the Otay Ranch GDP Program Final EIR (EIR 90-01, SCH #89010154; Otay Ranch GDP Program EIR), in accordance with CEQA Section 21093. The analysis in the Otay Ranch GDP Program EIR provided the basis for the review and approval of the General Plan Amendments and GDP/SRP for Otay Ranch. As a second tier document, this EIR relies on the Otay Ranch GDP Program EIR to determine whether or not projects proposed within Otay Ranch are consistent with previously approved policies or ordinances. In accordance with CEQA section 21094, those effects that the Lead Agency determines were either mitigated or avoided pursuant to the findings of the Otay Ranch GDP Program EIR or examined in sufficient detail in the Otay Ranch GDP Program EIR are not examined in this EIR. Rather, this EIR focuses on the environmental effects associated with development of the proposed SPA Plan that were not evaluated in the Otay Ranch GDP Program EIR.

This EIR provides decision-makers, public agencies, and the public with detailed information about the potential for significant adverse environmental impacts to occur as a result of the proposed project. Similarly, Responsible Agencies will use this EIR to fulfill their legal authority associated with permits issued for the proposed project. The analysis and findings in this document reflect the independent judgment of the City of Chula Vista.

The proposed project would require an amendment to the City of Chula Vista General Plan; the Otay Ranch GDP; the Phase 1 and 2 Resource Management Plan (RMP); and the County of San Diego Otay Subregional Plan, Volume 2. The proposed project also requires approval of a Chula Vista Multiple Species Conservation Plan (MSCP) boundary adjustment. The approval of the SPA Plan and subsequent tentative maps would also be required for the proposed project.

## **2.2 Development Process**

The following discussion describes the relationship of the SPA Plan to the planning process and outlines the additional steps needed for ultimate completion of development.

### **2.2.1 Chula Vista General Plan**

The General Plan for the City of Chula Vista outlines the goals and objectives for land use within the city. The City has recently updated the General Plan, which was adopted by the City Council on December 13, 2005 (Resolution Nos. 2005-424, 2005-425, 2005-426). The General Plan includes newly proposed goals, policies, and actions that are designed to implement the community's vision for the city. These new policies and actions would be used by the City to guide day-to-day decision-making to ensure that there is continuing progress toward the attainment of General Plan goals.

### **2.2.2 Otay Ranch GDP/SRP**

The Otay Ranch GDP refers to the plan adopted by the City in 1993, and the SRP refers to the Subregional Plan adopted by the County of San Diego (County) in 1993. Together, the Otay Ranch GDP/SRP includes plans for 11 urban villages, a golf course community, a resort village, Planning Area 12, four industrial areas, and two rural estate planning areas. (These equate to a total of 14 villages and five planning areas in the Otay Ranch GRP/SRP). Included are over 11,375 acres of open space within the Otay Ranch Preserve.

In addition to establishing community-wide land use policies, the Otay Ranch GDP/SRP also required the preparation of an Overall Design Plan. The Overall Design Plan (1995a) presents a design context for Otay Ranch and serves as a basis for Village Design Plans that are prepared as part of the City's SPA Plan process.

The Otay Ranch GDP/SRP groups residential areas into "villages." The heart of the village is the Village Core. Pursuant to the guidelines in the GDP/SRP, Village Cores are strategically located within each village. These are mixed-use areas designed to contain essential facilities and services such as elementary schools, shops, civic facilities, child-care centers, local parks, and higher-density housing.

### **2.2.3 SPA Plans**

The Otay Ranch GDP is implemented through the establishment of SPA Plans. A SPA Plan implements the plans, goals, and objectives of the Otay Ranch GDP, by defining land uses, development standards, and zoning for a particular portion of the Otay Ranch

community. Villages Two, Three, and Four are a part of the 11 urban villages designated in the approved Otay Ranch GDP.

The SPA Plan area is defined by the Otay Ranch GDP/SRP as an Urban Village, planned for transit-oriented development. There are eight categories of land use within the project area: residential designations of Low Medium Residential (LM), Low Medium Village (LMV), Medium High (MH); Mixed Use (MU); a Community Park/Park (CP/P); an Elementary School (K6); Industrial (I); and Open Space (O). Specific development guidelines have been established for each of these land use categories.

The SPA Plan establishes design criteria for the site and defines precisely the type and amount of development permitted. It also establishes the City's standards for that development including open space provisions and major improvements to be constructed by the project applicant.

The proposed SPA Plan for the project is based on the provisions for this area that are provided in the Otay Ranch GDP. The specifics of the SPA Plan are reviewed in this EIR.

The SPA Plan consists of the following regulatory documents: (1) Planned Community (PC) District Regulations; (2) Air Quality Improvement Plan (AQIP); (3) Water Conservation Plan (WCP); (4) Public Facilities Financing Plan; (5) Parks, Recreation, Open Space, and Trails Plan; (6) Affordable Housing Program; (7) Village Design Plans; (8) a Fire Protection Plan; and (9) Non-Renewable Energy Conservation Plan (NRECP).

#### **2.2.4 Implementing Permits and Maps**

After adoption of a SPA Plan, specific development occurs with the approval of a variety of permits and tentative and final subdivision maps. The proposed project includes a Composite Tentative Map (Composite TM) for the development within Village Two and the park in a portion of Village Four. The actual development of the other portions of the project will require the future approval of TMs and grading plans for the allowable uses. The action to which this EIR applies is the approval of the SPA Plan for Villages Two, Three, and a portion of Village Four, and the approval of the Composite TM for Village Two and the park located within Village Four. It is anticipated that final maps and permits, needed for project implementation, will be sufficiently similar to the program described in this report to minimize the need for subsequent environmental review. Since TMs for Village Three are not included in this application, future TMs for this area will be subject to a subsequent environmental review process.

### **2.2.5 Project History**

An initial application was submitted for this project that allowed 3,262 dwelling units within the SPA Plan area. That proposal included residential uses within the 1,000-foot buffer adjacent to the Otay Landfill. This proposal was analyzed along with two other alternatives for the SPA Plan area. Both alternatives analyzed approximately 2,695 dwelling units but considered different uses within the landfill buffer. A Notice of Preparation (NOP) was circulated with the applicant's project description and the two alternatives to responsible agencies and other interested agencies, groups, and individuals on September 2, 2003. A copy of the NOP and comments received in response to the NOP are found in Appendix A to this EIR.

After analysis of these three alternatives, the proposed project was revised. The revised project, which decreased the residential density and proposed industrial uses in the landfill buffer, is the proposed project assessed in this EIR. Elements of the alternative land uses that would mitigate identified impacts resulting from the project as initially proposed have been incorporated either into the current project or into the alternatives discussed in this EIR. A second NOP, which superseded and rescinded the 2003 NOP, was circulated for the current project on April 12, 2005. A copy of this second NOP and comments received in response to the NOP are also included in Appendix A to this EIR.

### **2.3 CEQA Requirements**

At each stage of the Otay Ranch planning and development process there has been environmental review in accordance with CEQA. The environmental documents associated with each of the steps in the planning process are listed in Table 1-1 in the Executive Summary. This Second-Tier EIR uses the information included in those environmental documents as a foundation for the environmental assessment conducted for the proposed project. Each of the prior certified EIRs is incorporated by reference.

The Otay Ranch Program GDP EIR (EIR 90-01, SCH #89010154) and the Chula Vista Sphere of Influence Update EIR (SCH #94041056; Sphere of Influence Update EIR) have addressed development of the entire Otay Ranch project area. The Otay Ranch GDP Program EIR was certified by the Chula Vista City Council and San Diego County Board of Supervisors on October 28, 1993. This Program EIR evaluated development within the entire 23,000 acres of Otay Ranch. Potential significant environmental effects resulting from the implementation of the Otay Ranch GDP/SRP were identified for the issues of land use, landform alteration, biology, cultural resources, geology and soils, paleontology, agricultural resources, mineral resources, water quality, traffic, noise, air quality, public services, and hazards/risk of upset.

The Sphere of Influence Update EIR addressed the impacts associated with the inclusion of 12,718 acres of the Otay Ranch into the City of Chula Vista's Sphere of

Influence boundary. The Sphere of Influence Update EIR and Mitigation Monitoring Program were certified by the City of Chula Vista on March 21, 1995.

This EIR incorporates by reference the Otay Ranch GDP/SRP Program EIR, the Chula Vista Sphere of Influence Update EIR, associated Mitigation Monitoring Program, and those documents listed in Table 1-1. These documents are available for public review at the City of Chula Vista, Planning and Building Department, 430 F Street, Chula Vista, California. This EIR contains information summarized from these prior documents to facilitate the reader's review of this document where necessary.

### **2.3.1 Environmental Compliance**

According to Public Resources Code section 21002.1, "the purpose of an [EIR] is to identify the significant effects on the environment of a project, to identify alternatives to the project and to indicate the manner in which those significant effects can be mitigated or avoided." This EIR has been prepared in accordance with the criteria, standards, and procedures of the City's Environmental Review Procedures, CEQA and the State CEQA Guidelines.

### **2.3.2 Environmental Review Procedure**

The City of Chula Vista is the Lead Agency for this EIR preparation and review process. One of the responsibilities of the lead agency is to approve, disapprove, or otherwise carry out proposed projects. Public participation is important to the environmental review and final decision-making process. The following discussion provides the mechanisms by which agencies, organizations, and the general public can comment on the adequacy of the EIR.

First, as noted previously, the original NOP and subsequent NOP were circulated to responsible agencies, other interested individuals, agencies, and groups. Such entities were invited to comment on the scope of the EIR (see Appendix A). Second, when completed, the Draft EIR will be made available for review and comment by the public as well as other interested jurisdictions, agencies, and organizations. A public hearing will be held at the end of the 45-day public review period to close the public review and comment period.

Following public review and comment, a final EIR will be prepared which will include the written responses to the comments received during the public review period and oral comments received during the public hearing process. At separate public hearings, the Planning Commission and City Council will review and consider the Final EIR, including all of its appendices, in making their decision to approve, revise, or deny the proposed project.

### 2.3.3 EIR Format

CEQA and the CEQA Guidelines specify the contents of EIRs and require an EIR to identify the location of the specified contents. CEQA and the CEQA Guidelines do not specify the format within which those items shall be included. In this EIR, a topical organization has been followed so that most of the information related to a single issue or topic is presented within the same report section. Table 2-1 lists the CEQA Guidelines references for required contents and the location of each in this EIR. Technical studies and supporting materials are provided in the EIR appendices, which are bound under separate cover and are available for review at the City of Chula Vista Planning and Building Department, 430 F Street, Chula Vista, California, and the Chula Vista Public Library, 365 F Street, Chula Vista, California.

### 2.3.4 Notice of Preparation

As stated above, the City's Planning Department circulated a NOP on September 2, 2003, to responsible agencies and other interested agencies, groups, and individuals. The NOP addressed preparation of a SPA Plan for Villages Two, Three, and a portion of Village Four, the Composite TM for Villages Two, Three, and a portion of Village Four, as well as the other required discretionary entitlements of the initial project applications. Eight letters were received in response to the issuance of the NOP. The NOP and comment letters are included in Appendix A.

The project was revised and a second NOP was prepared and circulated with the current project description to responsible agencies and other interested agencies, groups, and individuals on April 12, 2005. Nine letters were received in response to the issuance of the second NOP. All comments received were considered during preparation of this EIR. The second NOP and comment letters are also included in Appendix A.

Based on the review of past environmental documents, the analysis of the project by City staff, and the comments received in response to the NOPs, the following issues were determined to be potentially significant and are addressed in this EIR:

Land Use, Planning, and Zoning	Housing and Population
Landform Alteration/Aesthetics	Water Resources and Water Quality
Biological Resources	Transportation, Circulation, and Access
Cultural Resources	Air Quality
Geology and Soils	Noise
Paleontological Resources	Public Services and Utilities
Agricultural Resources	Hazards/Risk of Upset

These issues are discussed in detail in Section 5.0 of this EIR.

**TABLE 2-1  
CEQA-REQUIRED EIR CONTENTS**

CEQA Guidelines Section	Topic	Location in this EIR
15122	Table of Contents or Index	Table of Contents and this table
15123	Summary	Chapter 1.0
15124	Project Description	Chapter 3.0, with further details in each topical discussion in Chapter 5.0 as appropriate
15125	Environmental Setting	Summarized in Chapter 4.0 with more detail in the "Existing Conditions" section for each topic in Chapter 5.0
15126	Environmental Impact	
	(a) Significant Effects	"Impacts" sections of Chapter 5.0
	(b) Significant Effects Which Cannot Be Avoided	"Impacts" sections of Chapter 5.0
	(c) Mitigation Measures	"Mitigation" sections of Chapter 5.0
	(d) Alternatives	Chapter 10.0
	(e) Significant Irreversible Changes	Chapter 8.0
	(f) Growth Inducing Impacts	Chapter 7.0
15128	Effects Found Not To Be Significant	Chapter 9.0
15129	Organizations and Persons Consulted	Chapter 13.0
15130	Cumulative Impacts	Chapter 6.0
15148	Citations of Sources	Chapter 11.0

### **3.0 PROJECT DESCRIPTION**

#### **3.1 Location**

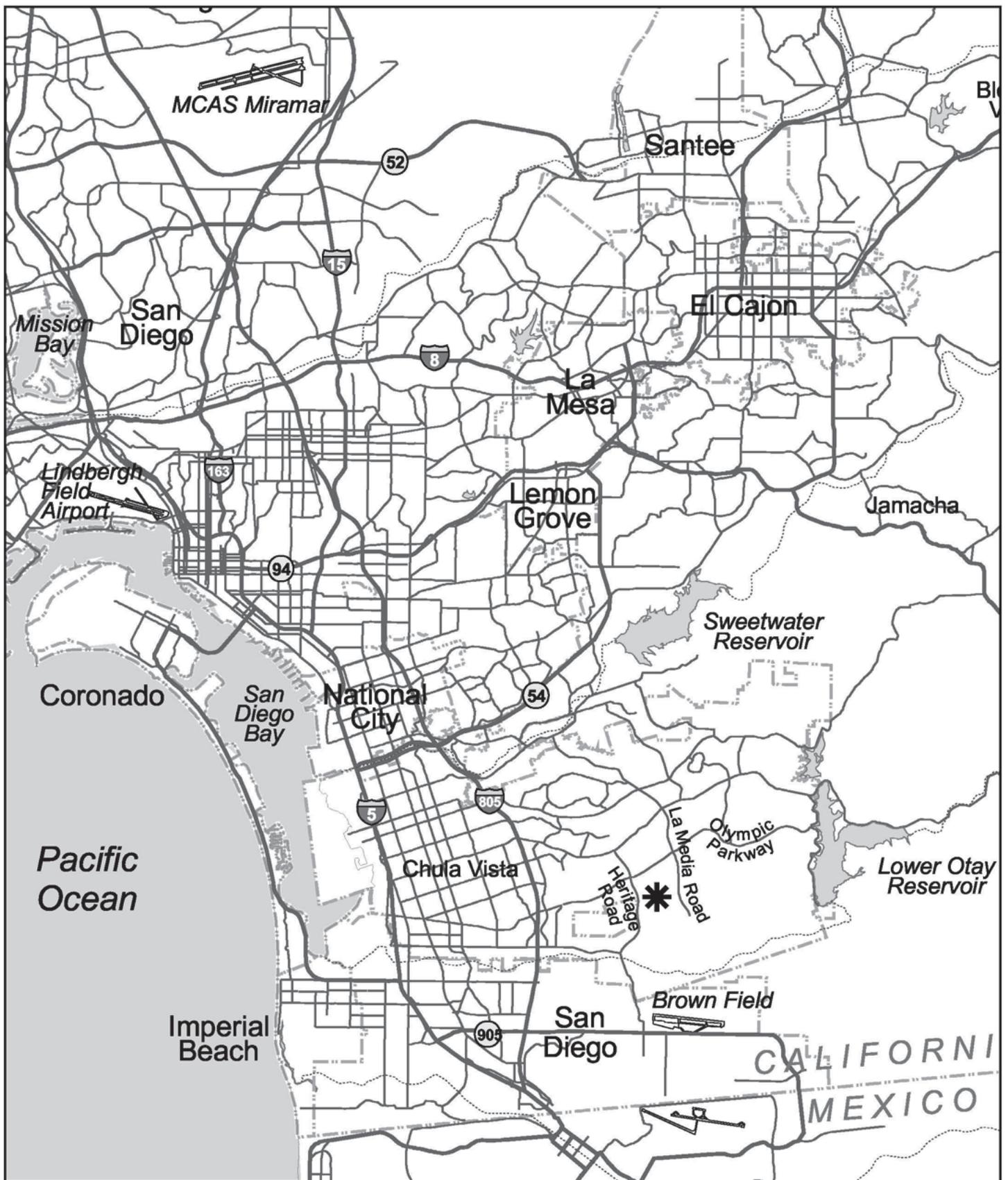
The Villages Two and Three, and a portion of Village Four project site (project site) encompasses an area of approximately 1,187 acres located in the city (Figure 3-1). The SPA Plan area is located at the western edge of the Otay Valley Parcel of the Otay Ranch GDP (Figure 3-2). The SPA Plan is surrounded by other Otay Ranch development areas including existing Villages One and Five located to the north of Olympic Parkway, and Village Six and Village Seven located to the east across La Media Road. The Otay Landfill is located south of Village Two West and west of Heritage Road (Figure 3-3).

The site is located four miles east of Interstate 805 and west of the proposed alignment of State Route 125 (SR-125). Olympic Parkway is adjacent to the SPA Plan site to the north, and La Media Road is adjacent to the SPA Plan site to the east. Village Two occupies the northern portion of the project site located to the east of Heritage Road. A portion of Village Two, "Village Two West," is located to the west of Heritage Road. Village Three is located in the southern portion of the SPA Plan area on the east and west sides of Heritage Road. Village Four is located to the southeast of Village Two proper.

#### **3.2 Background**

As noted previously, Villages Two and Three and a portion of Village Four are a part of the 11 urban villages in the Otay Ranch GDP/SRP which was adopted by the City and County of San Diego (County) on October 28, 1993, after an extensive planning and environmental review process. The Otay Ranch is a master-planned community encompassing approximately 23,000 acres and includes a broad range of residential, commercial, retail, and industrial development. Civic and community uses—such as libraries, parks, and schools—and about 11,375 acres preserved as open space are also part of the Otay Ranch community. Each village is based on the "village concept" that blends multi-family homes and shops with parks, schools, and civic activities in a core area within each Village. The Village Core would be surrounded by single-family homes in secondary areas. All are tied together by pedestrian facilities.

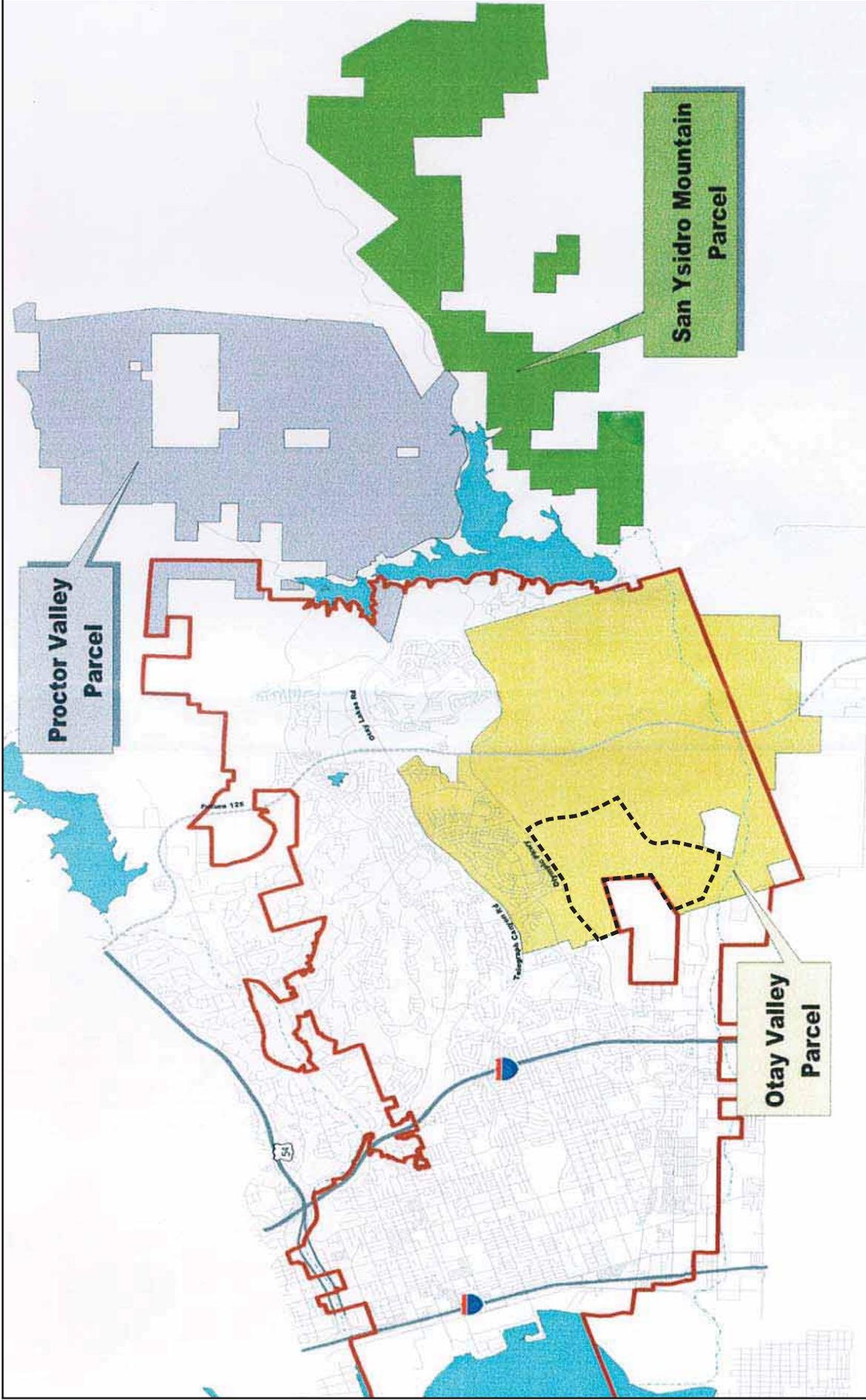
Both the City and County adopted the Otay Ranch GDP/SRP. In the City, the document is a General Development Plan under Section 19.48 of the Municipal Code. In the County, the document is a Subregional Plan. The Otay Ranch GDP/SRP establishes goals and objectives for the development of the Otay Ranch. As part of the review and approval process for the Otay Ranch GDP/SRP, a Program EIR was prepared and certified by both the City and the County. The only difference in the two adoptions was



★ Project location

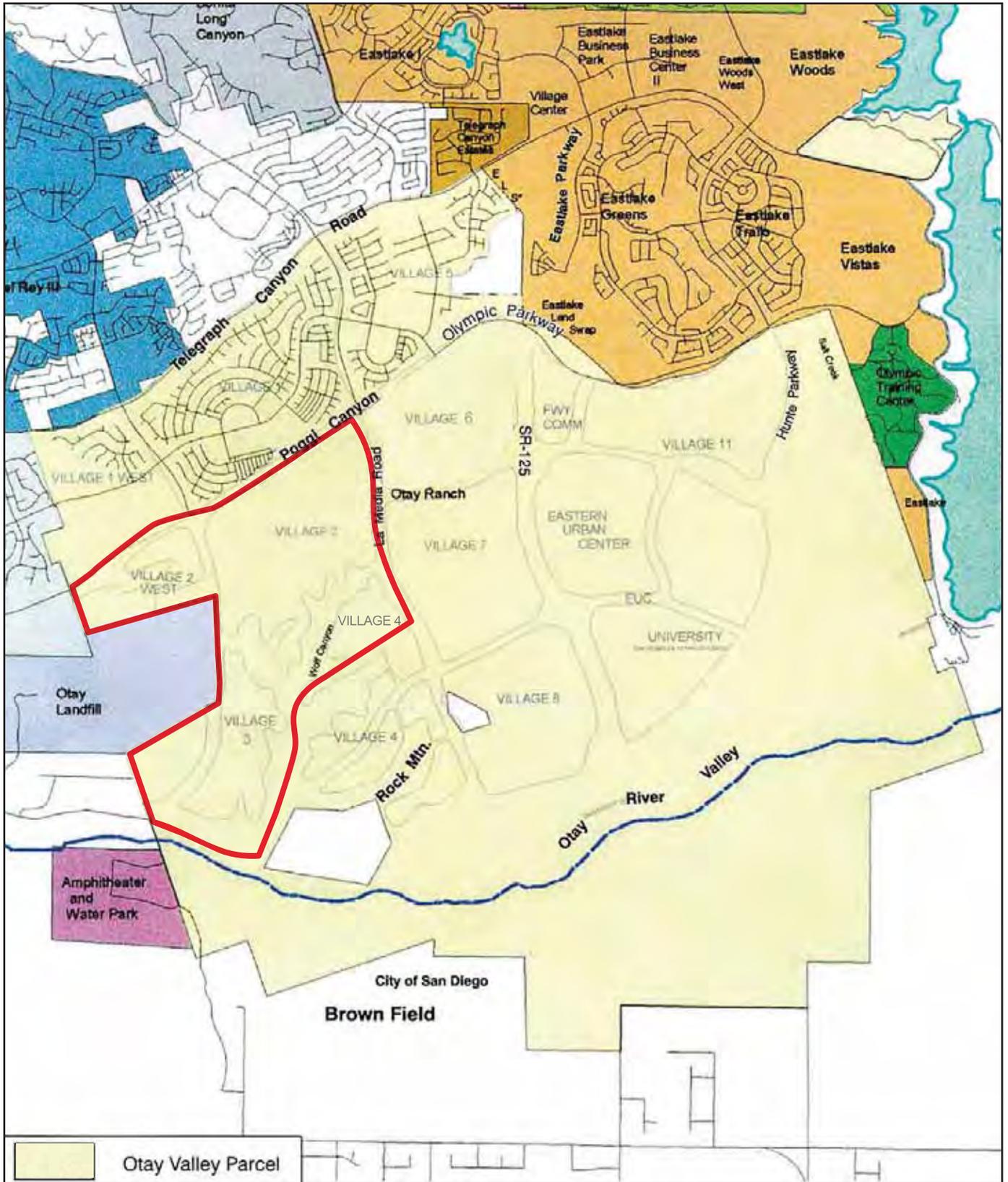


**FIGURE 3-1**  
Regional Location



Project Boundary

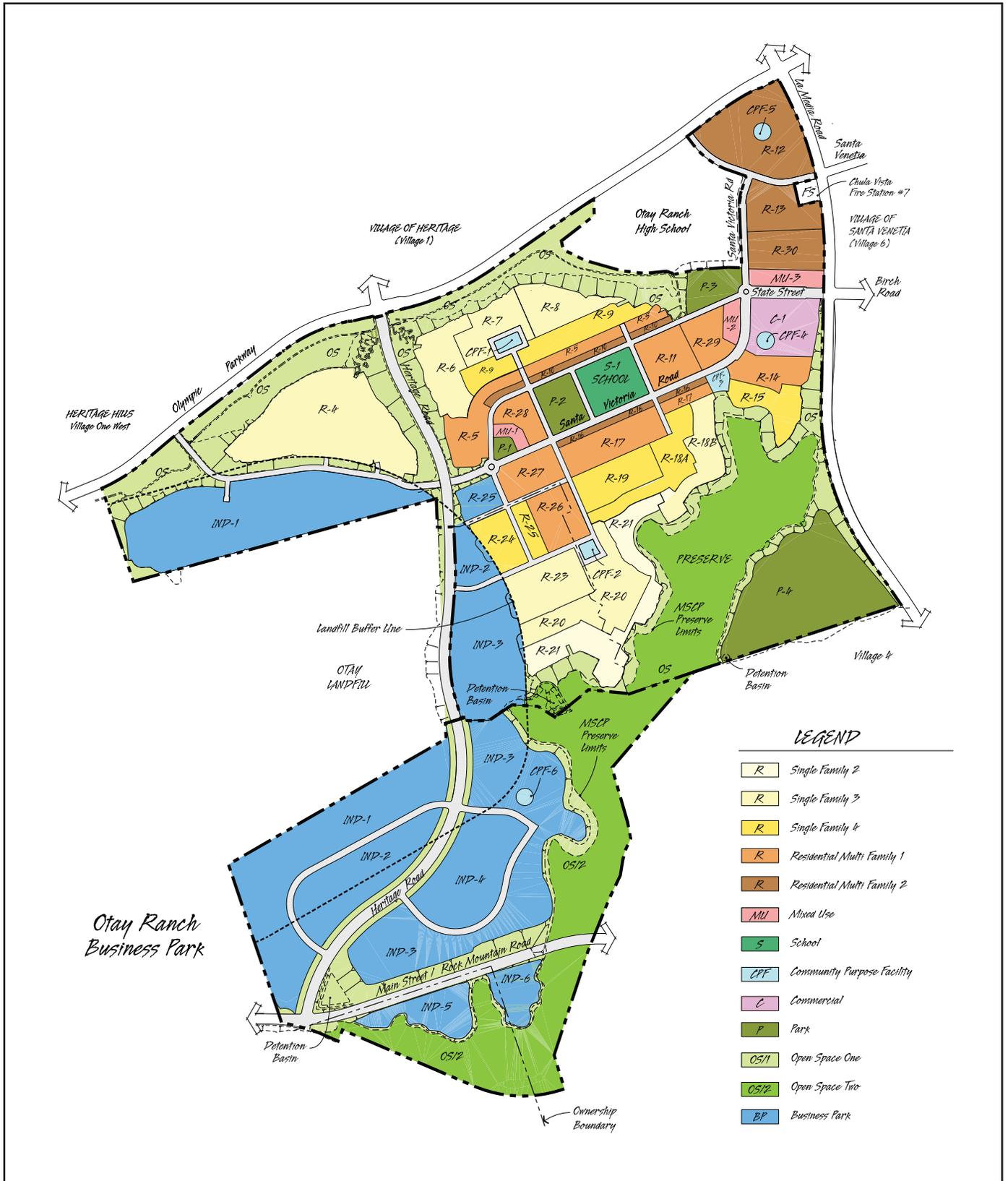
FIGURE 3-2  
Otay Valley Parcels of the  
Otay Ranch GDP/SRP



 Project Boundary



FIGURE 3-3  
Proposed Project Area



**LEGEND**

- R Single Family 2
- R Single Family 3
- R Single Family 4
- R Residential Multi Family 1
- R Residential Multi Family 2
- MU Mixed Use
- S School
- CPF Community Purpose Facility
- C Commercial
- P Park
- OS1 Open Space One
- OS2 Open Space Two
- BP Business Park

0 Feet 1000



**FIGURE 3-5**  
Land Use Plan

the plans for Village Three. The City planned Village Three for Industrial land uses while the County SRP called for a residential village.

In March of 1997, the City annexed 9,100 acres of the Otay Valley Parcel to the City. As part of the annexation the City entered into an agreement with the County of San Diego that established the Otay Landfill Buffer 1,000 feet around the operating part of the Otay Landfill and changed the General Plan and Otay Ranch GDP to the nonresidential Industrial designation. This designation was applied to portions of Village Two and Two West within the 1,000-foot buffer. No changes in Village Three were necessary since the village was already planned for industrial land uses within the city.

Under the implementation program for the Otay Ranch GDP/SRP, SPA plans are required to be approved before final development entitlements can be considered. The proposed SPA Plan for Villages Two and Three and a portion of Village Four will further refine the development standards, land plans, goals, objectives, and policies of the adopted Otay Ranch GDP/SRP. The proposed SPA Plan is provided as required by the Otay Ranch GDP and pursuant to Title 19, Zoning, of the Chula Vista Municipal Code.

### **3.3 Objectives**

As specified in the Villages Two and Three, and a portion of Village Four SPA Plan, the objectives of the proposed project are detailed as follows:

- Establish a pedestrian and transit-oriented village with an intense urban core to reduce reliance on the automobile and promote walking and the use of bicycles, buses, and regional transit.
- Promote synergistic uses between the SPA area and the neighborhoods of adjacent Otay Ranch Villages to balance activities, services, and facilities.
- Implement the goals, objectives, and policies of the adopted Chula Vista General Plan, and particularly, the Otay Ranch GDP, the Otay Ranch Phase 1 and Phase 2 RMP, the Otay Ranch Facility Implementation Plan, the Otay Ranch Village Phasing Plan, and the Otay Ranch Service/Revenue Plan.
- Implement Chula Vista's Growth Management Ordinance to ensure that public facilities are provided in a timely manner and financed by the parties creating the demand for, and benefiting from, the improvements.
- Foster development patterns that promote orderly growth and prevent urban sprawl.
- Develop, maintain, and enhance a sense of community identity.

- Establish a pedestrian-oriented village with an intense urban core to reduce reliance on the automobile and promote walking, and use of bicycles, buses, and regional transit.
- Promote synergistic uses between the SPA area and the neighborhoods of adjacent Otay Ranch villages to balance activities, services, and facilities.
- Accentuate the relationship of the land plan with its natural setting and the physical character of the region, and promote effective management of natural resources by concentrating development into less sensitive areas, while preserving large contiguous open space areas with sensitive resources.
- Add to the creation of a unique Otay Ranch image and identify which differentiates Otay Ranch from other communities.
- Wisely manage limited natural resources.
- Establish a land use and facility plan that assures the viability of the SPA Plan area in consideration of existing and anticipated economic conditions.

### **3.4 Ownership**

There are currently four land owners within the SPA Plan boundary: (1) the Otay Project, L.P.; (2) the Stephen and Mary Birch Foundation; (3) Otay Ranch Investments, LLC, and (4) the Flat Rock Company. The ownership boundaries are shown on Figure 3-4. Concurrently with the SPA Plan for Villages Two and Three, and a portion of Village Four, the project applicant is processing a composite Tentative Map for Village Two and the proposed park within Village Four, which will encompass property currently owned by the Otay Project, L.P. and the Otay Ranch Investments, LLC.

### **3.5 Proposed Project**

The primary actions addressed by this EIR are described below. All of the discretionary actions associated with the proposed project are also listed in Section 3.6.

#### **3.5.1 SPA Plan**

The SPA Plan is an implementation document required by the Planned Community (PC) Zone in Title 19 of the Chula Vista Municipal Code that refines and implements the land use plans, goals, objectives, and policies of the Otay Ranch GDP. The purpose of the SPA Plan is to define, in more detail the City's General Plan and the Otay Ranch GDP, as well as the development parameters for the Otay Project, L.P., the Stephen and Mary Birch Foundation, Otay Ranch Investments, LLC and the Flat Rock Company ownerships within the SPA Plan boundary. The SPA Plan would include the land uses, urban design criteria, circulation pattern, open space and recreation concept, and infrastructure requirements to support the community.

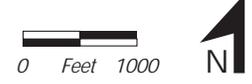
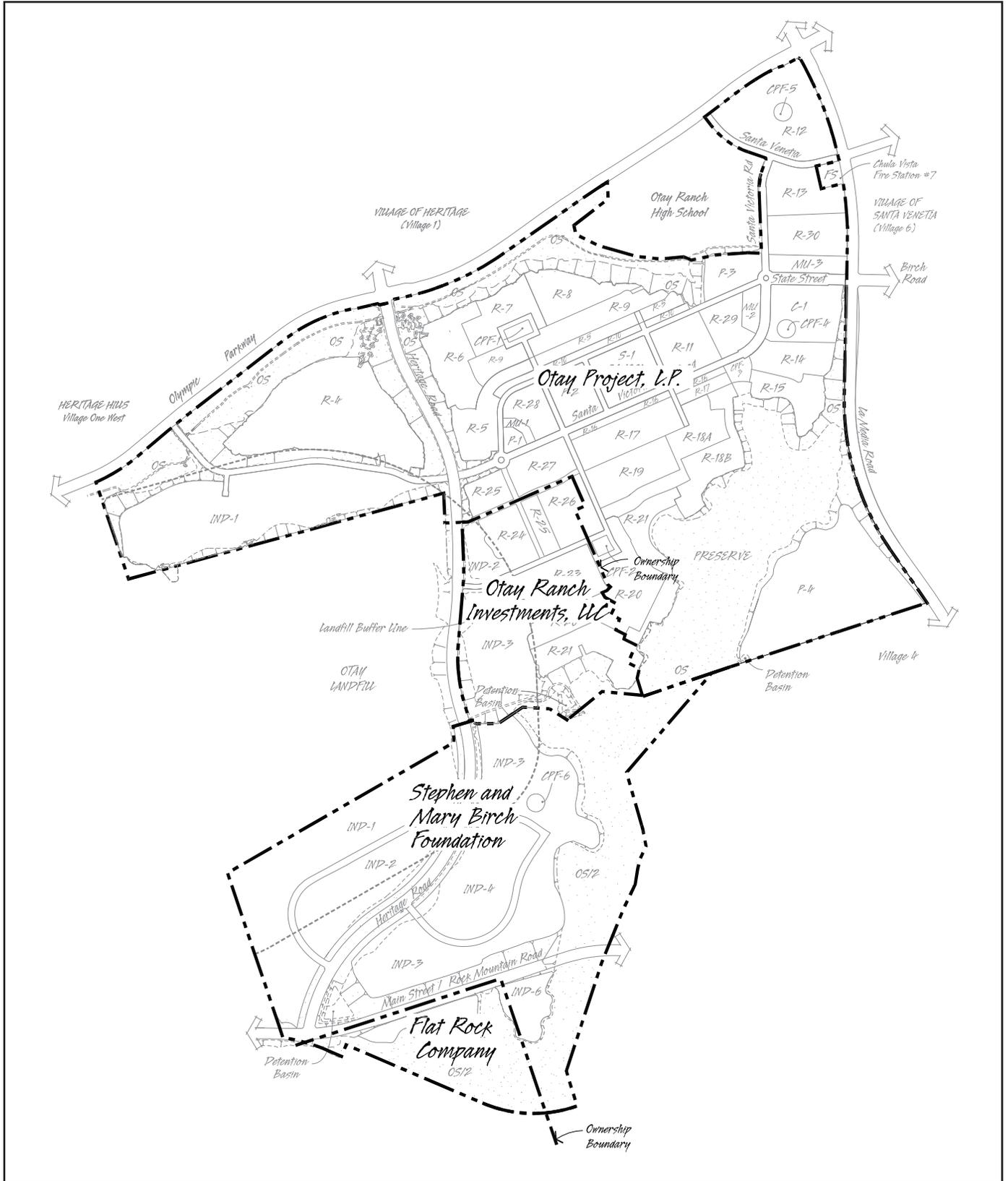


FIGURE 3-4  
Property Ownership

The components of the SPA Plan are described below:

**Planned Community District Regulations:** The PC District Regulations provide the applicable zoning regulations for the proposed SPA Plan site. The regulations are intended to implement and integrate the goals and policies of the Chula Vista General Plan, the Otay Ranch GDP, and the proposed SPA Plan by establishing land use districts and standards for each district. The regulations provide the basis by which the City would review and evaluate the preliminary and final drawings for subsequent development applications, and provide guidance at the design review level. Specifically, the regulations provide for the implementation of the GDP and PC zone by setting forth the development and use standards for all property within the SPA PC District by establishing setbacks, building heights, parking and landscaping requirements, use restrictions, animal regulations, density of development limitations, lot size, width and depth standards, fencing requirements, and signing regulations. Additionally, special uses and conditions are discussed and administrative procedures to implement the regulations are identified. Essentially, the PC District Regulations along with the other components of the SPA Plan delineate precisely the allowable use of the property.

**Village Design Plan:** The Otay Ranch GDP requires a Village Design Plan be prepared for each village at the SPA levels of planning. The Village Design Plan guides the design of sites, buildings, and landscapes within the village to ensure that the quality of the adopted urban design and architectural concepts established for the overall Otay Ranch community are maintained. The Village Design Plan provides a description of the design review process for development within the SPA Plan area and describes the setting for the Village, land use plan, and design theme.

**Business Park Design Plan:** The Otay Ranch Business Park is not an Otay Ranch Urban Village and as such does not require a Village Design plan to address complex land use and design issues. Instead, the Business Park Design Plan is a planning tool with guidelines to direct the design of sites, buildings, and landscapes within the Business Park. The Design Guidelines identify a theme for the business park and delineate that identity through streetscape and landscape design, signage programs, and architectural and lighting guidelines.

**Planned Facility Finance Plan (PFFP):** The PFFP addresses the public facility needs associated with implementation of the SPA Plan. The PFFP is required by the City's Growth Management Program and Chapter 9, Growth Management, of the Otay Ranch GDP. The PFFP is required in conjunction with the SPA Plan to ensure that the phased development of the project is consistent with the overall goals and policies of the City's General Plan, Growth Management Program, and the Otay Ranch GDP and to ensure that the development of the project will not adversely impact the City's Quality of Life Standards. The PFFP also contains a fiscal analysis identifying capital budget impacts on the City as well as maintenance and operation costs for each proposed phase of

development. The PFFP provides an analysis of infrastructure facilities, such as water and sewer, and the provision of community services, law enforcement, libraries, schools, parks, and animal control facilities.

**Affordable Housing Plan:** The City requires that a specific Affordable Housing Program and agreement, consistent with the Housing Element of the General Plan, be prepared and approved concurrent with the SPA Plan. The Affordable Housing program is intended to identify the type and location of affordable housing units to be provided, potential subsidies or incentive programs, income restrictions, and methods to verify compliance. The City's Housing Element and the Otay Ranch GDP provide that 10 percent of the total units will be affordable to low and moderate income households. Of the 10 percent, 5 percent must be affordable to low income households and 5 percent must be affordable to moderate income households.

**Air Quality Improvement Plan:** An AQIP is required to be submitted with SPA Plans per the City's Growth Management Ordinance. Additionally, the City's Growth Management Program requires the preparation of an AQIP for all major development projects (50 dwelling units or greater and commercial or industrial projects with equivalent air quality impacts to a residential project of 50 dwelling units or greater). The AQIP is intended to minimize air quality impacts during and after construction of projects and to demonstrate compliance with the air quality standards and policies of the San Diego Air Pollution Control District (APCD). Consistent with the Chula Vista AQIP, developers can either participate in the Chula Vista Greenstar Building Efficiency Program or evaluate the project using the Chula Vista CO<sub>2</sub> INDEX model including any necessary site plan modifications.

**Water Conservation Plan:** The City's Growth Management Ordinance also requires a WCP that is consistent with the Chula Vista WCP Guidelines to be prepared for all projects with 50 dwelling units or greater at the time of SPA Plan preparation. The purpose of a WCP is to respond to the Growth Management policies of the City of Chula Vista and address the long-term need to conserve water in new developments.

**Non-Renewable Energy Conservation Plan:** The Otay Ranch GDP requires preparation of a Non-Renewable Energy Conservation Plan for each Village. The plan identifies measures to reduce the use of non-renewable energy resources, including transportation, building design and use, lighting, recycling, and alternative energy sources.

**Fire Protection Plan:** Fire Protection Plans are required by the City of Chula Vista Fire Department in accordance with the provisions of Article 86 of the 2001 California Fire Code. The Fire Code requires that all new development in the Urban Wildland Interface (UWI) have a Fire Protection Plan. The Fire Protection Plan focuses on areas with a high UWI threat, such as the portion of the SPA Plan area along Wolf Canyon.

**Agricultural Plan:** The Otay Ranch GDP Program EIR requires the preparation of an agricultural plan concurrent with the approval of any SPA Plan affecting on-site agricultural resources. The Agricultural Plan shall indicate the type of agricultural activity being allowed as an interim use including buffering guidelines designed to prevent potential land use interface impacts related to noise, odors, dust, insects, rodents, and chemicals that may accompany agricultural activities and operations.

**Preserve Edge Plan:** In accordance with Policy 7.2 of the Otay Ranch RMP, a Preserve Edge Plan is to be developed for all SPAs that contain areas adjacent to the Preserve. The purpose of the Preserve Edge Plan is to identify allowable uses within appropriate land use designations for areas adjacent to the Preserve.

### 3.5.1.1 Proposed Land Uses

The land uses proposed in the SPA Plan include development of 2,786 dwelling units (986 single-family and 1,800 multi-family units) on approximately 335.1 acres and three industrial areas on 87.9 acres within Village Two and a 176.5-acre business park within Village Three. The remaining 587.8 acres would be developed with non-residential uses, including community purpose facilities, schools, public parks, commercial uses, open space, two pedestrian bridges, and circulation rights-of-way. Tables 3-1 and 3-2 present a tabulation of the proposed uses for the SPA Plan. The uses allocated to each Village are discussed below. The proposed land use plan for the SPA Plan is provided in Figure 3-5.

The adopted Otay Ranch GDP defines the proposed SPA Plan area as an Urban Village, planned for transit-oriented development. There are eight categories of land uses defined in the Otay Ranch GDP Land Use Plan within the project area: residential designations of Low Medium Residential (LM), Low Medium Village (LMV), Medium High (MH); Mixed Use (MU); a Community Park/Neighborhood Parks (CP/P); an Elementary School (K6); Industrial (I); and Open Space (O). Specific development guidelines have been established for each of these land use categories. These guidelines are summarized in Table 3-3.

#### *Village Two*

##### SINGLE-FAMILY RESIDENTIAL

A total of 986 single-family dwelling units are proposed on 198.7 gross acres within Village Two (see Figure 3-5 and Tables 3-1 and 3-2). These units would be distributed throughout 14 neighborhoods. Neighborhood densities would range from 2.9 to 7.7 dwelling units per acre with lot sizes ranging from 3,000 to 10,000+ square feet. Small-

**TABLE 3-1  
LAND USES WITHIN VILLAGES TWO AND FOUR FOR THE PROPOSED PROJECT**

Neighborhood Area	Gross Acreage	Dwelling Units	Dwelling Units/Acre
Single-Family			
R-4	41.5	160	3.9
R-6	12.6	63	5.0
R-7	9.4	44	4.7
R-8	10.0	51	5.1
R-9	13.3	101	6.2
R-15	7.2	45	6.3
R-18A	11.8	66	5.6
R-18B	10.4	46	4.4
R-19	10.8	83	7.7
R-20	19.3	83	4.3
R-21	22.2	64	2.9
R-23	13.1	71	5.4
R-24	7.6	41	5.4
R-25	<u>9.5</u>	<u>68</u>	<u>7.2</u>
Single-Family Subtotal	198.7	986	5.0
Multi-Family			
R-5	15.7	130	8.3
R-10	4.5	90	20.0
R-11	9.9	144	14.5
R-12	24.0	295	12.3
R-13	10.3	149	14.5
R-14	7.6	137	18.0
R-16	3.5	74	21.1
R-17	11.5	119	10.3
R-26	8.8	75	8.5
R-27	8.8	110	12.5
R-28	5.9	85	14.4
R-29	8.9	152	17.1
R-30	<u>10.2</u>	<u>180</u>	<u>17.6</u>
Multi-Family Subtotal	129.6	1,740	13.4
Mixed Use (MU)			
MU-1	1.1	10	9.1
MU-2	1.4	12	8.6
MU-3	<u>4.3</u>	<u>38</u>	<u>8.8</u>
Mixed Use Subtotal	6.8	60	8.8
Commercial (C)			
C-1	<u>11.9</u>	N/A	N/A
Commercial Subtotal	11.9	N/A	N/A
Industrial (IND)			
IND-1	51.5	N/A	N/A
IND-2	6.7	N/A	N/A
IND-3	<u>29.7</u>	N/A	N/A
Industrial Subtotal	87.9		

**TABLE 3-1  
LAND USES WITHIN VILLAGES TWO AND FOUR FOR THE PROPOSED PROJECT  
(continued)**

Neighborhood Area	Gross Acreage	Dwelling Units	Dwelling Units/Acre
Community Purpose Facility (CPF)*			
CPF-1	1.2	N/A	N/A
CPF-2	0.9	N/A	N/A
CPF-3	1.7	N/A	N/A
CPF-4	1.5	N/A	N/A
CPF-5	<u>0.8</u>	N/A	N/A
CPF Subtotal	6.1	N/A	N/A
Parks			
P-1 (Town Square)	1.4	N/A	N/A
P-2	7.1	N/A	N/A
P-3	6.9	N/A	N/A
P-4	<u>44.2</u>	N/A	N/A
Parks Subtotal	59.6	N/A	N/A
Schools			
S-1	<u>10.3</u>	N/A	N/A
School Subtotal	10.3	N/A	N/A
Other			
Open Space	164.5	N/A	N/A
Preserve	74.7		
External Circulation	26.2		
Streets	<u>42.6</u>	N/A	N/A
Other Subtotal	308.0	N/A	N/A
<b>TOTAL</b>	<b>818.9</b>	<b>2,786</b>	

SOURCE: Villages Two, Three, and a portion of Four SPA Plan (January 2006).

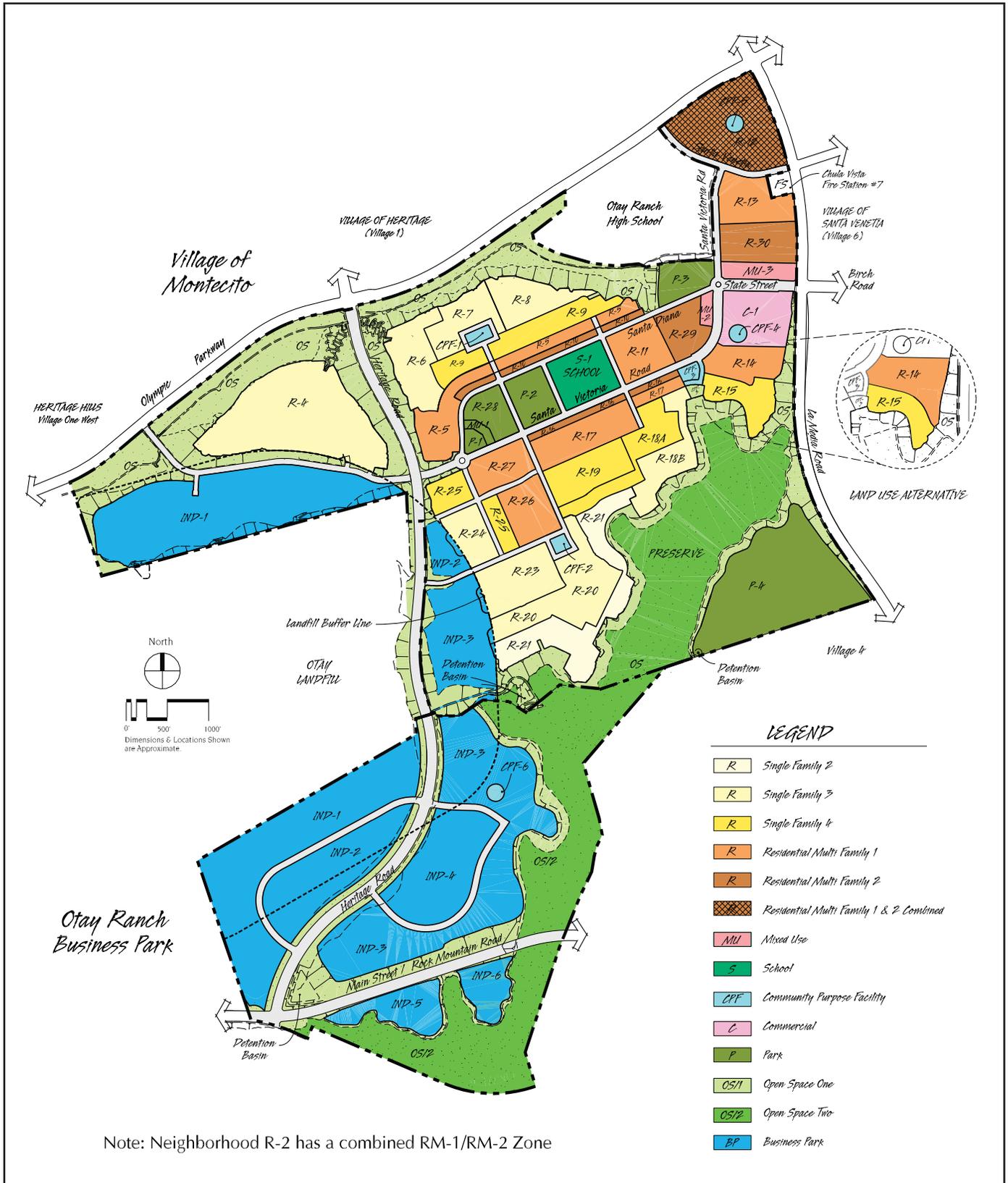
\*An additional 3.0- to 5.0-acre CPF site will be provided within the Village Core pursuant to a subsequent SPA amendment.

**TABLE 3-2  
LAND USES WITHIN VILLAGE THREE  
FOR THE PROPOSED PROJECT**

Use	IND Acres	CPF Acres*	OS Acres	CIRC Acres	Total Acres
IND-1	54.5				54.5
IND-2	26.4				26.4
IND-3	50.1				50.1
IND-4	26.4				26.4
IND-5	11.3				11.3
IND-6	7.8				7.8
CPF-6*		10.2			10.2
Other			146.9	34.8	181.7
<b>TOTAL</b>	<b>176.6</b>	<b>10.2</b>	<b>146.9</b>	<b>34.8</b>	<b>368.4</b>

NOTE: IND = Industrial; CPF = Community Purpose Facility; OS = Open Space;  
CIRC = External & Internal Circulation.

\*An additional 3.0- to 5.0-acre CPF site will be provided within the Village Core pursuant to a subsequent SPA amendment and CPF-6 will be reduced accordingly.



0 Feet 1000



FIGURE 3-5  
Land Use Plan

**TABLE 3-3  
DESCRIPTION OF LAND USE DESIGNATIONS**

Symbol	Category	Description
LM	Low Medium Residential	This category includes single-family detached dwellings on medium-size lots. Although not a minimum or a standard, these areas are typically 7,000-square-foot lots. In addition, under the concept of cluster development, single-family dwellings on smaller lots, zero lot line homes, and some single-family attached units (townhouses and patio homes) could be consistent with this designation.
LMV	Low Medium Village	The LMV category is permitted only in large-scale master planned communities containing a variety of uses, including commercial, designed and organized in a manner that encourages non-automotive travel and pedestrian orientation: a village. To ensure character differentiation and village viability, the LMV category requires specific area densities within the range of three to six dwelling units per acre. Therefore, LMV categories are accompanied by a specific density and number of homes. The density is not tied to any segment of the range. This housing type includes a wide variety of lot sizes, predominantly single-family, organized in patterns which contribute to a small-scale pedestrian-oriented community. The occurrence of some attached homes within this designation is consistent with the intent, as long as the character of the development area is consistent with the typical single-family neighborhood.
MH	Medium High (village core)	This category includes multi-family units such as town homes, garden apartments, and stacked flats, including flats over commercial. Densities within the range of 11 to 18 dwelling units per acre are appropriate. Mobile homes are also included in this category.
MU	Mixed Use (village core)	The most critical element of the village cores is mixed-use areas. Mixed land uses are provided in order to concentrate activities accessible to pedestrians. The creative mixing of uses enhances interaction and discourages multiple auto trips. The mixed-use development category is a combination of uses, befitting an energetic town-like environment. The mixed-use category promotes innovation and economic services to the village; therefore, there is flexibility in the standards.
I	Industrial	<p>This category includes light manufacturing, warehousing, flexible use buildings and public utilities. Very limited amounts of restaurant and office-oriented retail commercial.</p> <p><u>Village Three (Applicable to the City of Chula Vista)</u>            Primary Land Use Designation: The area indicated on the GDP/SRP Land Use Map as Village Three has a primary land use designation as Industrial.</p> <p>Secondary Land Use Designations: Village Three also has secondary land use designations for Village purposes. This area may be developed for said secondary uses if the Village had</p>

**TABLE 3-3  
DESCRIPTION OF LAND USE DESIGNATIONS  
(continued)**

Symbol	Category	Description
		remained in the County of San Diego. Since the property has been annexed to the City of Chula Vista, the designation is no longer applicable.
CP/P	Community Park/Park	This overlay designation indicates the approximate location of community parks (CP) and neighborhood parks (P). These facilities are to be fixed in location at the SPA level.
OS	Open Space	These areas include management preserve, open space, regional park, and open space district areas. No dwelling units are allocated to these areas.

SOURCE: GDP Otay Ranch Land Use Designations Table, 1998.

lot single-family homes and alley product types are proposed in neighborhoods designated for the highest densities.

#### MULTI-FAMILY RESIDENTIAL

A total of 1,800 multi-family dwelling units, including 60 units within the mixed-use area, with densities ranging from 8.3 to 21.1 dwelling units per acre are proposed on 136.4 gross acres in and adjacent to the Village Two Core. Multi-family units proposed by the SPA would be included in 13 multi-family neighborhoods and three mixed-use areas. Multi-family dwelling units would be two to four stories tall in the Village Two Core with building heights decreasing towards the periphery of the village.

#### COMMERCIAL AND INDUSTRIAL

Commercial uses in the SPA Plan area are concentrated in the Village Two Core. These uses are located within the Village Core area to function as a social, commercial, and activity center for the village as mandated in the Otay Ranch GDP. There is one area proposed for commercial uses totaling 11.9 acres and three mixed-use areas totaling 6.8 acres proposed within Village Two. The 11.9-acre commercial site would be located on the southwest corner of La Media Road and State Street (see Figure 3-5). The three mixed-use areas would be located within the Village Core. Two mixed-use areas are located adjacent to the 11.9-acre commercial parcel and will include commercial and retail uses and multi-family residential uses. The third mixed-use area would be located in the Village Two Core (see Figure 3-5). This mixed-used area would include neighborhood-serving commercial uses and multi-family residential uses.

Industrial uses in Village Two are concentrated in the landfill buffer to the north and east of the Otay Landfill. Three areas are proposed totaling 87.9 acres. A 51.5-acre industrial site would be located to the north of the landfill in Village Two West, and the two remaining industrial sites would be located to the east of the landfill consisting of a 6.7-acre and a 29.7-acre site.

#### COMMUNITY PURPOSE FACILITIES (CPF)

The City's Municipal Code Chapter 19.48 requires designation of CPF land area at a ratio of 1.39 acres per 1,000 residents, which would require 11.7 acres of CPF land in the SPA Plan area. Development of the CPF sites may require conditional use permits (CUPs) and design review per the requirements in the PC District Regulations. Completion of these CUPs is part of the site plan review process of the proposed SPA Plan. These CUPs are discretionary actions subject to additional CEQA review.

There are five CPF areas proposed within the Village Two portion of the project area totaling 6.1 acres. Figure 3-5 shows the locations of the CPF areas within the SPA Plan.

CPF areas 1 through 3 would vary between 0.8 acre and 1.7 acres in size and are intended to be private recreational facilities within the various neighborhoods. Amenities would include picnic and play areas, a tot lot, and sports courts. CPF area 4 includes a 1.5-acre floating site within the mixed-use Town Center and may include a day care facility or other uses authorized in the Chula Vista Municipal Code. The term floating site indicates that a future public facility is planned in the approximate area but has not yet been sited. CPF area 5 would include a 0.8-acre floating site located within Neighborhood R-12 in the northeast portion of Village Two. Amenities would include a tot lot, sports court, and passive recreation facilities.

An alternate CPF site is being considered within Village Two. This CPF site would include 3.0 to 5.0 acres located in the Village Two Core. If this option occurs, the Village Three CPF site (CPF-6) would be reduced by the amount of the Village Two core CPF site (3.0 to 5.0 acres).

#### PARKS

New development in the city of Chula Vista is required to provide public parkland, improved to City standards and dedicated to the City. Parkland dedication requirements are specified in Section 17.10.040 of the Chula Vista Municipal Code. The Parkland Dedication Ordinance requires three acres of neighborhood and community park per 1,000 residents. Therefore, because the proposed project would generate a population of approximately 8,458 people, the proposed project is required to provide 25.4 acres of parkland. The proposed project exceeds this requirement. Three parks are proposed in Village Two: a centrally located 6.9-acre neighborhood park, a 7.1-acre park in the eastern area of the village, and a 1.4-acre Town Square in the Village Two Core. As noted below and in Table 3-1, a 44.2 (net)-acre community park would be provided in Village Four for a total of 59.6 acres of parkland.

#### SCHOOLS

The SPA Plan provides a proposed elementary school site that would be centrally located in the residential neighborhoods. The 10.3-acre school parcel is sited within the Village Two Core area adjacent to a proposed park (P-2).

#### OPEN SPACE AND CIRCULATION

The remaining 308 acres of the Village Two SPA Plan area would be devoted to open space, preserve, and circulation. These issues are further discussed below as they pertain to the entire SPA Plan area.

### *Village Three*

#### INDUSTRIAL

The primary land use proposed in the Village Three portion of the SPA Plan is the development of a 176.5-acre business park located in the southern portion of the SPA Plan area, southeast of the Otay Landfill (see Figure 3-5). The business park would be located east and west of the future southern extension of Heritage Road. The Business Park Design Plan included in the SPA Plan will direct the design of sites, buildings, and landscapes within the Business Park.

#### COMMUNITY PURPOSE FACILITIES

A 10.2-acre CPF site is proposed in the Village Three portion of the SPA Plan area. This CPF site would serve the surrounding business park and Village Two areas. As noted previously, if the alternate CPF site in Village Two is implemented, the proposed CPF site in Village Three would be reduced by the amount of the Village Two core CPF site (3 to 5 acres).

#### OPEN SPACE AND CIRCULATION

The remaining 181.7 acres of the Village Three portion of the SPA Plan area would be devoted to open space and circulation. These issues are further discussion below as they pertain to the entire SPA Plan area.

### *Village Four*

A proposed 44.2-acre community park would be located in the northern portion of Village Four (see Figure 3-3 and 3-5). Amenities in the park may include restroom/maintenance buildings, lighted ball fields, lighted soccer fields/multi-purpose turf play areas, sports courts (basketball and/or tennis with lighting), community recreation center, gymnasium, swim complex, play area with play equipment, picnic facilities (shelters with BBQs and picnic tables), walkways (with security lighting), pathways lighted parking lots, and other park support fixtures and furnishing. All amenities located in the park will be consistent with the Chula Vista Parks and Recreation Master Plan. The City is also anticipating including a lighted skate (skateboard and/or roller skate) facility in the community park. Normal operating hours for the park in Village Four would be daily from 6:30 A.M. to 10:30 P.M. On-site parking lots would be provided to accommodate park users and visitors. Vehicular access would occur from La Media.

### 3.5.1.2 Regional Preserve

The largest component of open space in Otay Ranch is the Otay Ranch Preserve. Approximately 74.7 acres of the Preserve is currently located within the SPA Plan area. The preserve conveyance standard described in the Otay Ranch RMP requires 1.188 acres of preserve land per developable acre (excluding arterial streets, public parks, schools, or other land designated as public use areas). This results in a conveyance requirement of 769.9 acres for Village Two and 282.7 acres for Village Three for a total of 1,052.74,052.6 acres to the Otay Ranch preserve.

### 3.5.1.3 Circulation System

The circulation system for the proposed project is illustrated in Figure 3-6. The planned system includes both roadways and regional transit. Circulation element roadways in and adjacent to the SPA Plan area and their classification are listed in Table 3-4.

**TABLE 3-4  
CIRCULATION ELEMENT ROADWAYS**

Roadway	Classification
Olympic Parkway	Six-lane Prime Arterial
La Media Road	Six-lane Prime Arterial
Heritage Road	Six-lane Prime Arterial
Main Street/Rock Mountain Road	Six-lane Prime Arterial

In addition to the circulation element roadways, there are internal streets that provide circulation within the village. The internal circulation streets include Village Entry, Village Pathway, Retail, Promenade, Residential, and Industrial Streets. Traffic roundabouts are proposed at the terminus of both the east and west village entry streets.

The SPA Plan proposes the construction of two pedestrian bridges located along the northeast portion of Village Two. One bridge would cross Olympic Parkway on the west side of La Media Road and would link together Village Two and Village One to the north. The second pedestrian bridge would cross La Media Road just north of Santa Venetia Street and would link Village Two and Village Six. The locations of these bridges can be seen on Figure 3-6.

The Otay Ranch GDP calls for transit-oriented development. A north-south BRT line is planned along La Media with a station located in the Village Core. Local blue bus lines and green shuttle bus lines are planned to provide public transit service to the project site. Figure 3-7 shows the conceptual public transportation plan for the SPA Plan area.

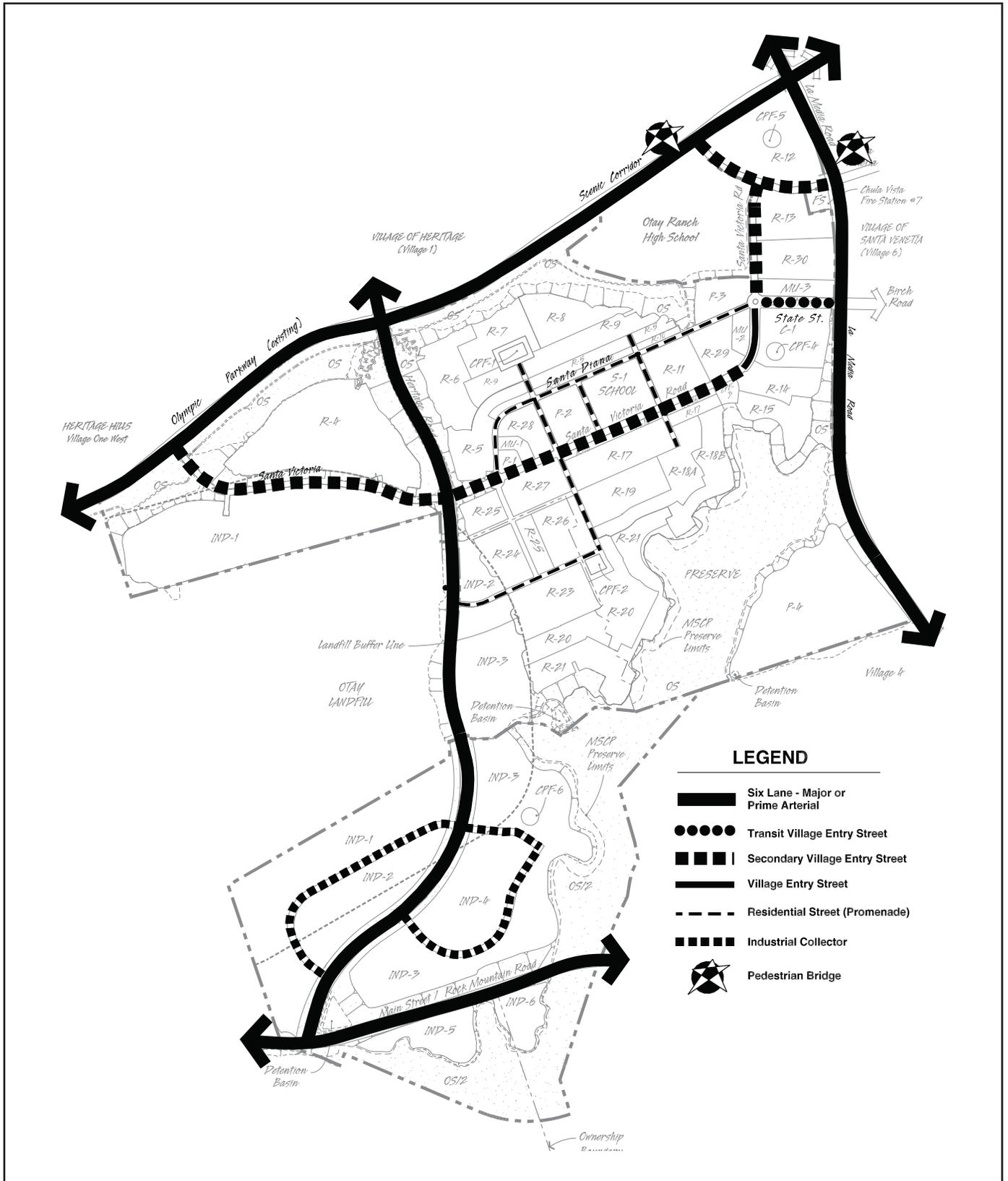
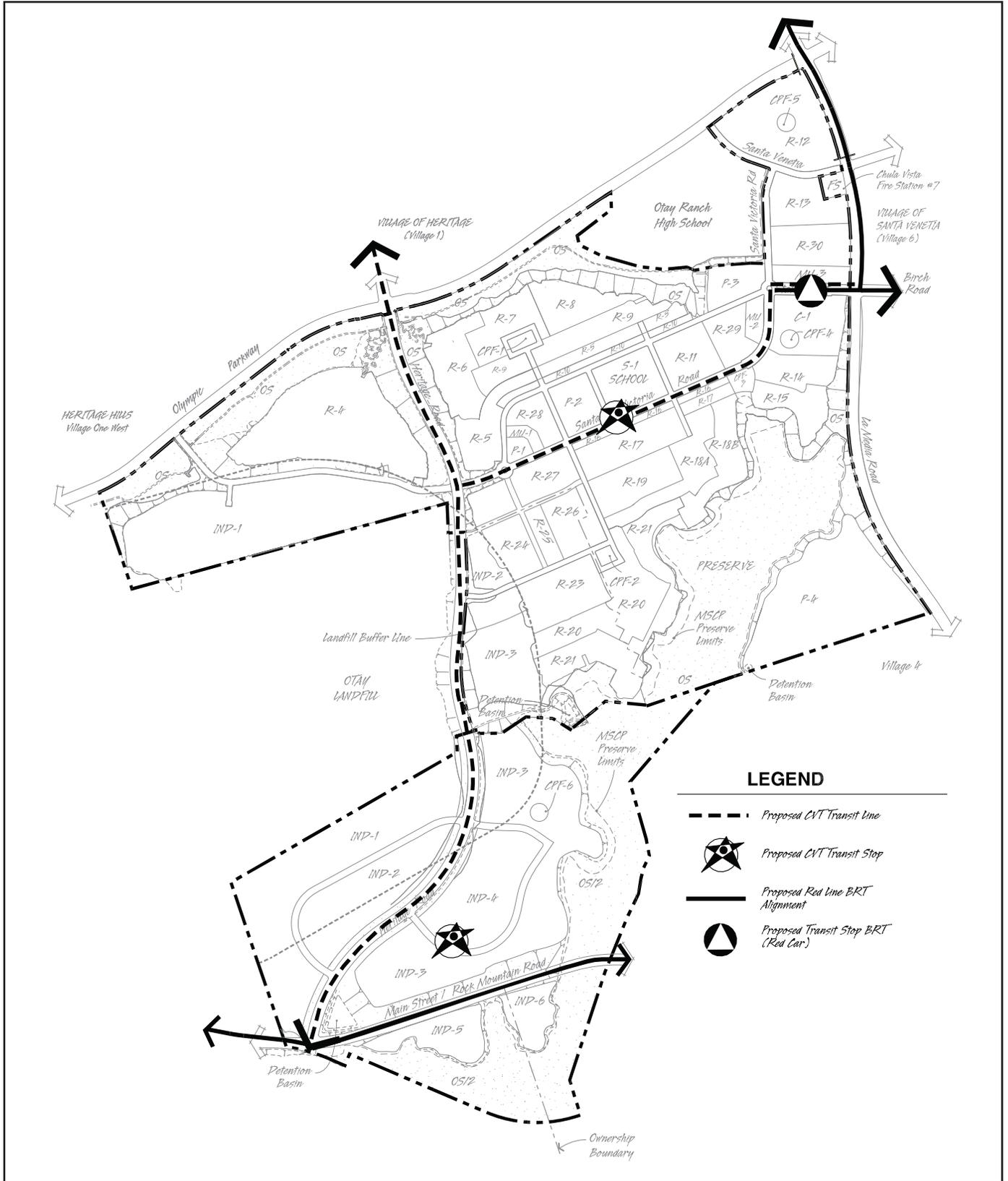


FIGURE 3-6  
Circulation



**LEGEND**

-  Proposed CNT Transit Line
-  Proposed CNT Transit Stop
-  Proposed Red Line BRT Alignment
-  Proposed Transit Stop BRT (Red Car)

0 Feet 1000



**FIGURE 3-7**  
Conceptual Public Transportation Plan

All new road construction would provide facilities for vehicular and non-vehicular modes of transportation, including roads and, variably, pedestrian trails and bicycle routes. Primary access from the west would be provided from Heritage Road and to the east from La Media Road at Birch Road. Additional village access points to the western portion of the SPA Plan area would be available from Olympic Parkway.

#### 3.5.1.4 Open Space and Trails

The Otay Ranch GDP requires the provision of open space in addition to local parks at a ratio of 15 acres for every 1,000 residents. Therefore, based on an estimated population of 8,458 residents, approximately 126.87 acres of open space are required. The proposed site utilization plan shows 164.5 acres within Village Two and 39.0 acres within Village Three for a total of 203.5 acres to be dedicated as open space. Proposed open space within the SPA Plan area would be in the form of manufactured slopes and other interior open spaces. The PC District Regulations, Village Design Plan, and Business Park Design Plan include landscaping and grading guidelines to provide buffer areas, to protect slopes and scenic corridors and to promote slope stability.

The trails within the SPA Plan area consist of regional and village trails, pathways adjacent to streets, and village streets designed to promote pedestrian, bicycle, and electric vehicle travel. Figure 3-8 shows the trails within the SPA Plan area. The Chula Vista Regional Trails are located on the north side of Olympic Parkway, west side of La Media, and the east side of Heritage Road. A Village Greenway would be located within the Village Four Community Park and would connect to the regional trail system adjacent to La Media. The Village Greenway would ultimately connect into the Chula Vista Greenbelt. A Village Pathway is proposed to extend from the northeast area of Village Two through the commercial area and west to Heritage Road.

#### 3.5.1.5 Phasing

The proposed SPA Plan would be developed in 10 non-sequential phases (Figure 3-9). Colors are used in this phasing plan to emphasize that specific developments are not designed to be sequential. Rather, phasing is based on the demand from existing development and projects with various entitlements through the year 2010. Development phasing is tied to the ability to service the project. Development phasing is established to limit or reduce certain actions until specific steps are taken to guarantee public facilities will be available.

As an applicant receives each succeeding development approval, the applicant must perform required steps leading to the timely provision of the required facility. Failure to perform the required step would curtail additional development approvals.

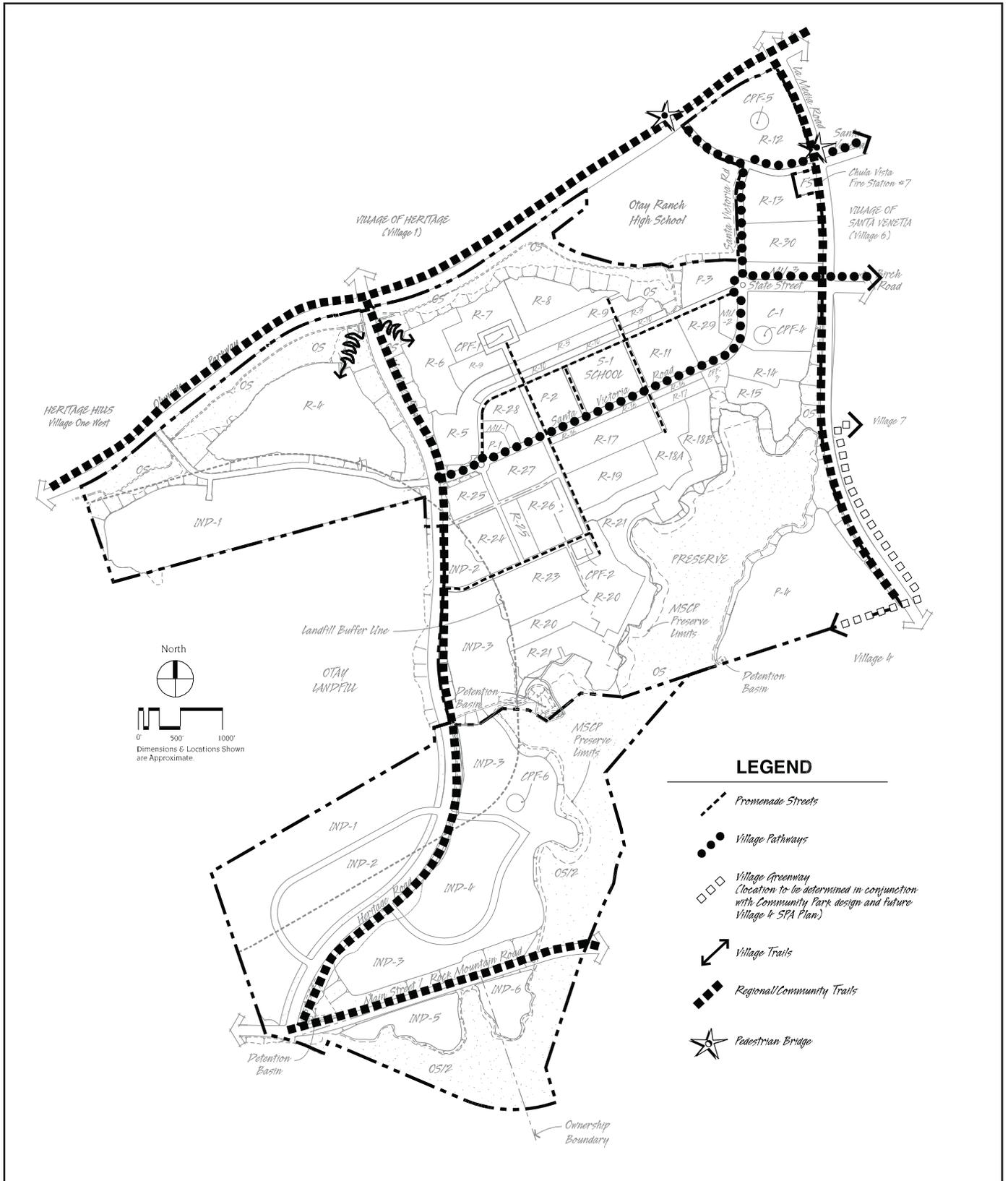


FIGURE 3-8  
Trails Plan

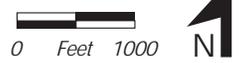
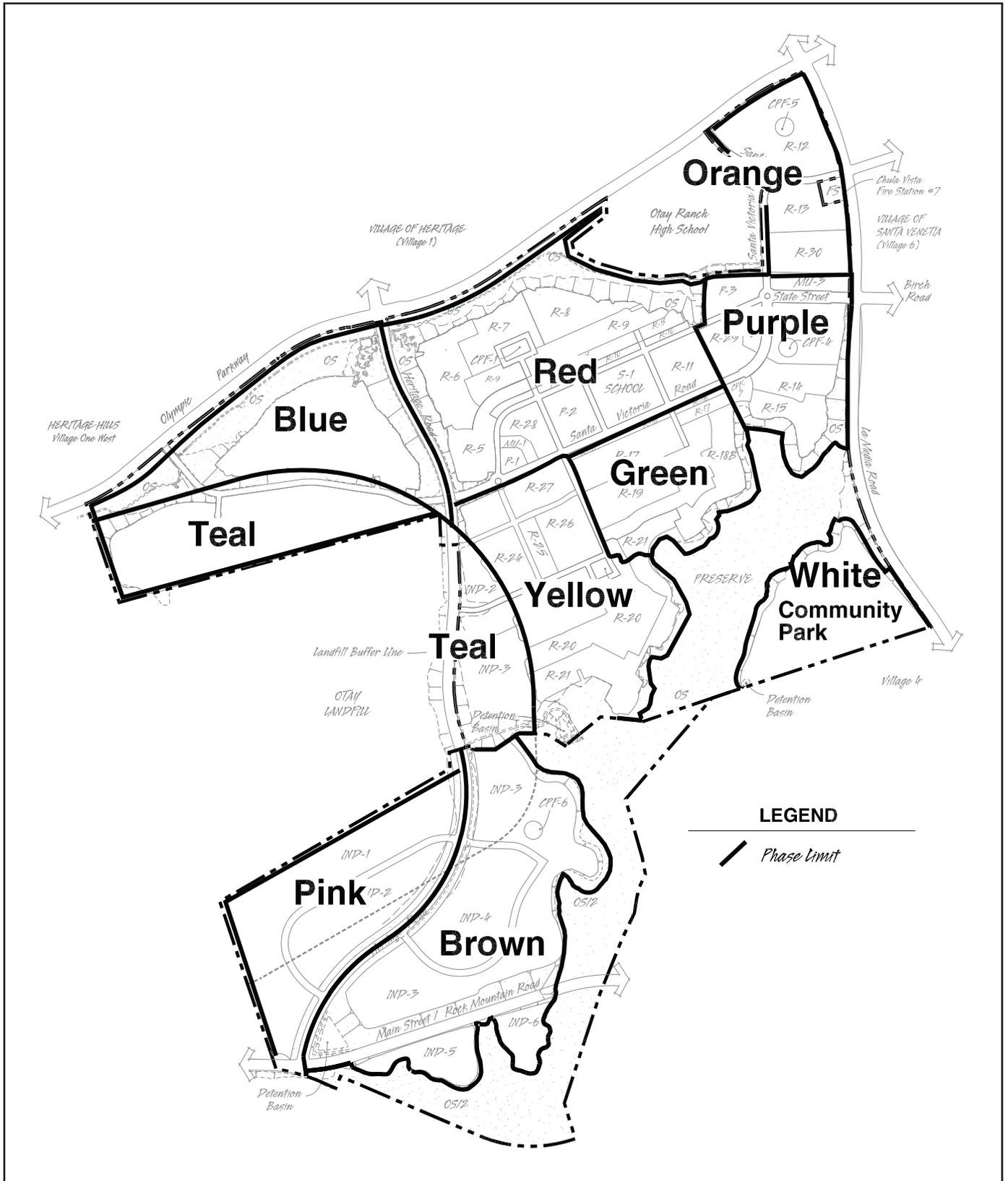


FIGURE 3-9  
Phasing

The Phasing Plan is consistent with the SPA Plan PFFP. The PFFP implements the City's Growth Management Program and Ordinance. The intent of the document is to ensure that the phased development of the project is consistent with the overall goals and policies of the City's General Plan, Growth Management Program, and the Otay Ranch GDP. The proposed phasing and actual construction timing of the SPA Plan area may be modified subject to compliance with provisions of the PFFP.

#### 3.5.1.6 Grading

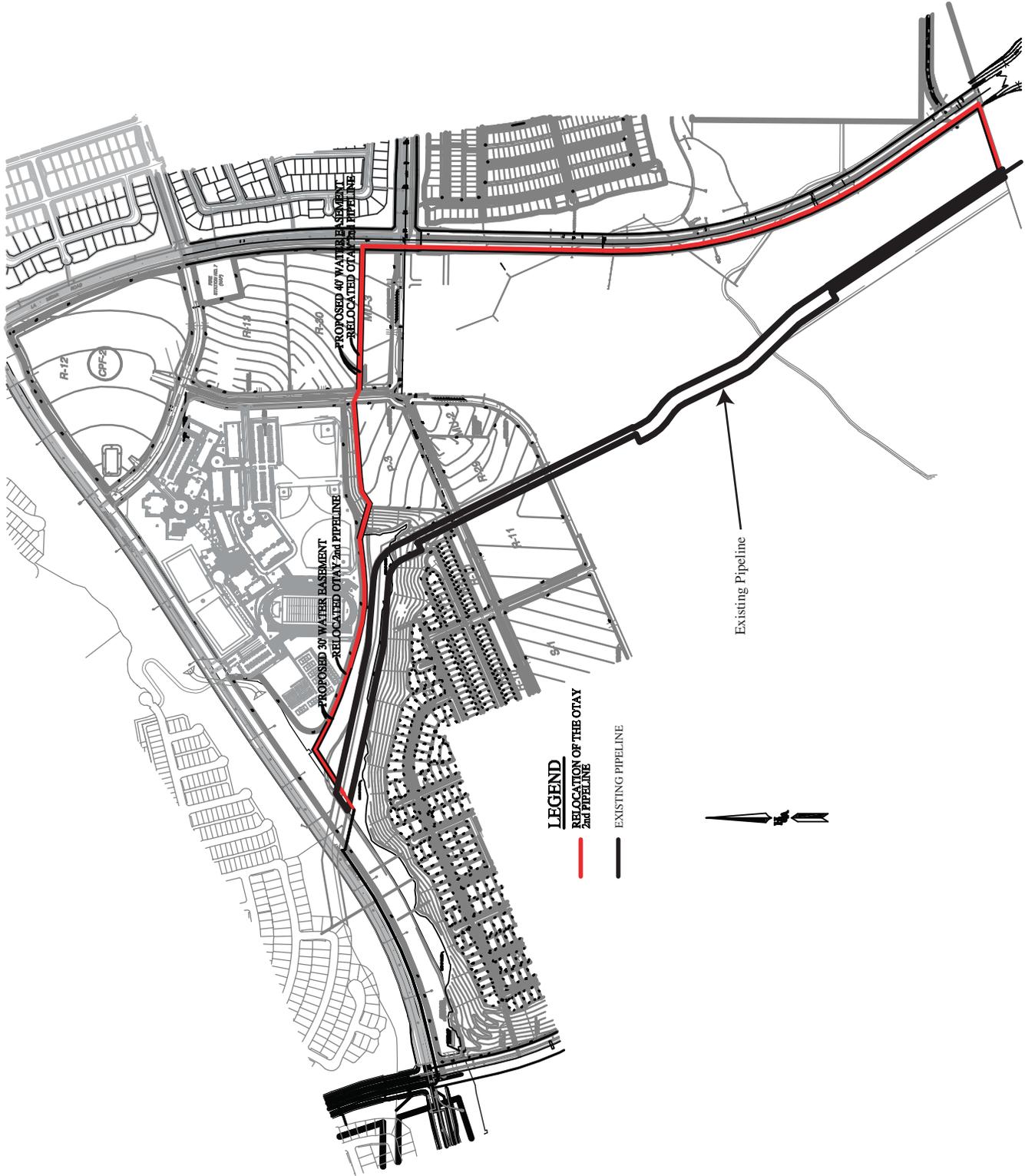
Approximately 18,428,000 cubic yards of cut and 18,428,000 cubic yards of fill would be required to implement the proposed SPA Plan. All graded material would be reused on-site to achieve balanced earthwork. The Village Two Core will be generally flat, and grading will be designed to be sensitive to the requirements for the regional transit as well as to promote pedestrian use.

#### 3.5.1.7 Infrastructure Improvements

In the Otay Water District's (OWD) Water Supply Assessment and Verification Report dated December 2003, and approved by the OWD Board of Directors on January 14, 2004, that confirms the availability of a long-term water supply to meet the demands of the proposed project in conjunction with other planned and future uses, in both the short-term and long-term. The projected potable water demand for the project area is 1.57 million gallons per day (mgd) or 1,732 acre-feet per year. This demand projection is consistent with the projected water demand included in the OWD Water Resources Master Plan and Water Supply Assessment and Verification Report. The project area would be supplied from two pressure zones. The proposed potable water mains for the project area would be connected to an existing 20-inch line in Olympic Parkway and would extend south in Heritage Road. The other portion of the project would be served by an existing 16-inch transmission line in La Media Road.

There is an existing City of San Diego waterline located along the eastern portion of Villages Two and Four within the SPA Plan boundary (Figure 3-10). The proposed SPA plan assumes the existing water line would remain in its current location and capacity. In the event that the segment of the pipeline through the SPA Plan area would need to be relocated (subject to City of San Diego approval), an alternative location for the pipeline segment has been identified.

As shown in Figure 3-10, an alternative alignment through the SPA Plan area would connect to the existing pipeline in Olympic Parkway, just west of the Otay Ranch High School. The pipeline would be relocated in an east-west direction through the Village Two core area and within the right-of-way of La Media Road, connecting to the existing pipeline south of the Community Park in Village Four. As previously noted, the proposed



**FIGURE 3-10**  
Relocation of the City of San Diego  
Waterline Option

SPA Plan does not assume relocation of the City of San Diego pipeline. Additional environmental review would be required to relocate the pipeline.

Consistent with the Otay Ranch GDP, a dual system for potable and recycled water will be constructed. Recycled water will be used if available to irrigate street landscaping areas, manufactured slopes along open space slope areas, and parks. Recycled water for irrigation in parkways will be allowed only if maintained by a Community Facility District (CFD) or a homeowners association (HOA).

Recycled water supply is currently available to Otay Ranch from the 1.3 mgd capacity Ralph W. Chapman Water Recycling Facility located near the intersection of Singer Lane and Highway 94. OWD will supply potable water to the recycled system when high demand exceeds the available capacity. Supplemental recycled water supply will be available from the City of San Diego's planned 15-mgd capacity South Bay Water Reclamation Plant, to be located in the Tijuana River valley near the Mexican border.

Project sewage flows would be collected by an on-site trunk sewer line and directed ultimately to the Poggi Canyon or Salt Creek Interceptors. Sewage flows from the northern portion of the SPA Plan area would connect with flows traveling through Olympic Parkway to the Poggi Canyon Interceptor. Sewage flows from the southern portion of the SPA Plan area would be conveyed in a gravity sewer line in Heritage Road southerly to the Otay River valley where the Salt Creek Interceptor is located.

The community park within a portion of Village Four that is to be developed concurrent with Village Two will ultimately be served by constructing a gravity sewer line south to a future sewer line in Rock Mountain Road. However, since there is a possibility that the early phases of the community park would be developed prior to the availability of the gravity sewer line, an interim sewage lift station would be required. The lift station would be located within the park site and it would pump flows from the park site northerly in La Media Road to an existing gravity sewer line at the intersection of Birch Road. If the temporary lift station is required, it would be designed to meet the requirements of the City of Chula Vista Subdivision Manual. The lift station would require a minimum pad area of approximately 50 feet by 40 feet and would include the following major components: package pump station, standby generator, odor control system, telemetry, dual force mains and overflow storage.

### **3.5.2 Composite Tentative Map**

Concurrently with the SPA Plan, the project applicant is proposing a composite TM for Village Two and the park in Village Four within the Otay Ranch Company and the Otay Ranch Investments, LLC ownerships. Please refer to Section 3.5.1.1 relative to the land uses proposed for the TM area within the SPA Plan area. The composite TM is shown in Figure 3-11. The composite TM would establish infrastructure requirements that

would enable the preparation of an application for Design Review. Potential impacts resulting from implementation of the proposed conceptual TM are also evaluated as part of this EIR.

The grading of the TM area would result in cuts of 30 to 40 feet and fills up to 50 feet high. However, grading of manufactured slopes for the project would maintain at 2:1 to 5:1 maximum variable slope throughout the site, with variations used to emphasize the aesthetics of the natural rolling topography that predominates the site. The overall earthwork quantities for the TM include approximately 12,625,000 cubic yards of cut and fill for Village Two and approximately 1,142,000 cubic yards of cut and 497,000 cubic yards of fill for the Village Four park site.

### **3.6 Discretionary Actions**

A discretionary action is an action taken by an agency that calls for the exercise of judgment in deciding whether to approve or how to carry out a project. The following discretionary actions are associated with the proposed project and would be considered by the Chula Vista Planning Commission and City Council:

- General Plan Amendments;
- Otay Ranch GDP Amendments;
- Adoption of the SPA Plan and associated documents of the SPA Plan;
- Phase One and Two RMP Amendments;
- City of Chula Vista MSCP Boundary Adjustment; and
- Tentative Subdivision Map.

In addition, this EIR will be used by other responsible agencies to implement the proposed project. Actions required by other agencies are discussed in Section 3.6.2.

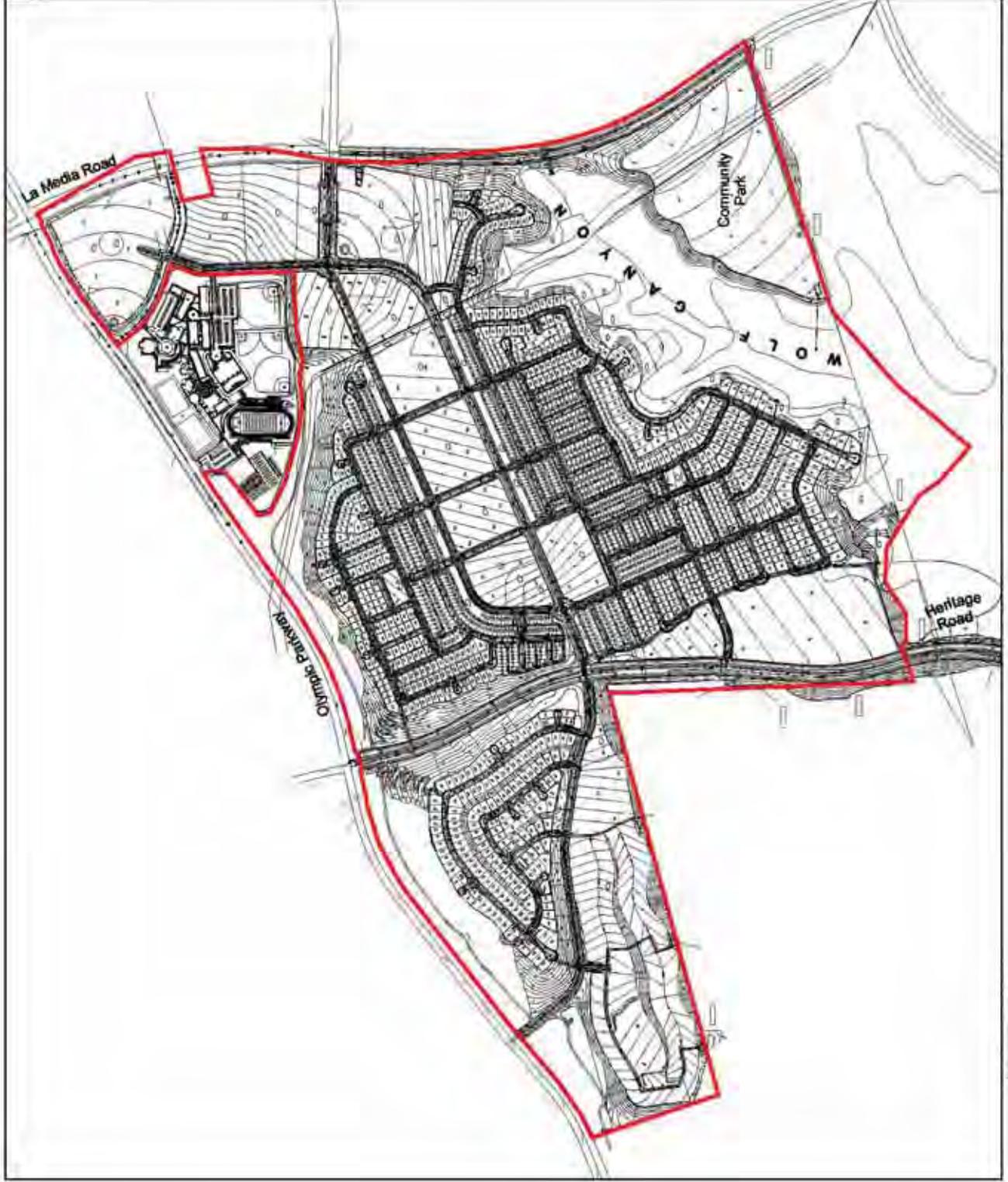
#### **3.6.1 City of Chula Vista Discretionary Actions**

##### **3.6.1.1 General Plan Amendments**

The General Plan Amendments include the following:

- 1) Adjust the permissible number of units in Village Two from a maximum of 2,510 units to 2,786 units;

0 50 100 Feet



### SPA Plan Area

Village Two and a Portion of Village Four Boundary  
Village Three Boundary  
(not a part of Composite Tentative Map)



FIGURE 3-11  
Composite Tentative Map

- 2) Process a boundary adjustment to Chula Vista MSCP Preserve to accommodate proposed grading limits for Village Two, as well as to include additional lands in the MSCP Preserve within the northern portion of Wolf Canyon (Figure 3-12). The proposed project places fill in an area within the boundaries of the MSCP Subarea Preserve; therefore, approval of this project requires the modification of the boundary of the preserve area;
  
- 3) Bring consistency with the County of San Diego MSCP Subarea Plan and the City's Subarea Plan relative to the "Letter Agreement" between the U.S. Fish and Wildlife Service, California Department of Fish and Game, County of San Diego, City of Chula Vista, and the owner of the Otay Ranch (then The Baldwin Company) dated November 10, 1995 (Appendix B-4). The intent of the Letter Agreement was to provide for revisions to the approved Otay Ranch land plan so as to enhance the long-term viability and sustainability of the Otay Ranch and MSCP Preserve system. Specifically, the parties agreed to eliminate development that had already been approved in the GDP for (1) approximately 140 acres and 372 dwelling units in the Resort Village 13; and (2) approximately 90 acres and 33 dwelling units in Village 15 southeast of the Lower Otay Reservoir (Figure 3-13). These areas, which were previously approved for development, were addressed to the Otay Ranch and MSCP Preserve system. These areas were deemed to provide significant contributions to the long-term sustainability of the preserve as they contained high-quality habitat and/or contributed significantly to the connectivity and integrated size of the preserve system.

In exchange for the elimination of these approved development areas, the parties agreed to eliminate the Otay Ranch coastal sage scrub restoration requirement in the GDP/RMP as well as allow development in certain areas that had originally been approved in the GDP as part of the preserve, but which contained low-quality, fragmented and isolated habitats. Specifically, portions of Villages One, One West, and Two West (west of Paseo Ranchero) were removed from the Otay Ranch preserve system and identified for development. These changes resulted in the elimination of the potential avian corridor between Villages Two and Three.

It should be noted that the elimination of preserve in Villages One, One West, and Two West and addition of preserve in Villages 13 and 14 were agreed to and formalized in a GDP/SRP amendment adopted by the City of Chula Vista on November 10, 1998. The remaining actions required for consistency with the County of San Diego MSCP Subarea Plan and the City's Subarea Plan are: (1) deletion of the avian corridor between Village Two West and Wolf Canyon; (2) deletion of the preserve areas in Village Two West; and (3) elimination of the coastal sage scrub restoration requirement.

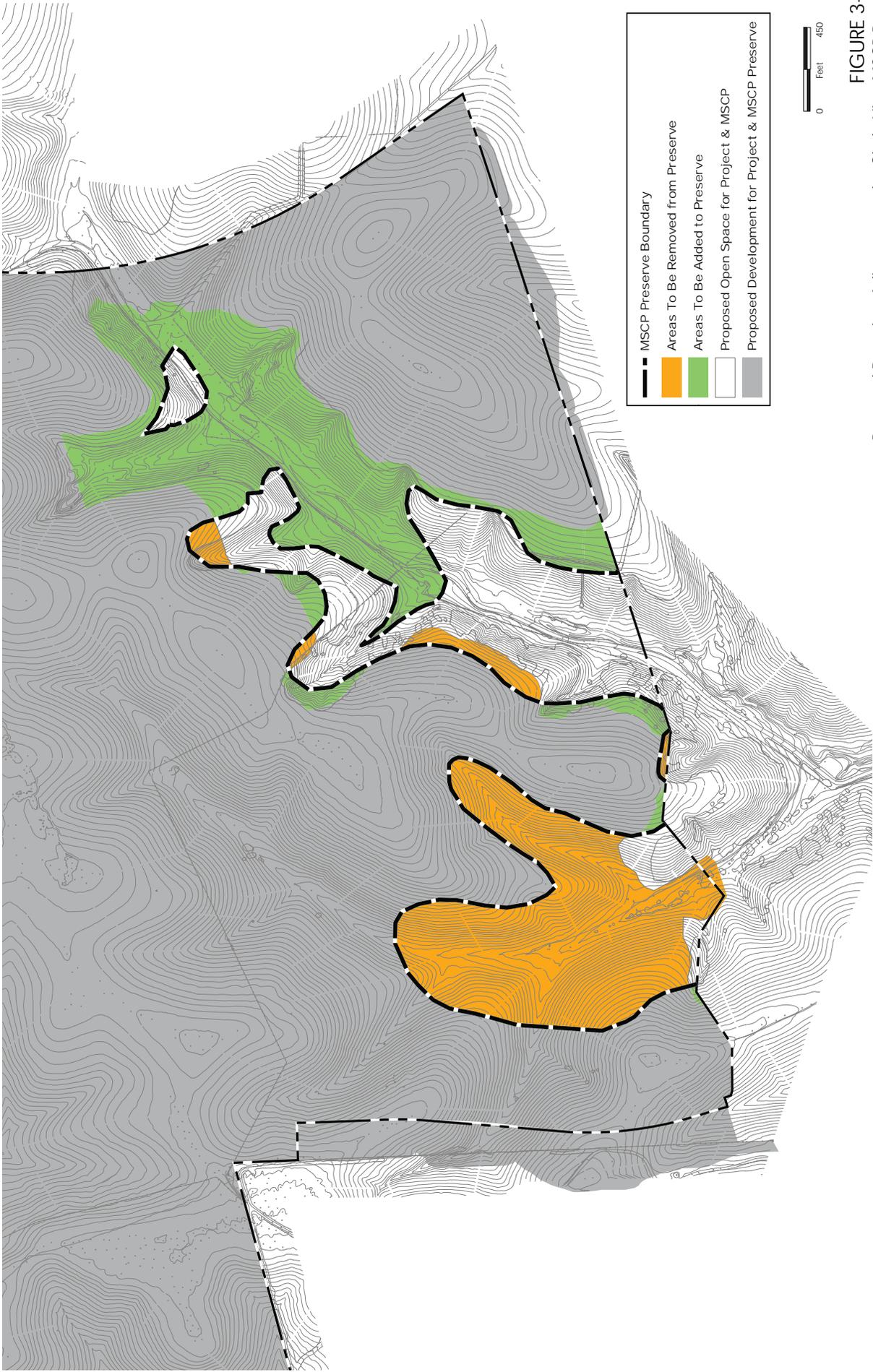
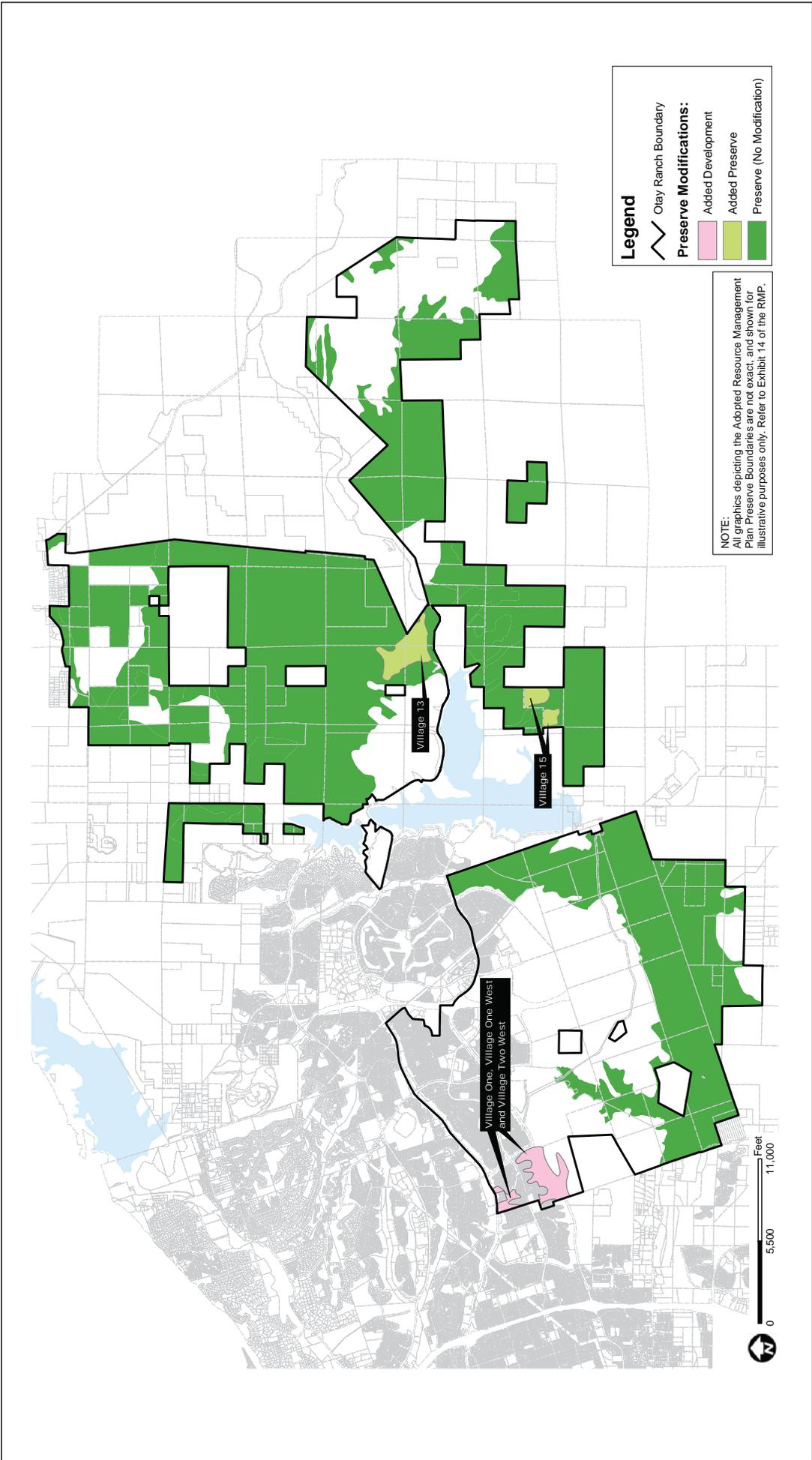


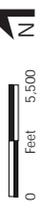
FIGURE 3-12  
Proposed Boundary Adjustment to the Chula Vista MSCP Preserve



**NOTE:**  
 All graphics depicting the Adopted Resource Management Plan Preserve Boundaries are not exact, and shown for illustrative purposes only. Refer to Exhibit 14 of the RMP.

**Legend**

- Otay Ranch Boundary
- Preserve Modifications:**
  - Added Development
  - Added Preserve
  - Preserve (No Modification)



**FIGURE 3-13**  
 1995 Letter Agreement Preserve Modifications

### 3.6.1.2 Otay Ranch General Development Plan Amendment

The Otay Ranch GDP was approved jointly by the City and the County to guide the future development of Otay Ranch. The GDP establishes goals, objectives, policies, and implementation measures that apply to all portions of Otay Ranch.

The proposed GDP Amendments include the following:

- 1) Refine the Otay Ranch GDP development/preserve boundaries within Wolf Canyon to accommodate proposed grading limits for Village Two, and include additional lands in the MSCP preserve within the northern portion of Wolf Canyon.
- 2) Adjust the permissible number of units in Village Two from a maximum of 2,510 units to 2,786 units in order to reflect the above-referenced amendments and SPA Plan;
- 3) Similar to the aforementioned General Plan Amendment pertaining to the 1995 Letter Agreement, the GDP would be an amendment to (1) delete the avian corridor between Village Two West and Wolf Canyon; (2) delete the preserve areas in Village Two West; and (3) eliminate the coastal sage scrub restoration requirement.
- 4) GDP Amendment to eliminate the Preserve Conveyance Schedule and to allow Villages Two, Three, and all subsequent Villages to convey any Otay Ranch Preserve lands in satisfaction of each Village's conveyance requirement.

### 3.6.1.3 SPA Plan and Associated Documents

The SPA Plan is an implementation document required by the PC Zone in Title 19 of the Chula Vista Municipal Code. The SPA Plan refines and implements the goals, objectives, and policies of the adopted Otay Ranch GDP. The SPA Plan defines, in more detail, the City's General Plan and the Otay Ranch GDP, as well as the development parameters for ownerships within the SPA Plan boundary, and provides the entitlement bridge linking the Chula Vista General Plan and Otay Ranch GDP policies and land use designations with subsequent project-level plans and approvals. The SPA Plan must be consistent with both the Chula Vista General Plan and the Otay Ranch GDP.

The associated documents of the SPA Plan include: the PFFP; Village Design Plan; Air Quality Improvement Plan; PC District Regulations; Business Park Design Plan; Affordable Housing Plan; Fire Protection Plan; Agricultural Plan; Edge Plan; Water Conservation Plan; and the Non-Renewable Energy Conservation Plan for Villages Two and Three, and a portion of Village Four.

#### 3.6.1.4 Phase 1 and 2 Resource Management Plan Amendments

The Otay Ranch RMP was adopted in the 1993 Otay Ranch GDP to establish a permanent open space preserve within Otay Ranch (i.e., Otay Ranch Preserve). The purpose of the Otay Ranch Preserve is the protection and enhancement of biological, paleontological, cultural, and scenic resources.

The proposed amendments to the Phase One and Two Otay Ranch RMP include the following:

- 1) Refine the Otay Ranch RMP preserve boundary to accommodate proposed grading limits for Village Two, and to include additional lands in the RMP preserve within the northern portion of Wolf Canyon (Figure 3-14). The proposed project places fill in an area within the boundaries of the MSCP Subarea preserve. Approval of this project requires the modification of the boundary of the Preserve area.
- 2) Amend the RMP to reflect the following elements of the 1995 Letter Agreement (Appendix B-4; Figure 3-13):
  - a) Delete the “Potential Avian Corridor” between Village Two West and Wolf Canyon;
  - b) Eliminate three development areas totaling approximately 139 acres at the east end of Village 13, and thereby convert the land to open space preserve;
  - c) Eliminate the development designation from approximately 98 acres at the southwest edge of Village 15, and thereby convert the land to open space preserve;
  - d) Expand the development area by approximately 62 acres within Village One, Village One West;
  - e) Delete Preserve areas in Village Two West; and
  - f) Eliminate the Otay Ranch RMP coastal sage scrub restoration requirement.

As previously noted, the Otay Ranch GDP has been amended for items b, c, and d above; however, the Otay Ranch RMP was not amended at that time. Therefore, all of the foregoing actions are required to bring the RMP into compliance with the 1995 Letter Agreement and the Otay Ranch GDP.

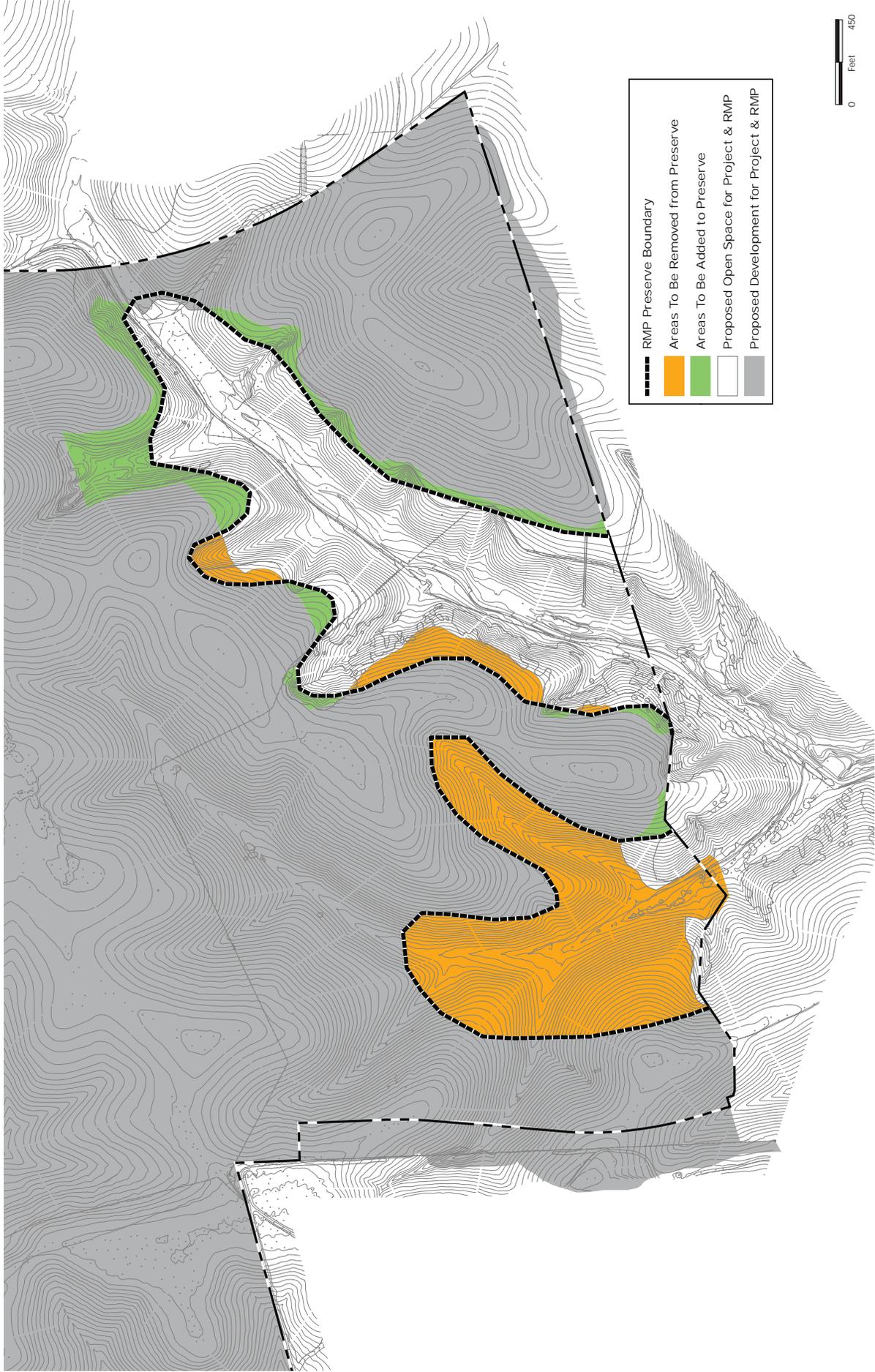


FIGURE 3-14  
Proposed Boundary Adjustment to the Chula Vista RMP Preserve

- 3) Amend the Phases 1 and 2 of the RMP to permit Villages Two, Three, and all subsequent Villages to convey any Otay Ranch Preserve lands in satisfaction of each Village's conveyance requirement. This amendment reflects: (1) changes in the circumstances related to the Otay Ranch since the adoption of the current conveyance schedule (hereinafter referred to as the "SPA One Conveyance Schedule") and (2) the fact that over 75 percent of the Preserve land included in the SPA One Conveyance Schedule is now, or is approved to be, offered for dedication to the Preserve Owner Manager ("POM").

#### 3.6.1.5 City of Chula Vista Multiple Species Conservation Program

Concurrent with the processing of the SPA Plan, the proposed project includes a Chula Vista MSCP boundary adjustment to accommodate proposed grading limits for Village Two, and to include additional lands in the MSCP Preserve within the northern portion of Wolf Canyon.

#### 3.6.1.6 Tentative Subdivision Map

Concurrently with the SPA Plan, the proposed project applicant is processing a composite TM for Village Two and the Park within a portion of Village Four within the Otay Ranch Company and the Otay Ranch Investments, LLC ownerships. The composite TM would establish infrastructure requirements that would enable preparation of an application for Design Review.

### **3.6.2 Other Approvals Required for the Project**

Several agencies will use this EIR in their decision making process. In conformance with Section 15124(d) of the CEQA Guidelines, Table 3-5 identifies the permits and actions that would be required from other agencies to implement the proposed project.

**TABLE 3-5  
ACTIONS REQUIRED FROM OTHER AGENCIES**

Agency	Action	Effect
County of San Diego	Amend the Otay Subregional Plan, Volume 2 and County RMP Preserve Conveyance Plan.	Permit Villages Two, Three, and all subsequent Villages to convey any Otay Ranch Preserve lands in satisfaction of each Village's conveyance requirement.
County Department of Environmental Health	Voluntary Assistance Program.	Ensure that contaminated soils are disposed of in accordance with local requirements.
U.S. Army Corps of Engineers	Issuance of Clean Water Act Section 404 Permit	Regulate discharge of fill into waters of the U.S.
Regional Water Quality Control Board	Issuance of Clean Water Act Section 401 Certification and National Pollutant Discharge Elimination System (NPDES) General Construction Permit.	Ensure compliance with federal, state, and local water quality regulations (Clean Water Act and NPDES permit regulations).
California Department of Fish and Game	Issuance of Streambed Alteration Agreement	Ensure compliance with Section 1602 of the California Fish and Game Code.

## **4.0 ENVIRONMENTAL SETTING**

The environmental setting for the SPA Plan area is provided in this section. A more detailed description of the existing conditions is provided at the beginning of each impact issue area addressed in Section 5.0, Environmental Impact Analysis. Information related to the environmental setting contained within the Otay Ranch GDP Program EIR (EIR 90-01) and Sphere of Influence Update EIR (EIR 94-03) is also incorporated by reference in this EIR.

### **4.1 Location**

Otay Ranch lies within the approximately 37,585-acre Eastern Territories Planning Area of the city of Chula Vista. Interstate 805 bounds the Eastern Territories Planning Area on the west, San Miguel Mountain and State Route 54 on the north, the Otay Reservoirs and the Jamul foothills on the east, and the Otay River valley on the south.

The SPA Plan area is located at the western edge of the Otay Valley Parcel of the Otay Ranch GDP area. The SPA Plan area is bounded by Olympic Parkway to the north and La Media Road to the east. Village Two occupies the northern portion of the area located to the east of Heritage Road. A portion of Village Two, "Village Two West," is located to the west of Heritage Road. Village Three is located in the southern portion of the SPA Plan area on the east and west sides of Heritage Road. Village Four is located to the southeast of Village Two proper.

The project area is surrounded by other Otay Ranch development areas including Villages One and Five located to the north of Olympic Parkway and Villages Six and Seven located to the east. The Otay Landfill is located south of Village Two West and west of Heritage Road.

### **4.2 Climate**

The climate of the region is characterized by warm, dry summers and mild, wet winters. Clear skies predominate for much of the year due to a semi-permanent high-pressure cell located over the Pacific Ocean. This high-pressure cell also drives the dominant onshore circulation and helps to create subsidence and radiation temperature inversions. Subsidence inversions occur during the warmer months when descending air associated with the high-pressure cell comes in contact with cool marine air. Radiation inversions typically occur on winter nights when air near the ground cools by radiation and the air aloft remains warm.

### **4.3 Landform and Vegetation**

The SPA Plan area is located within the coastal plain of the Peninsular Range, which is underlain by sedimentary formations. This region consists of broad, gentle mesas traversed by smaller canyons of the Otay River valley. A series of rolling east/west-oriented ridgelines, with intervening channels draining to the west, exist in the project vicinity. Elevations on-site range from approximately 140 feet above mean sea level (MSL) at the southwestern boundary to 530 feet above MSL at the northeastern boundary. The SPA Plan area consists of rolling hills in its central portion and relatively steep tributary canyons in its northern and southern portions. There are numerous drainages that occur in the northeastern portion of the site.

The project area is traversed by a system of dirt roads and cattle trails and consists of active and fallow agricultural lands that have been historically cultivated and grazed. The SPA Plan area supports 16 vegetation and land cover types including native vegetation and grasses.

### **4.4 Access**

Access to the project area will be provided via Olympic Parkway, an east-west arterial, which forms the northern boundary of the SPA Plan area, and Heritage Road and La Media Road, north-south arterials, which are aligned in the western and eastern portion of the project area, respectively. Access to the southern portion of the SPA Plan area will be provided via Main Street and Heritage Road. Regional access to the SPA Plan area is provided by I-805, which is located approximately 3.5 miles west of the project site, and once constructed, the proposed alignment of SR-125 will provide additional access east of the project area.

### **4.5 Surrounding Land Uses**

Historically, the Otay Valley parcel of Otay Ranch has been used for ranching, grazing, dry farming, and truck farming activities. The project area is surrounded by other Otay Ranch development areas including Villages One and Five located to the north of Olympic Parkway, and planned development of Villages Six and Seven located to the east. These villages are defined as urban villages. The Hanson Aggregates mining facility is located to the south of the SPA Plan area. The Otay Landfill is located south of Village Two West and west of Heritage Road.

## **5.0 ENVIRONMENTAL IMPACT ANALYSIS**

### **5.1 Land Use**

Adopted in 1993, the Otay Ranch GDP Program EIR analyzed the existing conditions, potential impacts, and mitigation measures related to land use, planning, and zoning for the entire Otay Ranch area. The Otay Ranch GDP Program EIR identified significant unavoidable impacts to land use due to the change of the character of the site from undeveloped to developed land. The analysis and discussion of land use issues contained in the Otay Ranch GDP Program EIR is incorporated by reference. Pursuant to CEQA Guidelines section 15150, the Otay Ranch GDP Program EIR is available for public review at the City of Chula Vista Planning Department, 276 Fourth Avenue, Chula Vista, California. The following discussion focuses specifically on potential impacts to land use, planning, and zoning that could result from implementation of the proposed SPA Plan and the Composite TM.

Land use effects fall into two main areas: (1) conformance to, or conflict with, adopted plans, policies, and regulations; and (2) effects on established communities. This section will address impacts of the SPA Plan and Composite TM on these land use considerations. Other issues associated with land use decisions include aesthetics, noise, and resource conservation. These issues are addressed in their respective sections of this EIR.

#### **5.1.1 Existing Conditions**

##### **On-Site and Surrounding Land Use Characteristics**

Historically, the Otay Valley Parcel of Otay Ranch, which includes the proposed SPA Plan area, has been used for ranching, grazing, dry farming, and truck farming activities. The majority of the SPA Plan area is still used for dry farming. Surrounding uses include Otay Ranch Villages One and Five and the Otay Ranch High School to the north, Otay Ranch Village Six to the east, Otay Ranch Village Seven to the east and southeast which is currently being developed, the Hanson aggregates mining operations to the south, and the Otay Landfill to the west. Otay Ranch Village One includes 1,456 single-family units and 1,609 multi-family units, and Village Five includes 1,262 single-family and 1,218 multi-family units. Both Villages One and Five include community purpose facilities, elementary schools, public parks, commercial uses, open space, and circulation rights-of-way. Village Six consists of 796 single-family units, 1,397 multi-family units, community purpose facilities, an elementary school, a private high school, a public neighborhood park, commercial uses, open space, and circulation rights-of-way. Village Seven will ultimately include 1,053 single-family units, 448 multi-family units, middle, elementary, and high schools, public park, mixed-use, and community purpose facilities.

Villages One and Five are separated from the proposed SPA Plan area by a major arterial (Olympic Parkway) and a linear open space system (Poggi Canyon). Villages Six and Seven are separated from the SPA Plan area by a major arterial (La Media Road) (see Figure 3-3).

### Regulatory Documents, Plans, and Policies

This section describes the adopted regulatory documents, plans, and policies relevant to the proposed project. These include the City's General Plan, the Otay Ranch GDP, Zoning Code, the Otay Ranch Phase 1 and 2 RMP, the MSCP, and the San Diego Association of Governments (SANDAG) Growth Management Plan and Strategy.

#### *City of Chula Vista General Plan*

On December 13, 2005, the City approved an update of the General Plan. The General Plan includes newly proposed goals, policies, and actions, which are designed to implement the vision of the City for growth and long-term development. These policies and actions will be used by the City to guide day-to-day decision-making, and to ensure that there is continuing progress toward the attainment of the goals of the General Plan.

The General Plan includes the following six elements:

Land Use and Transportation Element: The Land Use and Transportation Element addresses the relationship between the General Plan and state planning requirements. It also sets forth the General Plan Land Use Classifications and the Circulation Road Classifications. Focused objectives and policies, which are extensions of the vision and themes established in the General Plan are presented.

The Land Use section of the Land Use and Transportation Element establishes six broad land use categories, encompassing a wide range of residential, business, and public uses, each of which has a series of defined land uses. New categories include urban core residential, mixed use, and open space preserve. The mixed-use category provides greater planning flexibility within a given area. Development of mixed uses in accordance with "smart growth principles" would contribute to a more vibrant and varied community by allowing increased residential development proximate to services, transit corridors, and other amenities, and by providing a greater range of uses to meet neighborhood needs.

The proposed SPA Plan area is located within the Western District of the General Plan Land Use diagram. The General Plan includes four objectives which contain policies that direct development within the Western District. Applicable objectives are listed below:

- Objective LUT 77** Develop a pedestrian-oriented transit village within Village Two providing a range of housing types, community facilities, and open space.
- Objective LUT 78** Provide a higher density, mixed-use Village Core within the Village Two area to serve Village Two, as well as nearby communities and a lower density neighborhood-serving mixed-use area able to serve adjacent village residents.
- Objective LUT 79** Establish appropriate land uses adjacent to the Otay Landfill and Wolf Canyon that reflect the unique land use and landform characteristics of these areas.
- Objective LUT 80** Protect the natural features of the Otay Ranch Preserve located in Wolf Canyon.

The transportation component of the Land Use and Transportation Element establishes six distinct street classifications: (1) Freeways; (2) Expressways; (3) Six-lane Prime Arterials; (4) Six- and Four-lane Major Streets; (5) Class 1 Collector Streets; and (6) Town Center Arterials. The functionality and general design characteristics of each street classification are described in the Element.

Economic Development Element: The Economic Development Element establishes policies to ensure the long-term vitality of the local economy. The purpose of this Element is to help develop and guide employment and business ownership opportunities for Chula Vista residents and encourage appropriate economic and business development in the city. The overall goal of this Element is to maintain and enhance a high quality of life for the city's residents by developing and sustaining a healthy, strong and diverse economic base.

Public Facilities and Services Element: The Public Facilities and Services Element establishes the City's plan to provide and maintain infrastructure and public services for future growth without diminishing services to existing development. Public facilities refer to utilities such as water, sewer, drainage, power, and telecommunications services. Public services refer to schools, libraries, law enforcement, and fire protection. Parks, recreation centers, art and cultural facilities and programs, childcare opportunities, and health and human services are also addressed in this Element.

Housing Element: The Housing Element of the General Plan is an important planning tool for the city of Chula Vista. It identifies the existing and projected housing needs of the city and recommends ways to meet these needs while balancing other community objectives and resources. The California State Legislature has identified the attainment of a decent home and suitable living environment for every Californian as the state's

main housing goal. Recognizing the important part that local planning programs play in pursuit of this goal, the Legislature has mandated that all cities and counties prepare a housing element as part of their comprehensive general plans.

Among its numerous policies and programs, the Housing Element includes the Affordable Housing Program (AHP) that requires new projects involving 50 or more units to set aside a minimum of 10 percent of the project's units as affordable to low- and moderate-income households. The AHP, through its Implementation Guidelines, offers flexibility in meeting affordable housing goals by considering alternatives to actual developer built-in production. These alternatives include land set-asides, off-site projects, and in-lieu contributions.

Environmental Element: The Environmental Element establishes Chula Vista's policy framework for improving sustainability through the responsible stewardship of Chula Vista's natural and cultural resources, promotion of environmental health, and protection of persons and properties from environmental hazards and noise. It contains policies that reconcile conflicting demands created when population growth and development consumes natural resources—both renewable and non-renewable finite resources. The conservation component of the Environmental Element incorporates the Chula Vista Multiple Species Conservation Program Subarea Plan, water resources, agriculture, mineral resources, air quality, energy, solid waste, cultural resources, and paleontological resources. The open space component addresses Chula Vista's open space and trails network, connections to the regional open space and trails network, and ecotourism. The natural hazards component addresses geologic hazards, flooding, and wildland fire hazards. The hazardous materials and waste component addresses contaminated sites, household hazardous waste, hazardous waste facilities, and facilities that use, store, and handle hazardous materials and waste. This Element also addresses noise, including the establishment of exterior land use noise compatibility guidelines.

Growth Management Element: The purpose of the Growth Management Element is to provide the appropriate policy foundation that will guide future development in the city. "Growth Management" refers to the conscious decision to direct the pattern and rate of development through a set of comprehensive goals, objectives, and planning policies. Implicit in the concept of growth management are two complementary beliefs: (1) that population growth and development have the potential to seriously impact the well being of a city and its residents; and (2) that through adoption of comprehensive objectives and policies, those impacts can be mitigated to an extent that balances competing demands for growth and development, revitalization, and environmental protection. Achieving this balance gives the city an enviable quality of life. The General Plan establishes the vision of the type of community Chula Vista will become. The Growth

Management Element serves to assure that this vision is achieved without sacrificing the quality of life enjoyed in the community.

The Growth Management Element contains the tools to guide the timing of development planned for in the Land Use and Transportation Element, discussed above. It establishes the policy context so that capacities and generation rates described in the proposed Public Facilities and Services Element and supporting documents can be applied to development, redevelopment, and revitalization. It recognizes the importance of resources described in the Environmental Element and the contribution resources make to the overall quality of life enjoyed by existing and future residents.

#### VILLAGE TWO

The General Plan designates Village Two as a “transit village” served by the future extension of the Bus Rapid Transit (BRT), which integrates SANDAG’s adopted *Transit First!* Strategy into the Otay Ranch and locates a BRT station within Village Two. The station location in Village Two would serve as a vital stop for travel to other Otay Ranch and regional destinations. As a transit village, Village Two has higher multi-family densities within the Village Core. Transit village policies described in the GDP require higher densities in the Village Core area, including a minimum of 18 dwelling units per acre within a quarter-mile radius of the transit station.

The Chula Vista General Plan and its policies describe the following characteristics of a “village”:

- A planned community with an individual, unique character;
- A planned community designed to encourage mass transit and non-automotive forms of transportation and not physically oriented to prime arterials or major roads;
- A planned community with higher intensity medium and medium-high density residential uses that are part of the mixed commercial and community use Village Core focal point with single-family residential development surrounding the core areas; and
- A planned community designed with optimal placement of open space and recreational areas to serve village residents.

The General Plan Land Use Map also designates Village Two for an elementary school site, a mixed-use site, two neighborhood park sites, and research and limited industrial uses.

### VILLAGE THREE

The General Plan designates Village Three as part of the Western District of the Otay Ranch Subarea. The Village is planned for Industrial land uses in a business park that reflects the unique characteristics of the landform and surrounding development. Village Three General Plan policies call for the creation of large lot development suitable for industrial, research, and business park uses.

### VILLAGE FOUR

The General Plan designates the portion of Village Four within the SPA Plan area for a Community Park. The remainder of Village Four is planned for single-family residential and CPF development; however, the proposed SPA Plan only includes the community park area of Village Four.

### *Otay Ranch GDP*

The Otay Ranch GDP designates eight categories of land use within the project area: residential designations of Low Medium Residential (LM), Low Medium Village (LMV), Medium High (MH); Mixed Use (MU); a Community Park/Park (CP/P); an Elementary School (K6); Industrial (I); and Open Space (O). Specific development guidelines have been established for each of these land use categories. Figure 5.1-1 shows the adopted Otay Ranch GDP land use designations within the proposed SPA Plan boundary.

According to the Otay Ranch GDP, consistency between the proposed SPA Plan and subsequent discretionary applications are evaluated by the following criteria (GDP Part II, Chapter 1, Section E, Subsection 2):

- Total land use acres for each individual village may not vary by greater than 15 percent of the designated acres as indicated on the overall project summary table of the Otay Ranch GDP, except for environmental/wildlife corridor reservations;
- Mixed-use, medium-high, and high density residential uses for a village may not exceed the Otay Ranch GDP specified acres as indicated on the overall project summary table of the Otay Ranch GDP, except as permitted by transfer, consistent with the Otay Ranch GDP requirements;
- Units may be moved between villages in response to the location of major public facilities, i.e., schools;
- The total number of units within a village may not exceed the total number of units as indicated on the Overall Project Summary Exhibit of the adopted Otay Ranch GDP for that village;



FIGURE 5.1-1  
Adopted GDP Land Use Plan

- If the residential development area is reduced at the SPA Plan level, priority should be given to preserving the amount of land devoted to higher densities supporting transit and pedestrian orientation; and
- The Otay Ranch Overall Design Plan shall be accepted prior to, or concurrent with, the approval of the first SPA Plan, and shall be subject to review and approval by the City of Chula Vista (adopted in 1996 with SPA One).

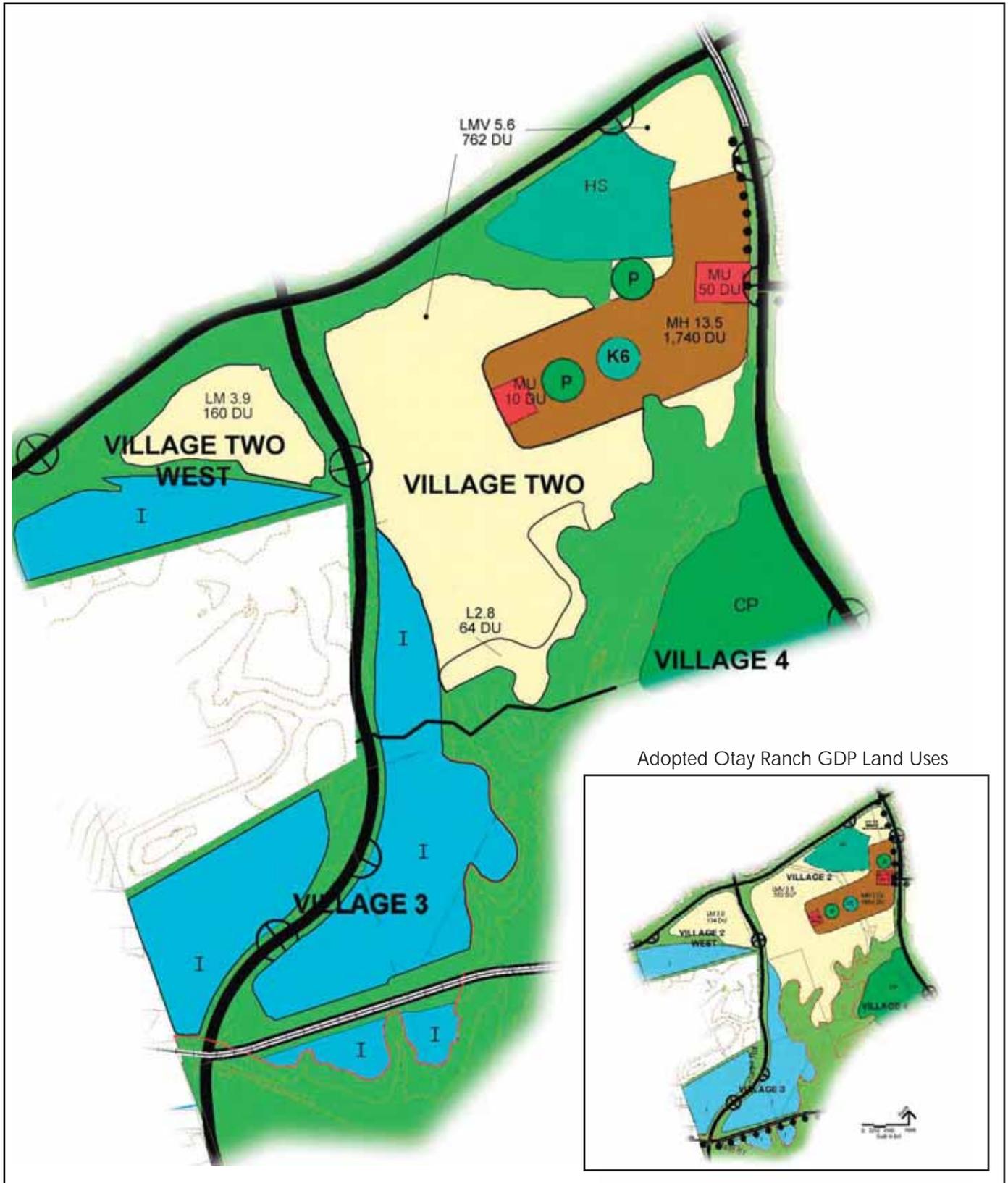
#### VILLAGE TWO

The Otay Ranch GDP Land Use Map (amended December 13, 2005) for the Village Two portion of the project is provided in Figure 5.1-2. Village Two will be served by the future extension of the BRT and will locate a transit station in the Village Core. Village Two will contain a large Village Core area with higher multi-family densities (consistent with GDP policies for transit villages) as well as a modest increase in single-family densities outside the Village Core. The adopted Otay Ranch GDP anticipates a total of 2,510 units in Village Two with a buildout population of approximately 6,986 people and designates the following uses in Village Two:

- A maximum of 709 single-family residential units;
- A maximum of 1,801 multi-family residential units;
- Two neighborhood parks;
- A fire station; and
- A Village Core area containing 18.7 acres of commercial use including the mixed-use areas, public and community purpose facilities, a transit stop, an elementary school, multi-family residential, a Town Square/Village Green/Main Street, and affordable housing.

The Otay Ranch GDP states that the physical character of Village Two is guided by the:

- Relationship with existing adjacent development, including buffers to the adjacent landfill, and consideration of the proposed industrial development;
- Location between two scenic canyons with undulating edge conditions and areas of sensitive habitat;
- Views to the east and south; and



Adopted Otay Ranch GDP Land Uses



FIGURE 5.1-2  
GDP Land Use Amendment

- Lower density relative to other surrounding villages, especially along Wolf Canyon and in the Village Core.

The Otay Ranch GDP provides policies that address village character, the Village Core, parks and open space, landform grading, the adjacent landfill, and vehicular access, including the following:

- The area west of Heritage Road shall be designed to be compatible with the adjacent development in the city of Chula Vista. The character of this area should reflect the proximity to the city, and may differ from the identity of the remainder of the village.
- Because of the central location of Village Two, uses in the Village Core area may be a higher intensity and size to serve adjacent villages. Higher intensity uses could include larger grocery stores and other tenants.
- Because of the size of Village Two, the Village Core will include a larger town center on the east and a smaller neighborhood center on the west end of the village.
- The main street theme in the town center shall organize mixed-use commercial/multi-family residential and public/quasi-public uses in a linear fashion along a tree-lined street with parking on both sides. While some parking may be visible from the street, it would be predominantly located to the rear of the buildings. Arcades, alleys, plazas, and similar spaces will provide pedestrian access from rear parking areas to the front entrances.
- A town-square theme in the neighborhood center shall orient mixed-use commercial/multi-family residential uses to a public town square. Parking may be provided along the mixed-use area frontage, with the main parking area provided to the rear of the buildings.
- Transit right-of-way and a transit stop and/or station shall be identified in an approximate location at the SPA Plan level and will be conditioned for dedication at the Tentative Map level.
- Open space preserve areas adjacent to Poggi and Wolf Canyons identified on the GDP/SRP Land Use Map shall be preserved outside of individual private lots pursuant to the adopted Otay Ranch RMP and Chula Vista MSCP Subarea Plan.
- Lot lines and grading shall not extend into the open space scenic corridor along Wolf Canyon or the RMP Preserve without environmental review. Modifications to the Preserve boundary must be consistent with the Otay Ranch RMP and Chula Vista MSCP Subarea Plan policies.

- Setbacks and landscaping shall be provided along Poggi Canyon in keeping with open space scenic corridor guidelines, which will be developed in the Overall Ranch Design Plan.
- View opportunities shall be provided in the design of the village.
- The village boundary along Heritage Road and La Media Road should consist of a landscaped buffer that shall provide for the transition to Poggi and Wolf Canyons and the Otay Landfill.
- The broad valley of Wolf Canyon should be retained as an open space amenity. Uses shall be consistent with the findings of the Wildlife Corridor Study and the Otay Ranch RMP and the Chula Vista MSCP Subarea Plan.
- Grading and landscaping along the village edge, adjacent to Wolf Canyon, should be conducted in a sensitive manner consistent with the Otay Ranch RMP and Chula Vista MSCP Subarea Plan to minimize conflicts with the adjacent open space preserve area.
- A visual analysis shall be performed at the SPA Plan level to assess visual impacts of development adjacent to the western portion of Poggi Canyon. The analysis shall illustrate the natural grade of the area and the topography after grading.
- Landform grading guidelines for Wolf and Poggi Canyons shall be developed as part of the Village Design Plan at the SPA Plan level.
- Phase development of the area west of Paseo Ranchero to avoid landfill conflicts, and coordinate land uses with the requirements of the county Hazardous Waste Management Plan and hazardous waste provisions of the Public Facilities Element contained in the Chula Vista General Plan.
- Vehicular access through the village shall direct traffic through the Village Core.

#### VILLAGE THREE

The GDP Land Use Map (amended December 13, 2005) for the Village Three portion of the proposed SPA Plan is provided in Figure 5.1-1. The land use designation for Village Three is Industrial. The GDP states that the character of this area shall be guided by the following:

- Location adjacent to Wolf Canyon and the Otay River valley, two scenic canyons/corridors with undulating edge conditions, and areas of sensitive habitat;

- Relationship with adjacent and planned industrial development and the Otay Landfill;
- Views to Wolf Canyon and Rock Mountain and the mountains to the east; and
- Location isolated by significant landforms.

The GDP includes policies for Village Three that address parks and open space, visual impacts of development, landform grading, and design guidelines, including:

- Any grading or improvement plans adjacent to and/or affecting Wolf Canyon shall consider the planned development within Villages Two and Four.
- Development adjacent to the Preserve shall adhere to the guidelines of the Otay Ranch RMP and the Chula Vista MSCP Subarea Plan.
- Open space preserve areas adjacent to and/or affecting Wolf Canyon and the Otay River valley identified on the GDP/SRP land use map shall be preserved outside of individual private lots. Natural open space character along the canyon shall be based upon the concept developed in the Overall Ranch Design Plan and refined in the Village Design Plan for this village.
- Setbacks and landscaping shall be provided along La Media Road in keeping with open space scenic corridor guidelines in the Overall Ranch Design Plan.
- Lot lines and grading shall not extend into the Wolf Canyon portion of the RMP Preserve without environmental review. Modifications to the Preserve boundary must be consistent with the Otay Ranch RMP and the Chula Vista MSCP Subarea Plan policies.
- The broad valley of Wolf Canyon shall be retained as an open space amenity. Uses shall be consistent with the findings of the Wildlife Corridor Study and the Resource Management Plan.
- Pedestrian trails shall link the village with the Otay Valley Regional Park.
- Develop a set of design guidelines for architectural, signage, graphics, and landscaping at the SPA level.
- The visual impacts of development in areas adjacent to Wolf Canyon should be considered. A visual analysis shall be performed at the SPA Plan level to assess visual impacts of development adjacent to Wolf Canyon. The analysis shall illustrate the natural grade of the area and the topography after grading.

- Landform grading guidelines for the edge of Wolf Canyon and the Otay River valley shall be developed as part of the Village Design Plan at the SPA Plan level.
- Design guidelines which address the visual quality developed in the Overall Ranch Design Plan and of development adjacent to the Otay Valley Regional Park shall apply to the Village Design Plan for Village Three.

#### VILLAGE FOUR

The Otay Ranch GDP designates Village Four for a maximum of 453 single-family residential units and a community park. As shown in Figure 3-5, the portion of Village Four within the SPA Plan is designated as parkland. The remainder of Village Four will be the subject of a future SPA Plan and appropriate environmental review. Applicable policies from the Otay Ranch GDP that pertain to the proposed community park include:

- The character of this area shall be guided by the following qualities:
  1. Location adjacent to Wolf Canyon and the Otay River valley;
  2. Linkage and compatibility with Villages Seven and Eight; and
  3. Views to Wolf Canyon, Rock Mountain, and the mountains to the east.
- The Village Four Community Park may develop independently from the balance of Village Four and may be included within the SPA Plan for the adjacent Village Two area. The balance of Village Four may be the subject of a future SPA Plan.
- Natural open space character along the canyon shall be based upon the concept developed in the Overall Ranch Design Plan and refined in the Village Design Plan for this village.
- The village edge should be a landscaped buffer, providing a soft transition to Wolf Canyon and to the Otay Valley Regional Park.
- Any grading or planned improvements adjacent to Wolf Canyon shall consider the planned development within Villages Two and Three.
- The broad valley of Wolf Canyon shall be retained as open space. Uses shall be consistent with the findings of the Wildlife Corridor Study and the Resource Management Plan.
- Pedestrian trails shall link the village with the Otay Valley Regional Park.
- The visual impacts of development in areas adjacent to Wolf Canyon and the Otay River valley shall be considered in the design of neighborhoods along this edge. A

visual analysis with photosimulations shall be performed at the SPA Plan level to assess visual impacts of development adjacent to Wolf Canyon and the Otay River valley. The analysis shall illustrate the natural grade of the area and the topography after grading.

- Landform grading guidelines for the edges of Wolf Canyon, Rock Mountain, and the open space scenic corridor along Otay Valley Road shall be developed as part of the Village Design Plan at the SPA Plan level. These specific guidelines shall be consistent with the definitions and standards established in the Overall Ranch Design Plan.

### *Zoning Ordinance*

Title 10 of the City of Chula Vista Municipal Code is the City's zoning title, which is intended to implement the City of Chula Vista General Plan. Otay Ranch, including the SPA Plan area, is zoned Planned Community (PC). According to Section 19.48.010 of the zoning title, the purposes of the PC zone are to:

- Provide for the orderly preplanning and long-term development of large tracts of land which may contain a variety of land uses, but are under unified ownership or development control so that the entire tract will provide an environment of stable and desirable character;
- Give the developer reasonable assurance that sectional development plans prepared by him in accordance with an approved general development plan will be acceptable by the City. Section development plans may include subdivision plans and/or planned unit development plans as provided in this title; and
- Enable the City to adopt measures providing for the development of the surrounding area compatible with the planned community zone.

According to Section 19.48.020 of the zoning title, the following ownership regulations apply to properties zoned PC:

- PC zones may be established on parcels of land which are suitable for, and of sufficient size to be planned and developed in a manner consistent with the purpose of this chapter and objectives of this title. No PC zone shall include less than 50 acres of contiguous land.

Under the existing PC Zone, PC District Regulations specific to development within the SPA are required. The proposed SPA Plan implements the zoning regulations through the PC District Regulations. These regulations, which are contained within the SPA Plan, provide the basis by which the City would review and evaluate the preliminary and

final drawings for subsequent development applications and provide guidance at the design review level.

*Otay Ranch Phase 1 and 2 Resource Management Plan*

The Otay Ranch Resource Management Plan, Phases 1 and 2 (hereinafter, RMP 1 and RMP 2), were adopted on October 28, 1993, and June 4, 1996, respectively, and were subsequently amended in 1998. The Phase 2 RMP was amended by the County Board of Supervisors on August 7, 2002. The Otay Ranch RMP provides guidance for resource protection within Otay Ranch. An important part of the RMP is the creation of the Otay Ranch Preserve. The Otay Ranch Preserve is an 11,375-acre hard-line preserve system which will be set-aside as mitigation for impacts to sensitive resources resulting from Otay Ranch development occurring within both the city and the unincorporated areas of the county. The Otay Ranch Preserve has been designed and will be managed specifically for the protection and enhancement of multiple sensitive species present within Otay Ranch. To ensure that the Otay Ranch Preserve land is transferred to the Preserve Owner Manager (POM) in step with development, the RMP incorporates a Preserve conveyance schedule, which includes a conveyance ratio of 1.188 acres of Preserve land for each acre of development area (excluding common use lands as defined in the RMP 2).

The objectives, policies, and standards of the RMP that are relevant to the proposed SPA Plan are described in detail in Appendix B-1 and are briefly summarized below. These policies are to be considered in connection with the applicant's proposed GDP amendments, including the proposed GDP/RMP amendment to eliminate the SPA One Preserve Conveyance Schedule and allow Village Two, Three, and all subsequent villages within Otay Ranch to convey any Preserve lands in satisfaction of each village's conveyance requirement (i.e., 1.188 acres of Preserve land for each acre of development area, excluding common use lands as defined in the RMP 2).

- Following notice of public hearing, the RMP may be amended by the legislative body having jurisdiction over the use of land affected by the amendment (in this case, the Chula Vista City Council), provided that all such amendments shall be subject to review and comment by the POM, by the City of Chula Vista, and by the County of San Diego (Policy 9.6).
- The overall size of the Preserve shall not be reduced by a Preserve Boundary Modification unless it can be demonstrated that the biological standards and guidelines can be met and that Preserve design is not adversely affected by a Preserve Boundary Modification that results in reduced acreage (Policy 9.8).
- A minimum of 85 percent of the total acreage of coastal sage scrub habitat on-site shall be conserved through a combination of 70 percent preservation and 15 percent restoration of disturbed and/or non-native habitats (RMP Policies 2.2 and 3.4). The

RMP 2 includes the Coastal Sage Scrub Master Plan that outlines restoration of 1,300 acres of coastal sage scrub and maritime succulent scrub. The RMP 2 identifies a maritime succulent scrub restoration ratio of 1:1 and a coastal sage scrub restoration ratio of 1:0.4 (for one acre impacted 0.4 acre are restored), and identifies the areas proposed for restoration.

- Develop and obtain City and County approval (in coordination with the POM) of a plan for the orderly conveyance of dedicated parcels of land to the Otay Ranch Preserve (Conveyance Schedule) (RMP Policies 5.6 and 5.7). Both the City and the County adopted the Conveyance Schedule with the RMP 2 and subsequently amended the Conveyance Schedule in connection with the Otay Ranch SPA One Plan (hereinafter referred to as the SPA One Conveyance Schedule). The SPA One Conveyance Schedule adopted by the City and County are depicted in different graphic forms by each of the agencies, but generally reference the same areas, with the exception being that the County Conveyance Schedule includes additional areas within the vernal pool preserve area on the Otay Mesa.

The RMP Preserve conveyance schedule, which applies to all villages and planning areas governed by SPAs that were adopted since approval of the GDP, is considered a dynamic tool that may be modified to reflect changing circumstances. As discussed in more detail below, the proposed SPA Plan contemplates an amendment to the GDP/RMP to eliminate the SPA One Conveyance Schedule which would allow Villages Two and Three and all subsequent villages within Otay Ranch to convey any Preserve lands in satisfaction of each village's Preserve conveyance requirement.

#### *Multiple Species Conservation Program*

The MSCP is a comprehensive, long-term habitat conservation plan that addresses the needs of multiple sensitive plant and animal species and the preservation of natural vegetation communities in San Diego County. The MSCP addresses the potential impacts of urban growth, loss of natural habitat and species endangerment, and creates a plan to mitigate for the potential loss of Covered Species and their habitat due to the direct impacts of future development of both public and private lands within the MSCP area.

#### SUBAREA PLAN GOALS

The Chula Vista Subarea Plan contains the following stated goals:

1. To conserve covered species and their habitats through the conservation of interconnected significant habitat cores and linkages.

2. To delineate and assemble a Preserve using a variety of techniques, including public acquisition, on- and off-site mitigation, and land use regulations.
3. To provide a Preserve management program that, together with federal and state management activities, will be carried out over the long term, further ensuring the conservation of covered species.
4. To provide necessary funding for a Preserve management program and biological monitoring of the Preserve.
5. To reduce or eliminate redundant federal, state, and local natural resource regulatory and environmental review of individual projects by obtaining federal and state Take Authorizations for 86 species.

The Subarea Plan does not contain a specific list of objectives or policies pursuant to these goals; however, policy language contained in various portions of the Subarea Plan does have a relationship to the proposed amendments. Relevant policy language is summarized below.

#### APPLICABLE SUBAREA PLAN POLICIES – MSCP BOUNDARY ADJUSTMENT

The actions that would exclusively affect policies of the Chula Vista Subarea Plan are limited to the proposed Boundary Adjustment. It should be noted that the Otay Ranch RMP was incorporated into the Subarea Plan for purposes of addressing conservation and management of covered species within the Otay Ranch planning area; and therefore, consistency with the RMP is an issue relevant to the Subarea Plan. The specific consistency issues related to the RMP are discussed separately in this section of the EIR.

Pursuant to the Chula Vista Subarea Plan, the standard of review for the proposed Boundary Adjustment is one of “biological equivalency.” As defined in Section 1.3 of the Subarea Plan:

Biological Functional Equivalency - A modification to a Preserve boundary which results in a Preserve configuration with a biological value that is equal to or higher than the original Preserve configuration. The comparison of biological value is based on the “like or equivalent” exchange concept for biological factors identified in Section 5.4.2 of the MSCP Subregional Plan.

The Subarea Plan permits boundary adjustments without processing plan amendments as provided in Section 5.4, as follows:

Adjustments to the Preserve boundaries may be made without the need to amend either this Subarea Plan or the MSCP Subregional Plan where the new Preserve boundary results in the same or higher biological value of the Preserve.

Section 5.4.2 of the Subarea Plan further states that:

Boundary adjustments may occur for reasons such as: (1) new biological information obtained through site-specific studies; (2) unforeseen engineering design opportunities or constraints; (3) a landowner or other constituent request to change boundaries in the context of the equivalency standard set forth in this section; and/or (4) timely and adequate notice of objection by the Wildlife Agencies to a mapping conflict determination made by the City Director of Planning and Building as defined by Section 5.4.1 of this Subarea Plan. In the case of a Boundary Adjustment, the City will determine the adjusted Preserve boundary pursuant to the following process:

1. A preliminary determination of the biological value of a proposed boundary adjustment will be made by the City Director of Planning and Building (or designee) in accordance with Section 5.4.2 of the MSCP Subregional Plan and/or Section 5.2.3.6 of this Subarea Plan, if appropriate.
2. The City notifies the Wildlife Agencies in writing of the boundary adjustment, including written findings of equivalency made by the City Director of Planning and Building.
3. The adjusted boundary becomes the adopted boundary upon project approval unless the Wildlife Agencies object to the adjusted boundary within 30 days of receipt of City's written notice to the Wildlife Agencies. Objections by the Wildlife Agencies to boundary adjustments must be in writing and must state the rationale in support of the objection.
4. If the City receives written objection to a determination of a boundary adjustment by the Wildlife Agencies within 30 days of receipt of City's written notice to the Wildlife Agencies, then the City and Wildlife Agencies will have 60 days to meet, confer, and reach agreement upon final Preserve boundaries.

5. If the Wildlife Agencies fail to respond to the City's notice within 30 days of receipt of the City's determination, the decision by the City Director of Planning and Building shall be deemed accepted.

### *SANDAG Growth Management Plan and Strategy*

SANDAG has adopted a series of plans and policies to address regional growth within San Diego County. Included within SANDAG's Regional Transportation Plan is the Growth Management Plan (GMP), which includes a Growth Management Strategy. The strategy incorporates population, housing, and transportation forecasts, including specific projections for the City of Chula Vista. SANDAG has projected that, from 1995 to 2020, the City of Chula Vista will increase in population by 82 percent, civilian employment will increase by 90 percent, and housing units will increase by 79 percent.

Although the proposed project is not required to conform to the GMP, the plan and its growth projections serve as the basis for forecasting services for the population demand-based issues. The strategy also emphasizes the role of local government in growth management. According to the strategy, local governments are integral to the maintenance of a prosperous economy, provision of an adequate and equitable transportation system, preservation of open space and habitat, increasing the rate of home ownership, and reforming the state and local tax system to assist and sustain the aforementioned attributes.

#### **5.1.2 Thresholds of Significance**

According to Appendix G of the CEQA Guidelines (2005), the proposed project would have a significant impact on land use if it would:

Threshold 1: Physically divide an established community;

Threshold 2: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect;  
or

Threshold 3: Conflict with any applicable habitat conservation plan or natural community conservation plan.

Significant land use impacts would also occur if the proposed SPA Plan project does not comply with the applicable mitigation measures established by the Otay Ranch GDP Program EIR and the Otay Ranch GDP findings of fact, as amended by subsequent projects. These mitigation measures include the requirement that SPA Plans establish

standards for landscaping, grading, and buffering to prevent land use interface impacts such as noise, lighting, and loss of privacy from occurring between internal land uses, particularly between single- and multi-family residential land uses and between residential and non-residential land uses. In addition, the Otay Ranch GDP Program EIR requires that the applicant(s) implement the RMP to protect biological resources within Otay Ranch.

### **5.1.3 Impacts**

#### Threshold 1: Physically Divide an Established Community

##### *Compatibility with Surrounding Uses*

The SPA Plan area is currently undeveloped, but is planned for development in the City's General Plan and the Otay Ranch GDP. The area surrounding the proposed SPA Plan area consists of existing, developing, or planned communities. The Otay Landfill lies to the west of the proposed SPA Plan area. Village One lies to the north and is separated from the SPA Plan area by Olympic Parkway. Village Six has recently been developed east of the proposed project site, and the planned communities in Village Seven are in various stages of construction east and southeast of the proposed SPA Plan area. Remaining portions of Village Four located south of the site (areas not included in this proposed SPA Plan area) are planned for development in the Otay Ranch GDP, but will need project-level entitlements in the future. Otay Valley to the south has a mix of commercial, industrial, and open space uses. Therefore, development of the proposed SPA Plan would not physically divide an established community.

To link the proposed SPA Plan area to adjacent communities, the SPA Plan proposes the construction of two pedestrian bridges located along the northeast portion of Village Two (see Figure 3-6). One bridge would cross Olympic Parkway on the west side of La Media Road and would link together Village Two and Village One to the north. The second pedestrian bridge would cross La Media Road just north of Santa Venetia Street and would link Village Two and Village Six. The pedestrian bridges further support the compatibility of the project with adjacent uses.

The Otay Landfill is located to the west of the SPA Plan area. The SPA Plan proposes industrial uses within the landfill buffer. Industrial land uses within the landfill buffer would be compatible with the Landfill Agreement between the County and the City. Impacts associated with planned development in proximity to the landfill would be primarily in terms of landfill dust, noise, and health concerns. These impacts are discussed in Sections 5.11, Air Quality, 5.12, Noise, and 5.14, Hazards/Risk of Upset, and the necessary mitigation measures are identified in those sections to reduce potential impacts to below a level of significance.

### *Compatibility of Proposed Land Uses Internal to the Project*

The proposed SPA Plan project is comprised of the following land use components: Village Two consists of 2,786 residential units, of which 986 are single-family and 1,800 are multi-family; approximately 11.9 acres for a commercial town center; 6.1 acres of Community Purpose Facility uses; 15.4 acres of neighborhood parks, including a town square; 87.9 acres of industrial uses; and a 10.3-acre elementary school. Village Three contains a 176.5-acre industrial park and a 10.2-acre Community Purpose Facility. Village Four contains a 44.2-acre community park site. The proposed project also includes related infrastructure and natural and manufactured open space.

The multi-family units within the SPA Plan area would be centered around the Village Core and near a future transit stop. Multi-family dwelling units would be two- to four-stories tall in the Village Core with building heights decreasing towards the periphery. The land uses within Village Two would transition from the Village Core mixed-use and higher density residential uses to lower density residential uses at the village perimeters and adjacent to the open space preserve areas. The proposed design and layout of land uses for the SPA Plan would be compatible with one another and would not result in a significant impact.

Threshold 2: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

### *General Plan/GDP*

Table 5.1-1 lists goals in the General Plan that are germane to the SPA Plan and analyzes the consistency of the proposed project with these goals. Table 5.1-2 lists the applicable goals, objectives, and policies in the Otay Ranch GDP that are germane to the SPA Plan and analyzes the consistency of the proposed project with these goals. As detailed in Tables 5.1-1 and 5.1-2, the proposed SPA Plan project is consistent with the applicable goals of the General Plan and the Otay Ranch GDP.

The proposed SPA Plan requires three General Plan Amendments that pertain to the: (1) increase in dwelling units; (2) the modification of the MSCP Preserve boundary; and (3) consistency between the Phase 1 and 2 RMP and the General Plan. The proposed SPA Plan also requires four GDP amendments, including three amendments similar to the General Plan amendments listed above. In addition, a separate GDP amendment is proposed to eliminate the SPA One Conveyance Schedule and allow Village Two, Three, and all subsequent Villages to convey any Otay Ranch Preserve lands in satisfaction of each village's conveyance requirement. The analysis of these General Plan and GDP amendments is provided below:

**TABLE 5.1-1  
CONSISTENCY OF THE PROPOSED PROJECT WITH THE GENERAL PLAN ELEMENTS**

Element	Goal	Consistency Analysis
Land Use and Transportation	<p>The overall goal of the Land Use and Transportation Element is the development of a strong image and community character; safe neighborhoods; a healthy economy; protection of natural resources; and provision of community services. It is also to provide a wide range of mobility options.</p>	<p>The project's mix of residential, commercial, and public/quasi-public uses is consistent with and complementary to similar surrounding land uses. The multi-family units would be centered around the Village Core and near a future transit stop. Multi-family dwelling units would be two to four stories tall in the Village Core with building heights decreasing towards the periphery. The slight decrease in family uses would not create adverse on-site land use compatibility conflicts with respect to noise, light, and aesthetics. The multi-family housing proposed for the SPA Plan is adjacent to commercial and public/quasi-public uses in the Village Core and proximate to La Media Road and Olympic Parkway, both six-lane prime arterial roadways.</p> <p>Streets surrounding and internal to the SPA Plan area are designed in compliance with the goals and objectives of the Otay Ranch GDP. Several roadway intersections and segments failed to operate at City level of service (LOS) standards. However, with project mitigation, as described in Chapter 5.10 (Traffic, Circulation, and Access), Section 5.10.5, all impacts to arterials are reduced below a level of significance.</p>
Economic Development Element	<p>The overall goal of the Economic Development Element is to maintain and enhance a high quality of life for the city's residents by developing and sustaining a healthy, strong and diverse economic base.</p>	<p>As discussed above, the project's mix of residential, commercial, and public/quasi-public uses is consistent with and complementary to similar surrounding land uses. The SPA Plan will be developed in phases that balance market forces with the provision of the facilities, as identified by the Public Facilities Finance Plan.</p>
Public Facilities and Services Element	<p>The goal of the Public Facilities and Services Element is to provide and maintain public facilities and services within Chula Vista through exemplary public infrastructure and community services that support and enhance the well being of the city and its residents.</p>	<p>The SPA Plan will phase development with infrastructure improvements, and the developer will participate in fair-share funding of facilities, as described in the Public Facilities Financing Plan. The SPA Plan and the Public Facilities Financing Plan include a phasing component that ensures that infrastructure is developed commensurate with housing units. Further, Village Two is located adjacent to existing development in Villages One, Five, Six, and Seven. Development of Village Two would result in a logical extension of existing public services.</p>

**TABLE 5.1-1  
CONSISTENCY OF THE PROPOSED PROJECT WITH THE GENERAL PLAN ELEMENTS  
(continued)**

Element	Goal	Consistency Analysis
Environmental Element	<p>The goal of the Environmental Element is to improve sustainability through the responsible stewardship of Chula Vista's natural and cultural resources, promotion of environmental health, and protection of persons and property from environmental hazards and the undesirable consequences of noise.</p>	<p>The Land Use (5.1), Biological Resources (5.3) and Landform Alteration and Visual Quality (5.2) sections of this EIR describe the project design and mitigation measures required to preserve the natural features and environmental features of the project site. Grading would conform to the natural topography of the site to the extent possible; however, landform grading will be required. Views toward open space and distant mountains will be maintained. The SPA Plan outlines the landscape and architectural design standards that would be applied in the proposed project to create a sense of place.</p> <p>The proposed amendment to the Preserve Boundary provides for higher biological value than the existing Preserve, and therefore, significant cumulative impacts related to losses to habitats and species, would be minimized through project implementation. Additionally, the SPA Plan includes water conservation, energy conservation, and air quality improvement plans to which the development must (and does) adhere to. See Section 5.9 (Water Resources and Water Quality) and Section 5.11 (Air Quality)</p>
Growth Management Element	<p>The purpose of the Growth Management Element is to provide the appropriate policy foundation so as to allow the creation the various components that together create the overall growth management program that guides future development in the city. "Growth management" refers to the conscious decision to direct the pattern and rate of development through a set of comprehensive goals, objectives, and planning policies.</p>	<p>The project site and surrounding areas are planned for development and zoned for future urban growth. The proposed development of the SPA Plan is in conformance with the Otay Ranch phasing program. The project site is surrounded by the Otay Ranch developments of Villages One, Five, Six, and Seven. Therefore, development of Village Two would result in a logical extension of the Otay Valley parcel infrastructure, which supports orderly growth and avoids leapfrog development. Phasing is in conformance with the City GMOG Threshold standards as demonstrated in the PFFF.</p>

**TABLE 5.1-1  
CONSISTENCY OF THE PROPOSED PROJECT WITH THE GENERAL PLAN ELEMENTS  
(continued)**

Element	Goal	Consistency Analysis
Housing Element	<p>The City shall encourage citizens, developers, and builders to support the development of neighborhoods which provide housing for people of all economic classes, races, and age groups.</p> <p>The AHP shall require a minimum of 10 percent of each housing development of 50 or more units to be affordable to low- and moderate-income households, with at least one-half of those units being designated for low-income households.</p> <p>The City encourages the construction of projects offering a wide variety of housing types including townhomes, condominiums, and other units providing low- and moderate-income ownership opportunities.</p>	<p>The proposed project offers for sale both single- and multi-family housing of varying sizes that will appeal to people of varying tastes and incomes. The proposed project would be required to provide 139 low- and 139 moderate-income units in conformance with the Affordable Housing Policy (AHP).</p> <p>The proposed project conforms to the AHP in that it is required to provide 139 low-income and 139 moderate-income units.</p> <p>The proposed project offers a variety of multi-family housing types as well as single-family homes of various sizes for different incomes. The proposed project would also provide 139 low- and 139 moderate-income units in conformance with the AHP.</p>

SOURCE: City of Chula Vista General Plan (Updated December 13, 2005).

**TABLE 5.1-2  
SPA PLAN CONFORMANCE WITH THE OTAY RANCH GDP**

Applicable Goals, Objectives, and Policies	Project Conformance
<p><b>Goal: Develop comprehensive, well integrated and balanced land uses, which are compatible with the surroundings.</b></p> <p>Objective: Provide a well-integrated land use pattern which promotes both housing and employment opportunities, while enhancing the unique environmental and visual qualities of the Otay Ranch.</p> <p>Objective: Provide a wide range of residential housing opportunities, from rural and estate homes to high-density multi-family projects. Provide a balanced and diverse residential land use pattern for the Otay Valley Parcel which promotes a blend of multi-family and single-family housing styles and densities, integrated and compatible with other land uses in the area.</p> <p>Objective: Provide development patterns complementary to the adopted plans and existing development of the adjacent communities.</p>	<p>The SPA Land Use Plan supports these GDP goals and objectives by providing a range of housing and employment opportunities. The plan adheres to the GDP specific directives for Village Two that create a Village Core (composed of commercial, community purpose, elementary school, high school, neighborhood park, town square and residential land uses) and residential neighborhoods that offer a variety of housing styles and densities.</p> <p>The organization of the land uses within the SPA Plan area meets the objectives of integration and compatibility of land uses within villages and with adjacent communities. Adjacent land uses include existing residential to the north and west, planned residential to the east, Otay Landfill to the west and open space preserve to the south. The land uses within Village Two transition from the Village Core mixed use and higher density residential uses to lower density residential uses at the village perimeters and adjacent to the open space preserve areas.</p> <p>The SPA Plan supports the objective of enhancing the unique environmental and visual qualities of Otay Ranch. The village conforms to the natural topography of the site and maintains views towards open spaces and distant mountains.</p>
<p><b>Goal: Environmentally sensitive development should preserve and protect significant resources and large open space areas.</b></p> <p>Objective: Provide land use arrangements which preserve significant natural resource areas, significant landforms and sensitive habitat.</p>	<p>These goals and objectives will be met through the conveyance of approximately 1,035.2 acres of land to the Otay Ranch Preserve in accordance with the requirements of the RMP. The SPA Plan area is sited within land area designated for development and the Plan provides for protection of the adjacent environmentally sensitive areas as described in the Preserve Edge Plan.</p>

**TABLE 5.1-2  
SPA PLAN CONFORMANCE WITH THE OTAY RANCH GDP  
(cont.)**

Applicable Goals, Objectives, and Policies	Project Conformance
<p><b>Goal: Reduce reliance on the automobile and promote alternative modes of transportation.</b></p> <p>Objective: Develop villages and town centers which integrate residential and commercial uses with a mobility system that accommodates alternative modes of transportation, including pedestrian, bicycle, low speed/neighborhood electric vehicle, bus rapid transit, and other modes of transportation.</p> <p>Objective: Develop residential land uses which encourages the use of alternative modes of transportation through the provision of bus rapid transit right-of-way, and the inclusion of a bicycle, low speed/neighborhood electric vehicle, and pedestrian network.</p> <p>Objective: Commercial uses should be sized to meet the needs of the immediate and adjacent villages and town centers. Village and Town Center commercial land uses may preempt large regional commercial opportunities within villages and town centers and relegate them to the EUC or Freeway Commercial areas.</p>	<p>Land uses within the SPA Plan area, including industrial, commercial, community purpose facility, park and school uses, are designed to provide for the daily needs of the residents. The provision of land uses that minimize the need for automobile travel coupled with the pedestrian-oriented design of the villages are two ways the plan meets the GDP goals and objectives. In Village Two the Village Core is located in the central portion of the village within walking distance of most of the village. Throughout the village, a system of trails and landscaped streets link residential neighborhoods, the Village Core, parks and schools to encourage walking, rather than driving. These paths are designed with parkway separations between walkways and streets, landscaping, lighting and furnishings to make the pedestrian experience pleasant and promote safety. The Village Pathway is provided for off-street low speed electric vehicle and bicycle travel. Convenient support features, such as bus stops, bicycle racks and low speed electric vehicle parking spaces are also provided. Bus routes can be accommodated around and through the villages with strategically located stops. The village trail system also connects to the surrounding community trail system.</p>
<p><b>Goal: Promote village and town center land uses which offer a sense of place to residents and promotes social interaction.</b></p> <p>Objective: Organize Otay Ranch into villages and town centers, each having its own identity and sense of place.</p> <p>Objective: The design of the Otay Ranch should promote variety and diversity at the village scale, while providing a sense of continuity through the use of unifying design elements.</p>	<p>Village Two meets these goals and objectives by providing a Village Core centered on a "Main Street" theme. Land uses within the Village Core include commercial/mixed use, community purpose facilities, elementary school, high school, park and a variety of residential housing types. The land uses, coupled with a village design theme create the village identity and sense of place. The village incorporates Ranch-wide design elements, such as signage and landscaping, to connect it with the other villages of Otay Ranch.</p>

**TABLE 5.1-2  
SPA PLAN CONFORMANCE WITH THE OTAY RANCH GDP  
(cont.)**

Applicable Goals, Objectives, and Policies	Project Conformance
<p><b>Goal: Diversify the economic base within Otay Ranch.</b></p> <p>Objective: Create an economic base that will ensure there is adequate public revenue to provide public services.</p> <p>Objective: Create an Eastern Urban Center within the Otay Valley Parcel and encourage the development of a retail base for the planning area, but not to the detriment of existing regional and local commercial centers.</p> <p>Objective: Create a Regional Technology Park (RTP) and other business parks that offer employment opportunities for area residents which complements, rather than substitutes for industrial development on the Otay Mesa.</p>	<p>The Village Two core commercial development and business park contribute to the economic base with neighborhood, regional-serving businesses. The Village Three business park will provide a significant employment center for the area.</p>
<p><b>Goal: Promote synergistic uses between the villages and town centers of the Otay Ranch to provide a balance of activities, services, and facilities.</b></p> <p>Objective: Develop individual villages and town centers to complement surrounding villages/town centers.</p> <p>Objective: Select villages/town centers to provide activities and uses which draw from surrounding villages/town centers. Uses serving more than one village or town center, such as a cinema complex, should be located in a Village Core or town center that has convenient access to adjacent villages or town centers.</p>	<p>Village Two provides commercial uses, such as a grocery store, that serve neighboring villages. All areas of Village Two are connected by an extensive trail and pathway system. Internal streets have been designed to accommodate bicycles and low speed electric vehicles, and a series of pedestrian paths are provided throughout the village to provide alternatives to automobile travel.</p>
<p><b>Goal: Organize land uses based upon the village/town center concept to produce a cohesive, pedestrian friendly community, encourage nonvehicular trips, and foster interaction amongst residents.</b></p>	<p>All areas of Village Two are connected by an extensive trail and pathway system. These trails and pathways reinforce a pedestrian friendly concept, as well as promote the use of alternative modes of transportation. By reducing the need for an automobile, people will have opportunities to interact with their neighbors and other residents of the village as they walk or ride to their destinations. The location of medium and high-density residential, elementary school and neighborhood park uses near the Village Core will also encourage non-vehicular trips.</p>

**TABLE 5.1-2  
SPA PLAN CONFORMANCE WITH THE OTAY RANCH GDP  
(cont.)**

Applicable Goals, Objectives, and Policies	Project Conformance
<p><b>Goal: Provide a safe and efficient transportation system within Otay Ranch with convenient linkages to regional transportation elements abutting the Otay Ranch.</b></p> <p>Objective: Ensure timely provision of adequate local circulation system capacity to respond to planned growth, maintaining acceptable levels of service (LOS).</p> <p>Objective: Plan and implement a circulation system such that the operational goal of Level of Service "C" for circulation element arterial and major roads and intersections can be achieved and maintained. Internal village streets/roads are not expected to meet this standard.</p> <p>Objective: Encourage other transportation modes through street/road design standards within the village, while accommodating the automobile. Design standards are not focused on achieving LOS standards or providing auto convenience.</p> <p>Objective: Provide an efficient circulation system that minimizes impacts on residential neighborhoods and environmentally sensitive areas.</p>	<p>Streets surrounding and internal to the SPA Plan area are designed in compliance with the goals and objectives of the Otay Ranch GDP. Street design and phasing strives to provide efficient and appropriate level of service. The village circulation system provides for accommodation of public transportation. Internal streets have been designed to accommodate bicycles and low speed electric vehicles, and a series of pedestrian paths are provided throughout the village to provide alternatives to automobile travel.</p> <p>The village circulation system provides for accommodation of public transportation. Internal streets have been designed to accommodate bicycles and low speed electric vehicles, and a series of pedestrian paths are provided throughout the village to provide alternatives to automobile travel.</p>
<p><b>Goal: Achieve a balanced transportation system which emphasizes alternatives to automobile use and is responsive to the needs of residents.</b></p> <p>Objective: Study, identify, and designate corridors, if appropriate, for light rail and transit facilities.</p> <p>Objective: Promote alternative forms of transportation, such as bicycle and low-speed electrical vehicle paths, riding and hiking trails, and pedestrian walkways as an integral part of the circulation system.</p>	<p>A wide variety of alternative forms of transportation, including transit routes, low speed electric vehicle and bicycle paths and trails, are provided within the SPA Plan area. This alternative transportation network addresses the needs of residents by offering different routes to uses within and outside of the villages, including connections to public transportation.</p>

**TABLE 5.1-2  
SPA PLAN CONFORMANCE WITH THE OTAY RANCH GDP  
(cont.)**

Applicable Goals, Objectives, and Policies	Project Conformance
<p><b>Goal: Create a balanced community exemplified by the provision of a diverse range of housing styles, tenancy types and prices.</b></p> <p>Objective: Provide a variety of housing opportunities sufficient to meet a proportionate share of the Regional Share allocation of housing.</p> <p>Objective: Each Otay Ranch Village will proportionately assist the appropriate land use jurisdiction to meet or exceed Otay Ranch's share of the five-year Regional Share allocation as provided by each jurisdiction's Housing Element.</p>	<p>The Village Two plan meets these goals and objectives by providing a wide variety of housing types, including affordable housing. Proposed housing includes apartments, townhouses, condominiums, attached housing (duplexes and/or triplexes), small lot single-family alley homes and average lot single family residential. The Affordable Housing Plan and the Public Facilities Finance Plan (PFFP) describe in detail how the housing goals are met. Based on the target residential units proposed for the development, 139 low-income and 139 moderate-income residential units will be required for the SPA Plan.</p>
<p><b>Goal: The provision of sufficient housing opportunities for persons of all economic, ethnic, religious and age groups, as well as those with special needs such as the handicapped, elderly, single parent families and the homeless.</b></p> <p>Objective: Ensure that the Otay Ranch provides housing opportunities sufficient to meet a proportionate share of identified special housing needs, and applies fair housing practices for all needs groups in the sale, rental, and advertising of housing units.</p>	<p>Village Two will contain a wide variety of housing types ranging in density from low-medium to high. The variety of housing types will accommodate families, singles and those with special housing needs, including the handicapped and the elderly. Fair housing practices will be employed in the sale, rental and advertising of all units.</p>
<p><b>Goal: Provide diverse park and recreational opportunities within Otay Ranch which meet the recreational, conservation, preservation, cultural and aesthetic needs of project residents of all ages and physical abilities.</b></p> <p>Objective: Identify park, recreational and open space opportunities, where appropriate, to serve the South County region and San Diego County as a whole.</p> <p>Objective: Maximize conservation, joint uses and access and consider safety in the design of recreational facilities.</p> <p>Objective: Provide neighborhood and community park and recreational facilities to serve the recreational needs of local residents.</p>	<p>Chapter V, Parks, Recreation, Open Space and Trails Plan, of the SPA Plan, describes in detail the location, funding, and maintenance of required facilities.</p>

**TABLE 5.1-2  
SPA PLAN CONFORMANCE WITH THE OTAY RANCH GDP  
(cont.)**

Applicable Goals, Objectives, and Policies	Project Conformance
<p><b>Goal: Assure the efficient and timely provision of public services and facilities of developable areas of Otay Ranch concurrent with need.</b></p> <p>Objective: Ensure that the pace and pattern of residential, commercial and other non-residential development is coordinated with the provision of adequate public facilities and services.</p> <p>Objective: Permit development only through a process that phases construction with the provision of necessary infrastructure prior to or concurrent with need.</p> <p>Objective: Development projects shall be required to provide or fund their fair share of all public facilities needed by the development.</p> <p>Objective: "Enhanced Services" may be provided to specified geographic areas of the Otay Ranch. These are services that exceed the normal or standard level of services provided to the jurisdiction as a whole.</p> <p>Objective: The City of Chula Vista and the county of San Diego shall enter into a Master Property Tax Agreement covering all annexations within an agreed-upon geographic area in Otay Ranch. That Agreement shall consider the distribution of property tax revenues, as well as the allocation of total project revenues between the City and the County in accordance with the following policies.</p> <p>Objective: As a general guideline, efforts should be made to keep the effective tax rate (ETR), including all property taxes and special assessments, not to exceed 2.00 percent of the assessed value of the property.</p>	<p>The proposed SPA Plan's PFFP provides an analysis and detailed description of how these goals and objectives will be met. The SPA Plan will phase development with infrastructure improvements and the developer will participate in fair-share funding of facilities, as described in the PFFP.</p>

**TABLE 5.1-2  
SPA PLAN CONFORMANCE WITH THE OTAY RANCH GDP  
(cont.)**

Applicable Goals, Objectives, and Policies	Project Conformance
<p>Objective: Monitor the impacts of growth and development on critical facilities and services to ensure that necessary infrastructure is provided prior to or concurrent with need.</p>	
<p><b>Goal: Designate areas within the Otay Ranch project area for religious, ancillary private educational, day care, benevolent, fraternal, health, social and senior services, charitable, youth recreation facilities, and other county regional services.</b></p>	<p>A Community Purpose Facility Master Plan, included as Chapter VI of this SPA Plan, describes the facilities provided by the development that will meet this goal and the specific requirements of the City's Municipal Code.</p>
<p><b>Goal: Provide high quality, K-12 educational facilities for Otay Ranch residents by coordinated planning of school facilities with the appropriate school district.</b></p> <p><b>Goal: Coordinate the planning of adult educational facilities with appropriate district.</b></p> <p>Objective: School facilities shall be provided concurrently with need and integrated with related facility needs, such as child care, health care, parks, and libraries, where practical.</p> <p>Objective: Provide school district with 12 to 18 month development plan and 3 to 5 year development forecasts so that they may plan and implement school building and/or allocation programs in a timely manner.</p>	<p>An elementary school site is provided within Village Two. Otay Ranch High School was built prior to the balance of Village Two and is currently serving surrounding Otay Ranch villages. Adult education facilities could be accommodated in the commercial and community purpose facility sites or as a shared use with the public schools.</p>
<p><b>Goal: Minimize the adverse impacts of development on air quality.</b></p>	<p>The Air Quality Improvement Plan provides measures to meet this goal. The Plan addresses improvement measures including job/housing balance, transit access, alternative travel modes, building construction methods and educational programs. The SPA Plan area has been designed to offer numerous alternative methods of transportation, including public transit and pedestrian trails.</p>

**TABLE 5.1-2  
SPA PLAN CONFORMANCE WITH THE OTAY RANCH GDP  
(cont.)**

Applicable Goals, Objectives, and Policies	Project Conformance
<p><b>Goal: Promote a quiet community where residents live without noise which is detrimental to health and enjoyment of property.</b></p> <p><b>Goal: Ensure residents are not adversely affected by noise.</b></p> <p>Objective: Otay Ranch shall have a noise abatement program to enforce regulations to control noise.</p>	<p>The SPA Land Use Plan separates higher noise generating land uses from more sensitive residential land uses. Sound abating features, such as masonry walls and dual-glazed windows, will be provided as needed. City standards for noise regulation and abatement shall be enforced.</p>
<p><b>Goal: Develop Otay Ranch villages to balance regional and local public needs, respond to market forces, and assure the efficient and timely provision of public services and facilities concurrent with need.</b></p> <p>Objectives: Coordinate the timing of the development of Otay Ranch villages to provide for the timely provision of public facilities, assure the efficient use of public fiscal resources and promote the viability of the existing and planned villages.</p>	<p>The SPA Plan will be developed in phases that balance market forces with the provision of the facilities, as identified by the Public Facilities Finance Plan.</p>

SOURCE: RECON 2005.

- 1) *General Plan and GDP Amendment to adjust the permissible number of units in Village Two from a maximum of 2,510 units to 2,786 units.*

Table 5.1-3 shows the difference in units between the GDP and the proposed SPA Plan. The proposed project would amend the GDP to allow 2,786 dwelling units as compared to 2,510 dwelling units in the adopted GDP. The increase of 276 dwelling units is comprised entirely of single-family dwelling units. The proposed SPA Plan would increase the permissible number of single-family units, from 709 to 986, while reducing the number of multi-family units from 1,801 to 1,800. The remaining land use acreages would not change. The proposed SPA Plan would expand the Low-Medium Village acreage in Village Two from 181.1 acres in the GDP to 198.7 acres. This additional acreage is primarily the result of the proposed Boundary Adjustment. As discussed below and in Section 5.3, the proposed Boundary Adjustment would provide additional developable land that has primarily been used for agricultural cultivation in exchange for the preservation of habitat area with higher quality biological resources (see Section 5.3).

Grading within the additional development area requires fill to develop a relatively flat site. The creation of a relatively flat site would comply with General Plan and GDP policies on pedestrian-oriented design. The proposed project would be consistent with LUT 77 of the General Plan in that it would continue to provide a higher density, mixed-use Village Core within the Village Two area to serve the residents of Village Two as well as the nearby communities. The proposed project would continue to provide for a lower density neighborhood-serving mixed-use area to serve adjacent village residents as well.

The impact analysis contained in Section 5.0 of this EIR addresses the proposed increase in dwelling units. As discussed in Sections 5.2 through 5.14, the proposed unit increase would not result in new significant impacts that were not previously identified in the Program EIR, because the overall development footprint is not significantly changed. Further, the unit increase would not result in significant impacts that cannot be fully mitigated to below significance. Public services and circulation would be provided commensurate with development, and the additional units would not result in a significant impact on facilities and services (see Sections 5.10 and 5.13). As discussed in Section 5.8, the anticipated growth in population and dwelling units is consistent with the growth forecasted by SANDAG and the Chula Vista Growth Management program. As such, no significant land use inconsistencies would result due to the increase in the permissible number of units in Village Two either within the SPA Plan area or with adjacent uses.

**TABLE 5.1-3  
COMPARISON OF GDP LAND USES AND THE PROPOSED SPA PLAN LAND USES  
WITHIN VILLAGES TWO AND THREE**

Land Uses	GDP Land Uses			Proposed Project Land Uses		
	Gross Acreage	Dwelling Units	Dwelling Units/Acre	Gross Acreage	Dwelling Units	Dwelling Units/Acre
Village Two						
Single-Family	228.2	709	3.1	190.7	986	5.0
Multi-Family	133.6	1,801	4.6	129.6	1,740	13.4
Mixed Use	--	N/A	N/A	6.8	60	N/A
Commercial	11.9	N/A	N/A	11.9	N/A	N/A
Industrial	80.2	N/A	N/A	87.9	N/A	N/A
CPF	9.7	N/A	N/A	6.1	N/A	N/A
Parks	58.6	N/A	N/A	59.6	N/A	N/A
School	10.1	N/A	N/A	10.3	N/A	N/A
Open Space	232.7	N/A	N/A	239.2	N/A	N/A
Streets	54.9	N/A	N/A	68.8	N/A	N/A
Village Two Total	818.9	2,510	N/A	818.9	2,786	N/A
Village Three						
Industrial	186.7	N/A	N/A	176.5	N/A	N/A
Open Space	146.8	N/A	N/A	146.9	N/A	N/A
Circulation	34.8	N/A	N/A	34.8	N/A	N/A
Park	--	N/A	N/A	-	N/A	N/A
CPF	--	N/A	N/A	10.2	N/A	N/A
Village Three Total	368.3			368.4		

SOURCE: Villages Two, Three, and a portion of Four SPA Plan (January 2006) and Otay Ranch GDP.

- 2) *General Plan and GDP Amendment to process a Boundary Adjustment to Chula Vista MSCP Preserve to accommodate proposed grading limits for Village Two, as well as to include additional lands in the MSCP Preserve within the northern portion of Wolf Canyon.*

The General Plan and Otay Ranch GDP incorporate the Chula Vista Subarea Plan and RMP. Analysis of consistency between the proposed Boundary Adjustment and the General Plan is based on consistency with the Subarea Plan and RMP.

Section 5.2.3.6 of the Subarea Plan contains the requirements for Boundary Adjustments, including preparation of equivalency findings. Equivalency Findings have been prepared for the proposed action to modify the MSCP Preserve boundary, and are contained in Section 5.3 and Appendixes B-1 and B-2 of this EIR. Further, a complete analysis of consistency with Policies 9.6 and 9.8 of the RMP relative to the proposed boundary adjustment is also contained in Section 5.3 of this EIR.

The analysis contained in Section 5.3 includes a biological functional equivalency analysis conducted for the proposed project based on Preserve boundaries included in the City's Subarea Plan. The proposed Boundary Adjustment would remove Preserve in the western fork of Wolf Canyon and add Preserve in the northern portion of the main drainage of the canyon. The adjustment, which would convert approximately 41.1 acres of developable land to Preserve, and permit development on approximately 30.0 acres of land identified as Preserve in the MSCP Subarea Plan, would result in a net increase to the Preserve of approximately 7.94 acres. The 30.0 acres of land to be removed from the Preserve has been and can continue to be cultivated and are thus generally void of sensitive habitat.

Further, the proposed project provides for more conservation of higher value habitat, including a net increase in conservation of 15.5 acres of maritime succulent scrub, a Tier 1 (rare uplands) habitat according to the Subarea Plan. In addition, the project Boundary Adjustment conserves an estimated 25,000 Otay tarplants that would be otherwise impacted without the Boundary Adjustment. Moreover, the adjustment would enhance habitat linkages by providing for improved Preserve design and adding new Preserve acreage.

In summary, based on the more detailed analysis included in Section 5.3, Biological Resources, of this EIR, the proposed Boundary Adjustment provides for higher biological value of the Preserve, and therefore, no significant impacts relative to consistency with the Subarea Plan or RMP would result.

- 3) *General Plan and GDP Amendment to delete Preserve areas in Village Two West and to delete the CSS requirement pursuant to a 1995 agreement with the Wildlife*

*Agencies (see Appendix B-4) incorporated in the County MSCP Subarea Plan and consistent with the City of Chula Vista Subarea Plan.*

Because the General Plan incorporates the Chula Vista Subarea Plan, analysis of consistency with the Subarea Plan also serves to address consistency with the General Plan.

Village Two West: The deletion of Preserve area within Village Two West would bring the Preserve Boundaries shown in the GDP into conformance with the Preserve Boundaries shown in the County MSCP Subarea Plan and the General Plan, which incorporates the Chula Vista Subarea Plan. Therefore, the action would not involve any changes that would result in inconsistencies with the County MSCP Subarea Plan, the General Plan, or the Chula Vista Subarea Plan, and would provide for better overall internal consistency. Therefore, no significant impacts related to General Plan/GDP consistency would result from this action.

Coastal Sage Scrub Restoration Requirement: Policy 2.2 of the RMP 1 sets standards for conservation levels of coastal sage scrub and maritime succulent scrub habitats, including a conservation requirement of 85 percent, which is anticipated to be achieved through a combination of preservation (a minimum of 70 percent) with restoration of disturbed and/or non-native habitats (15 percent or 1,300 acres). Policy 3.4 further requires development of a restoration program for coastal sage scrub and maritime succulent scrub habitat.

The proposed action would eliminate the requirement for coastal sage scrub restoration, but would not affect the maritime succulent scrub restoration requirement. This action is consistent with the provisions of the 1995 Letter Agreement, which specifically removed the coastal sage scrub restoration requirement in exchange for other benefits to the MSCP. The intent of the 1995 Letter Agreement (which is also discussed in Section 3.6 of this EIR) was, among other things, to ensure that the Otay Ranch was incorporated into both the Chula Vista Subarea Plan and County MSCP Subarea Plan. The primary advantage of incorporating the Otay Ranch into both the Chula Vista Subarea Plan and County MSCP Subarea Plan was to provide greater assurance of long-term conservation and management of biological resources. While the MSCP is both a Habitat Conservation Plan (HCP) under the federal Endangered Species Act, and a Natural Communities Conservation Plan (NCCP) under the state NCCP Act, the RMP is only a locally adopted and enforced plan with the primary purpose of providing mitigation for project impacts under CEQA. Therefore, incorporation of the Otay Ranch Preserve into the MSCP, rather than just the RMP, provided additional assurances for the conservation and management of biological resources in the long term, and provided the Wildlife Agencies with federal and state enforcement mechanisms through both the Implementing Agreement that accompanied the MSCP, and the issuance of federal and state permits, including conditions that are enforceable directly by the Wildlife Agencies.

In order to achieve the goal of incorporating the Otay Ranch into the Chula Vista Subarea Plan and the County MSCP Subarea Plan, the parties to the 1995 Letter Agreement collectively agreed to a number of revisions to the Otay Ranch land plan (including deletion of the Preserve areas in Village Two West) as well as revisions to certain of the approved GDP/RMP policies (including deletion of the coastal sage scrub restoration requirement). With regard to the land plan revisions, for example, changes were made so as to enhance the long-term viability and sustainability of the Otay Ranch and MSCP Preserve system. Specifically, the parties agreed to eliminate development that had already been approved in the GDP for (1) approximately 140 acres and 372 dwelling units in the Resort Village 13; (2) approximately 90 acres and 33 dwelling units in Village 15 southeast of the Lower Otay Reservoir; and (3) approximately 299 acres and 345 dwelling units in Village 14 (see Figure 3-13). These areas, which were previously approved for development, were added to the Otay Ranch and MSCP Preserve system. These areas were deemed to provide significant contributions to the long-term sustainability of the Preserve as they contained high-quality habitat, and contributed significantly to the connectivity and integrated size of the preserve system.

In exchange for the long-term benefits derived by including the Otay Ranch in the MSCP program, and in exchange for elimination of the otherwise developable areas identified above, the parties to the 1995 Letter Agreement agreed (1) to allow development in certain areas containing low quality, fragmented and isolated habitats not sustainable in the long term (e.g., the Preserve areas in Village Two West) and (2) to eliminate the coastal sage scrub restoration requirement. In short, the terms of the 1995 Letter Agreement contributed to the long-term viability of the preserve system and, accordingly, were incorporated directly into the County MSCP Subarea Plan.

Because of the benefits provided through the 1995 Letter Agreement, and because the proposed action would bring consistency between the General Plan, GDP/SRP and MSCP, impacts related to consistency of the proposed action with the provisions of any local land use plans, policies, or regulations are considered to be less than significant.

- 4) *GDP Amendment to eliminate the SPA One Conveyance Schedule and to allow Villages Two, Three, and all subsequent Villages to convey any Otay Ranch Preserve lands in satisfaction of each Village's conveyance requirement.*

Policy 5.6 of the RMP 1 requires that the City and County (in coordination with the POM) develop and approve a plan for the orderly conveyance of dedicated parcels of land to the Preserve. Both the City and the County adopted a conveyance schedule with the RMP 2 and subsequently amended the conveyance schedule in connection with the Otay Ranch SPA One Plan. The adopted conveyance schedules of the City and County have different boundaries, but generally reference similar areas, with the exception that the County Conveyance Schedule includes additional lands within the vernal pool preserve on the Otay Mesa portion of the Otay Ranch.

The proposed SPA Plan includes an amendment to the GDP/RMP to eliminate SPA One Conveyance Schedule. This would require an amendment to Policy 5.6 of the RMP. A detailed discussion of all relevant policies pertaining to the Conveyance Amendment is provided in Appendix B-3 to this EIR. That analysis demonstrates consistency of the proposed action with the specific guidelines included in RMP 1, Policy 5.6.

The GDP/RMP Amendment proposes to eliminate the SPA One Conveyance Schedule in light of changes in circumstances related to the Otay Ranch Preserve lands since the schedule was adopted in 1993. As a general matter, the SPA One Conveyance Schedule and the Policy 5.6 guidelines sought to convey Preserve lands with the highest quality resources and/or in the most vulnerable areas, beginning with certain “keystone” parcels. Since adoption of the SPA One Conveyance Schedule, the majority of Preserve lands in the schedule that met these requirements: (a) have been offered for dedication already; (b) are to be offered for dedication as a condition of development that has now obtained discretionary approvals and only awaits final map approval; or (c) have been acquired for purposes of non-Otay Ranch mitigation or for preservation as permanent open space.

The proposed GDP Amendment, therefore, is necessary at this time to facilitate the orderly completion of the Otay Ranch Preserve and the systematic development of Otay Ranch because:

- Sufficient land is not available to satisfy the remaining SPA One Conveyance Schedule;
- Additional environmental regulations have added more certainty to the Preserve and have ensured the protection of previously vulnerable areas; and
- Priorities have evolved since adoption of the SPA One Conveyance Schedule, such that high quality biological resources are found on other Preserve lands within Otay Ranch.

In light of the change in circumstances, it is necessary to amend the GDP and eliminate the SPA One Conveyance Schedule to allow all villages to convey any Otay Ranch Preserve lands in satisfaction of each village's preserve conveyance requirement. These lands include Wolf Canyon and upland habitat areas adjacent to the Otay River floodplain; the central and northern portions of the Proctor Valley Parcel; and the remaining Preserve areas in the San Ysidro Parcel. These additional Preserve areas comprise upland habitat areas within the Otay Valley that support high-quality resources, including maritime succulent scrub, coastal sage scrub, and native grassland. Wolf Canyon, in particular, has been undergoing extensive restoration efforts for the past several years, which has resulted in the establishment of approximately 45 acres of maritime succulent scrub habitat along the western slopes of the canyon. An additional 81 acres of maritime succulent scrub is included within the areas outside of the SPA

One Conveyance Schedule. The upland areas in the Otay River floodway have restoration potential, are subject to ongoing threats from encroaching development, and provide important habitat connectivity functions between core resource areas to the east and San Diego Bay to the west. The additional preserve areas to be added within the Proctor Valley and San Ysidro parcels represent large habitat blocks providing linkages to other Preserve areas identified as part of the MSCP. Amending the GDP to eliminate the SPA One Conveyance Schedule and allow the inclusion of these three general areas that are currently outside of the SPA One Conveyance Schedule would effectively comprise the entire RMP Otay Ranch Preserve.

In summary, inclusion of the entire Otay Ranch RMP Preserve at this time would provide contiguity of ownership and management by the designated POM. Based on the analysis of the relevant guidelines from RMP Policy 5.6, the proposed action to amend the GDP and eliminate the SPA One Conveyance Schedule would be consistent with the provisions and requirements of that policy, and no significant impacts related to plan consistency would result.

#### *Zoning Ordinance*

The proposed SPA Plan, once adopted, would establish Planned Community District Regulations for development within Villages Two, Three, and a portion of Village Four of Otay Ranch. For issues not covered by the Planned Community District Regulations, applicable City regulations would apply. The proposed structures must meet the applicable height, setback, and coverage regulations specified in the various regulatory documents that would be adopted as part of the overall SPA Plan documentation. Therefore, the proposed SPA Plan project is consistent with PC Zone regulations and no significant land use impacts related to regulations of the zoning ordinance would result.

#### *Composite Tentative Map*

The Composite TM conforms to the SPA Plan and is consistent with the residential district development standards for lot sizes under the PC Zoning regulations. Additionally, open space buffers are shown between residential lots and arterial roadways, consistent with the adopted General Plan and the GDP. Furthermore, the Composite TM also identifies open space, outside of individual private lots, along Poggi and Wolf Canyons in conformance with Otay Ranch GDP policies. Landscape buffers consistent with the GDP vary along the canyon rim, but average 75 feet.

#### *SANDAG Growth Management Plan and Strategy*

The Growth Management Plan (GMP) includes a Growth Management Strategy. As stated above, the strategy incorporates population, housing, and transportation forecasts, including specific projections for the city of Chula Vista. Although the

proposed project is not required to conform to the GMP, the plan and its growth projections serve as the basis for forecasting services for the population demand-based issues. Seven of the nine quality of life factors included in the Growth Management Strategy (air quality, transportation/congestion management, water, sewage treatment, hazardous waste management, sensitive lands and open space preservation and protection, and housing) are addressed in the Otay Ranch GDP, the proposed SPA Plan and PFFP, and/or this EIR. Economic prosperity is not directly addressed by the Otay Ranch GDP, proposed SPA Plan, PFFP, or EIR; although the PFFP includes a fiscal analysis of the project as well as the proposed financing for public facilities required for project implementation.

The housing program outlined in the SPA Plan conforms to the City's Affordable Housing Program and is consistent with the Strategy's housing goals. As stated above, the Affordable Housing Program requires new projects involving 50 or more units to set aside a minimum of 10 percent of the project's units as affordable to low- and moderate-income households. In addition to helping reduce the projected county-wide housing shortfall, the project also proposes a portion of the dwelling units for affordable housing. The proposed SPA Plan would generate 278 low- and moderate-income households (139 low- and 139 moderate-income households). This demand will be met through the provisions of affordable units with Village Two and through credits from other affordable units provided by the applicants in surrounding Otay Ranch. This housing program is consistent with the Strategy's fair-share objective that seeks to ensure affordable housing and similar measures to accommodate low and moderate income families.

The Village concept is intended to cluster development in an appropriately sized area with conveniently located homes, jobs, schools, parks, and other daily needs. The SPA Plan would also establish a pedestrian-oriented village with an intense urban core to reduce reliance on the automobile, and promote walking and use of bicycles, buses, and transit. The promotion of synergistic uses between villages to balance activities, services, and facilities while planning land uses in accordance with the natural setting and physical character of the region would concentrate development into less sensitive areas and preserve large tracts of contiguous open space containing sensitive resources. These project characteristics are in substantial conformance with SANDAG's Regional Growth Management Strategy. Therefore, there would be no significant land use impacts related to the SANDAG Growth Management Plan and Strategy.

Threshold 3: Conflict with any applicable habitat conservation plan or natural community conservation plan.

*Otay Ranch Resource Management Plan (RMP)*

The proposed project would amend the RMP to include the following:

- 1) *Refine the RMP preserve boundary to accommodate proposed grading limits for Village Two, as well as to include additional lands in the RMP preserve within the northern portion of Wolf Canyon.*

As discussed under Threshold 2 in the General Plan/GDP analysis, the proposed Boundary Adjustment provides for higher biological value of the Preserve, and therefore no significant impacts to regional resource planning related to the RMP would result.

- 2) *Pursuant to a 1995 Agreement with the Wildlife Agencies included in the County's MSCP Subarea Plan, the following RMP amendments are proposed:*
  - i) Eliminate three development areas totaling approximately 139 acres at the east end of Village 13 converting the land to open space preserve;
  - ii) Eliminate the development designation from approximately 98 acres at the southwest edge of Village 15 converting the land to open space preserve;
  - iii) Expand the development area by approximately 62 acres within Village One, and Village One West;
  - iv) Delete the "Potential Avian Corridor" between Village Two West and Wolf Canyon;
  - v) Delete Preserve areas in Village Two West; and
  - vi) Eliminate the RMP Coastal Sage Scrub Restoration requirement.

An Otay Ranch GDP/SRP amendment was adopted by the City of Chula Vista City Council on November 10, 1998 and by the San Diego County Board of Supervisors on July 18, 2001, to revise the GDP/SRP land use designations for items i, ii, and iii above; however, the RMP amendments were not adopted at the same time. Therefore, the RMP amendments are included in this project to make the RMP consistent with the Otay Ranch GDP.

Items i. through v., above: The analysis provided under Threshold 2, General Plan/GDP discussion and Section 5.3 describes consistency issues related to the Boundary Adjustment proposed for the Village Two area. In addition to those changes, the 1995 Agreement includes additional boundary modifications that exchange conservation areas in portions of the Otay Ranch. Specifically, the action would remove Preserve areas in the western portions of Village Two, in exchange for additional Preserve areas in the Proctor Valley and San Ysidro Parcels of Otay Ranch, consistent with the City and County MSCP Subarea Plans (see Project Description Figures 3-12, 3-13, and 3-14). This exchange of land would result in an increase of 237 acres of preserve and a decrease of 62 acres of development area. Another result of the boundary adjustment would be the elimination of the avian corridor between Poggi and Wolf Canyons. Wolf Canyon is an extension of the preserve system from the Otay River valley, capturing live-in habitat for birds and smaller mammal species. While Wolf Canyon is identified in the Otay Ranch Wildlife Corridor Study as a local corridor for target mammal species, it is not designated a regional wildlife movement corridor and, therefore, offers little linkage value. The proposed Boundary Modification does not significantly alter the ability of wildlife (including target mammal species as identified in the Wildlife Corridor Study) to move through the area, and does not preclude linkages of habitat. The Boundary Modification would enhance habitat linkages by providing improved preserve design, additional Preserve acreage, and increased amounts of coastal sage scrub and maritime succulent scrub.

The primary function of the western fork of Wolf Canyon in the original RMP Preserve design was to accommodate a manufactured corridor between Wolf Canyon and coastal sage scrub resources in Poggi Canyon. However, as a result of the exchange of Preserve areas, eliminating the coastal sage scrub resources in Poggi Canyon, the proposed corridor is no longer proposed because it would not serve any functional purpose. Therefore, removal of the proposed manufactured corridor does not represent a significant inconsistency, since the primary function of the design of the Preserve in the affected area has already been modified by previous actions.

Item vi, above: Please see discussion of the removal of the coastal sage scrub restoration requirement under Threshold 2, General Plan/GDP.

*3) Amend the RMP to eliminate the SPA One Conveyance Schedule and to allow Villages Two, Three, and all subsequent Villages to convey any Otay Ranch Preserve lands in satisfaction of each Village's conveyance requirement.*

This amendment to the RMP to eliminate the SPA One Conveyance Schedule is similar to the amendment required for the GDP discussed above. Therefore, please refer to the analysis of this discretionary action under Threshold 2, GP/GDP.

*Multiple Species Conservation Program*

As stated above, the proposed project requires a boundary adjustment to the MSCP Preserve boundary and the City's Subarea Plan to accommodate the proposed grading limits for Village Two, as well as to include additional lands within the northern portion of Wolf Canyon in the MSCP Preserve. The applicable policies of the MSCP Subarea Plan relative to this action are those pertaining to MSCP Boundary Adjustments contained in Section 5.2.3.6 of the Subarea Plan. A detailed analysis of the proposed Boundary Adjustment pursuant to the requirements of Section 5.2.3.6 of the Subarea Plan is contained in Section 5.3 and Appendix B-1 of this EIR.

As noted in the analysis of the Boundary Adjustment contained in Section 5.3, the proposed Preserve Boundary Adjustment would provide a net benefit to conservation of Covered Species and habitats within the modified Preserve by inclusion of additional Tier I habitat, providing for higher biological value of the Preserve. Therefore, no significant impacts relative to consistency with the MSCP would result.

**5.1.4 Summary of Significance Prior to Mitigation**

The SPA Plan area is currently undeveloped, but is planned for development in the City's General Plan and the Otay Ranch GDP. The proposed design and layout of land uses for the SPA Plan would be compatible with one another, as well as be compatible with surrounding communities. The area surrounding the proposed SPA Plan area consists of recently developed or planned development, and therefore, development of the proposed SPA Plan would not physically divide an established community. However, consistent with the conclusion in the Program EIR, development of the SPA Plan and composite TM would result in a significant change in the character of the site from undeveloped to developed urban use. This impact would remain a significant unavoidable impact.

With adoption of the proposed General Plan and Otay Ranch GDP amendments, implementation of the SPA Plan would not conflict with an adopted plan, policy, or regulation established to avoid environmental effects.

The proposed RMP amendments would not adversely affect the ability to meet all of the objectives, policies, standards and guidelines related to conservation of biological resources and design and configuration of the Otay Ranch Preserve. The modified preserve design provides for better contiguity of habitat and includes areas that are already being managed for recovery (maritime succulent scrub revegetation area), that were not included in the original Preserve design. As a result, the proposed Boundary Adjustment provides for higher biological value of the Preserve, and, therefore, no significant impacts would result.

Conservation thresholds for coastal sage scrub in the Program EIR have nearly been satisfied. Anticipated impacts to coastal sage scrub have been reduced because of acquisition and preservation of land that had previously been planned for development. There would be no significant land use impacts resulting from the elimination of the coastal sage scrub restoration requirement.

The proposed GDP/RMP amendment to eliminate the SPA One Conveyance Schedule at this time allows for additional Preserve land area outside the adopted SPA One Conveyance Schedule to be conveyed, which would provide important habitat linkages to other Preserve areas identified in the MSCP and Chula Vista Subarea Plan, and facilitates completion of the Otay Ranch Preserve over the long term. There would be no significant land use impact resulting from the elimination of the SPA One Conveyance Schedule.

#### **5.1.5 Mitigation Measures**

No significant land use impacts were identified that could be mitigated to below significance. Implementation of the proposed SPA Plan and Composite TM would result in the conversion of the site from undeveloped to developed urban uses, as identified in the Otay Ranch GDP Program EIR. Therefore, this impact remains significant.

#### **5.1.6 Level of Significance After Mitigation**

The conversion of the SPA Plan area from undeveloped to developed urban uses would remain a significant unavoidable impact.

## **5.2 Landform Alteration and Visual Quality**

### **5.2.1 Existing Conditions**

The Otay Ranch GDP Program EIR, Section 3.2, Landform Alteration/Aesthetics, analyzed the existing conditions, potential impacts, and mitigation measures related to landform alteration and visual quality for the Otay Ranch GDP. The Otay Ranch GDP Program EIR identified significant impacts to landform alteration and aesthetics caused by the change of land use from undeveloped to urban, and due to the alteration of significant or sensitive landforms. The landform and aesthetics section from the Otay Ranch GDP Program EIR is applicable to the proposed SPA Plan because the project would implement the Otay Ranch GDP by converting undeveloped land to urban uses and altering the landform to achieve the overall plan. Additionally, new sources of lighting would be introduced. Relative to aesthetics, nighttime lighting impacts were found to be less than significant in the Otay Ranch GDP Program EIR. The adopted mitigation measures incorporated specific landform alteration standards into the Otay Ranch GDP and required implementation of specific measures to be implemented at the SPA Plan level to reduce grading and visual resource impacts. However, even with mitigation, the Otay Ranch GDP Program EIR determined that the conversion of undeveloped land to urban uses is a significant and unmitigable impact of development. The analysis and discussion of landform and visual elements from the Otay Ranch GDP Program EIR are incorporated herein by reference.

The following discussion focuses on the project-specific impacts to landform alteration and visual quality that would result from implementation of the proposed SPA Plan.

#### **Physical Environment**

Elevations on-site vary from approximately 140 feet above MSL at the southwestern boundary to 530 feet above MSL at the northeastern boundary. Figure 5.2-1 shows the proposed SPA Plan area and surrounding areas. The SPA Plan area consists of rolling hills in its central portion and relatively steep tributary canyons in its northern and southern portions. There are numerous drainages that occur in the northeastern portion of the project site. Figure 5.2-2 shows the topographic conditions associated with the SPA Plan site. The project area is traversed by a system of dirt roads and cattle trails and consists of active and fallow agricultural lands that have been historically cultivated and grazed. Vegetation includes a moderate growth of brush and native vegetation and grasses.

The Otay Ranch GDP Program EIR identified slopes greater than 25 percent as visual resources, including slopes greater than 25 percent within the SPA Plan area (Figure 5.2-3). The SPA Plan area contains 143.0 acres of steep slopes, including 115.2 acres in Village Two and the Community Park site within Village Four and 27.8 acres in Village Three. The most visible steep slope locations are along the Prime Arterial streets and adjacent to Poggi and Wolf Canyons. Poggi Canyon, located in the northern portion of Village Two, is a steep,

Image Source: Copyright 2004 AirPhotoUSA, L.L.C. All Rights Reserved (from April 2004)

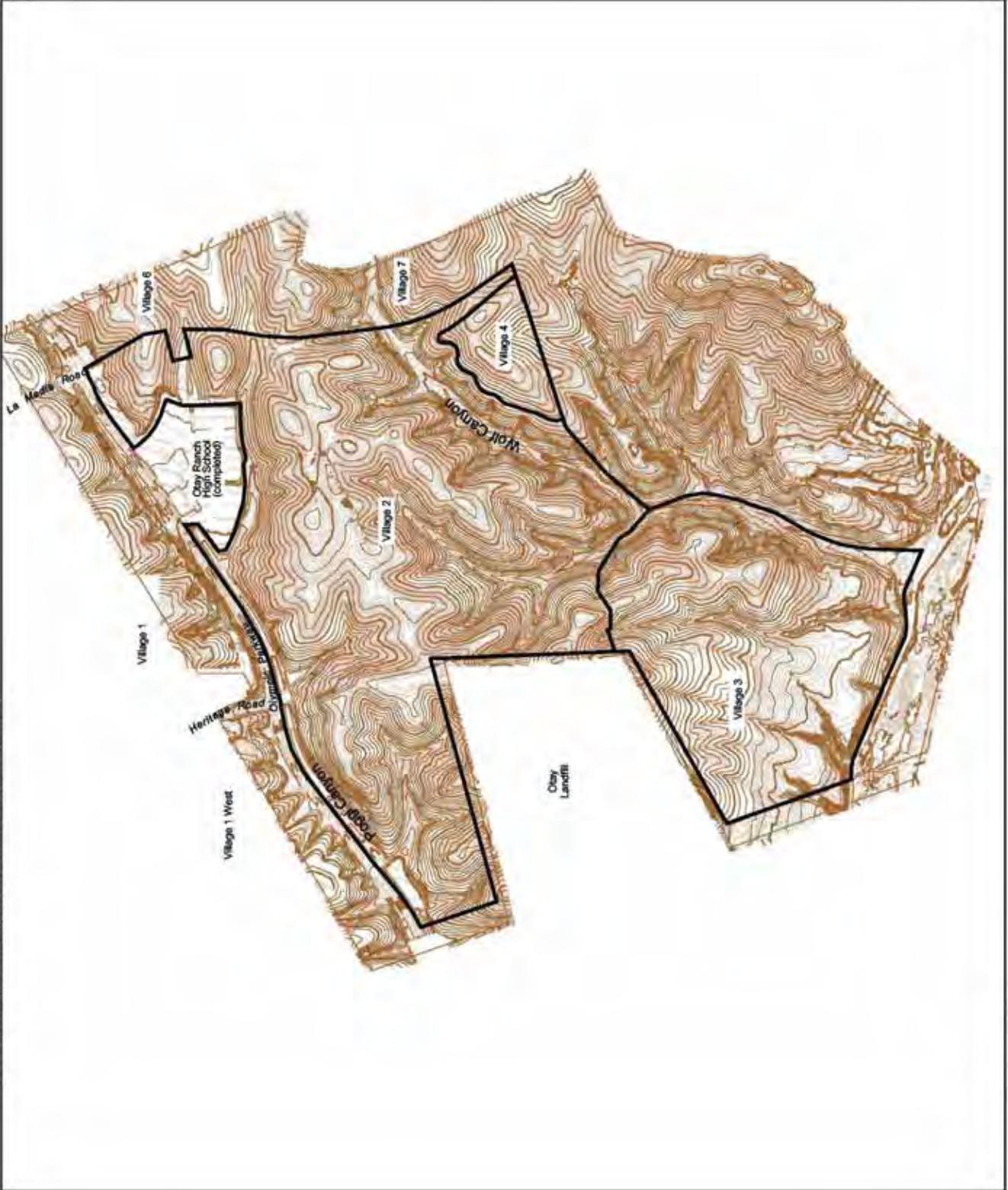


SPA Plan boundary

FIGURE 5.2-1  
Aerial Photograph of  
Project and Vicinity

M:\0502020100\0502020100.apr  
Fig. 5.2-1 (aerial) 2/10/04

Map Source: Humsakar & Associates, digital AutoCAD drawing received 03/24/04.



Project boundary

FIGURE 5.2-2  
Existing Landform

M:\GIS\Projects\5.2\5.2-2.dwg

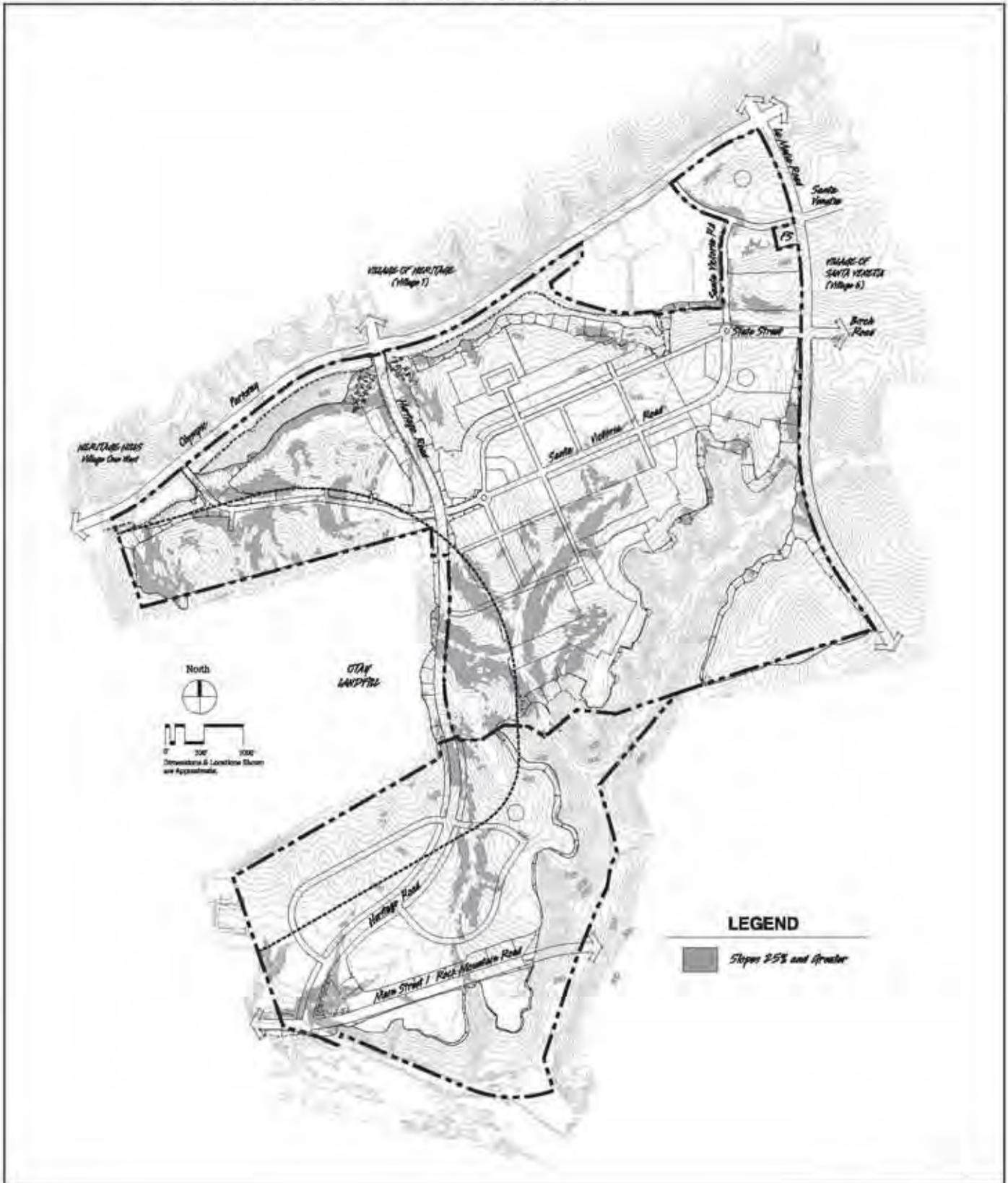


FIGURE 5.2-3  
Steep Slopes Map

narrow drainage channel that has been modified due to construction of Olympic Parkway. Wolf Canyon is located in the southern portion of Village Two and east of Village Three (see Figures 5.2-1 and 5.2-2).

### Views

Photographs 5.2-1 through 5.2-3 show the current condition of the SPA Plan area. Photograph 5.2-1 shows the existing view looking south from Olympic Parkway. Olympic Parkway is in the foreground and landscaping associated with construction of Olympic Parkway aligns the road. Although not visible, Poggi Canyon is located on the south side of the existing landscaping. In the distance, there is native brush and agricultural operations. Photograph 5.2-2 shows the existing view looking west from La Media Road. La Media Road is in the foreground, landscaping in the median as well as along the western right-of-way is visible. In the distance, a manufactured slope associated with the construction of La Media Road precludes visibility of the Village Two site. Photograph 5.2-3 shows the existing view looking north from the future community park site in Village Four. The upper fingers of Wolf Canyon are shown in the foreground, along with patches of brush and native vegetation. In the distance, agricultural operations are evident up to the rim of the canyon on the north and northwest.

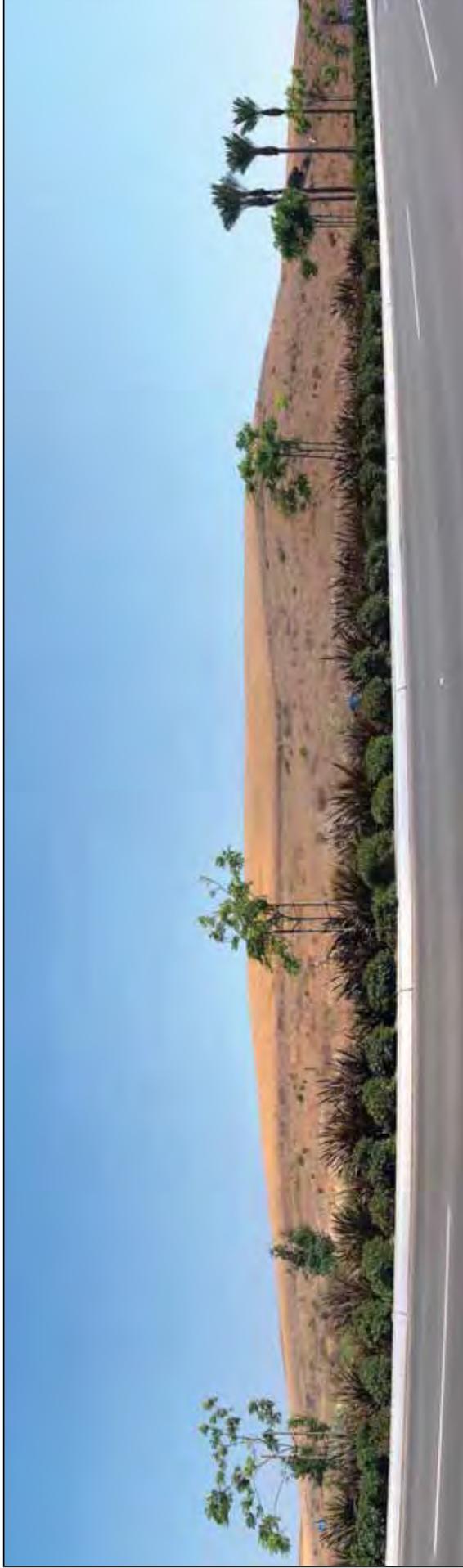
### Landform and Visual Policies

#### *General Plan*

The General Plan contains objectives and policies to preserve and enhance scenic resources. These include the continued environmental protection of the open space network, as well as design policies for features such as views, entryways, gateways, streetscapes, buildings, parks, and plazas. Table 5.2-1 lists the relevant landform and visual policies in the Land Use and Transportation Element of the City's General Plan.

#### *Otay Ranch GDP and Phase 2 RMP*

The Otay Ranch GDP and RMP establish a ranch-wide standard that require preservation of at least 83 percent of the steep slopes (slopes with gradients of 25 percent or greater) throughout the Otay Ranch. As an implementing action of the GDP/RMP, a steep slope allocation table was provided as part of the Phase 2 RMP. This original steep slope tabulation assumed that 17 percent of Otay Ranch's steep slopes (1,301 acres) would be impacted by proposed development. With regard to the proposed SPA Plan, the GDP/RMP specifically allocated 127.7 acres of steep slope impacts to Villages Two, Three, and a portion of Village Four (Table 5.2-2).



PHOTOGRAPH 5.2-1  
Existing View: Looking South from Olympic Parkway



PHOTOGRAPH 5.2-2  
Existing View: Looking West from La Media Road



PHOTOGRAPH 5.2-3  
Existing View: Looking North from Future Community Park Site

**TABLE 5.2-1  
RELEVANT GENERAL PLAN UPDATE LANDFORM AND VISUAL POLICIES**

Objectives	Policies
<p><b>Objective LUT 8</b> Strengthen and sustain Chula Vista's image as a unique place by maintaining, enhancing and creating physical features that distinguish Chula Vista's neighborhoods, communities, and public spaces, and enhance its image as a pedestrian-oriented and livable community.</p>	<p><b>LUT 8.1:</b> Develop a program to enhance the identity of special districts and neighborhoods to create variety and interest in the built environment, including such items as signage, monuments, landscaping and street improvements.</p> <p><b>LUT 8.2:</b> Emphasize certain land uses and activities, such as cultural arts, entertainment, specialty retail, or commercial recreation, to enhance or create the identity of specialized districts or Focus Areas in the City.</p> <p><b>LUT 8.3:</b> Ensure that buildings are appropriate to their context and designed to be compatible with surrounding uses and enhance the desired character of their district.</p> <p><b>LUT 8.4:</b> Encourage and require, where feasible, the incorporation of publicly accessible urban open spaces, including parks, courtyards, water features, gardens, passageways, paseos, and plazas, into public improvements and private projects.</p> <p><b>LUT 8.5:</b> Prepare urban design guidelines that help to create pedestrian-oriented development by providing:</p> <ul style="list-style-type: none"> <li>• Pedestrian circulation among parcels, uses, transit stops, and public or publicly accessible spaces;</li> <li>• Human scale design elements;</li> <li>• Varied and articulated building facades;</li> <li>• Visual (first floor clear glass windows) and physical access for pedestrians;</li> <li>• Ground floor residential and commercial entries that face and engage the street; and</li> <li>• Pedestrian-oriented streetscape amenities.</li> </ul> <p><b>LUT 8.6:</b> Develop a master plan for artwork in public places that would identify the types of art desired and establish appropriate settings for the display of art, including within public rights-of-way and landscape medians.</p>

**TABLE 5.2-1  
RELEVANT GENERAL PLAN UPDATE LANDFORM AND VISUAL POLICIES  
(continued)**

Objectives	Policies
<p>Objective LUT 13 Preserve scenic resources in Chula Vista, maintain the city's open space network, and promote beautification of the city.</p>	<p>LUT 13.1: Identify and protect important public viewpoints and viewsheds throughout the planning area, including features within and outside the planning area, such as mountains, native habitat areas, San Diego Bay, and historic resources.</p> <p>LUT 13.2: Continue to implement the city's planned open space network.</p> <p>LUT 13.4: Any discretionary projects proposed adjacent to scenic routes, with the exception of individual single-family dwellings, shall be subject to design review to ensure that the design of the development proposal will enhance the scenic quality of the route. Review should include site design, architectural design, height, landscaping, signage, and utilities. Development adjacent to designated scenic routes should be designed to:</p> <ul style="list-style-type: none"> <li>• Create substantial open areas adjacent to scenic routes through clustering development;</li> <li>• Create a pleasing streetscape through landscaping and varied building setbacks, and</li> <li>• Coordinate signage, graphics and/or signage requirements, and standards.</li> </ul>

**TABLE 5.2-1  
RELEVANT GENERAL PLAN UPDATE LANDFORM AND VISUAL POLICIES  
(continued)**

Objectives	Policies
<p><b>Objective LUT 79</b> Establish appropriate land uses adjacent to the Otay Landfill and Wolf Canyon that reflect the unique land use and landform characteristics of these areas.</p>	<p><b>LUT 79.1:</b> Prior to or concurrent with the approval of a SPA Plan for Village Two, Two West, and the Otay Ranch industrial/business park, ensure that the design of these areas reflects the unique characteristics of the landform and surrounding land use.</p> <p><b>LUT 79.2:</b> Preserve and protect view opportunities and provide view corridors to open space areas to the south and east from the high mesa locations of Village Two and from along the edges of Poggi and Wolf Canyons.</p> <p><b>LUT 79.3:</b> The size and design of lots and graded pads shall be suitable to accommodate a range of appropriate types of users within industrial areas.</p> <p><b>LUT 79.4:</b> Prior to or concurrent with approval of a SPA Plan for Village Two West, ensure that single-family residential development in Village Two West provides appropriate open space adjacent to industrial uses that are located adjacent to the Otay Landfill.</p> <p><b>LUT 79.5:</b> Limit land uses adjacent to the Otay Landfill to open space and limited industrial uses or business parks.</p>
<p><b>Objective LUT 80</b> Protect the natural features of the Otay Ranch Preserve located in Wolf Canyon.</p>	<p><b>LUT 80.1</b> Maintain the natural landform character of Wolf Canyon by implementing policies of the Chula Vista Multiple Species Conservation Program (MSCP) Subarea Plan.</p> <p><b>LUT 80.2</b> Ensure development respects existing landforms by utilizing landform grading techniques in areas that interface with Poggi and Wolf Canyons.</p>

**TABLE 5.2-2  
STEEP SLOPE ALLOCATION FOR THE PROJECT AREA**

Area	RMP Allocation (acres)
Village Two	88.0
Village Three	30.9
Village Four	8.8*
<b>TOTAL</b>	<b>127.7</b>

SOURCE: Phase 2 RMP, Exhibit 29.

\*Village Four is allocated a total of 67.8 acres of steep slope impacts; however, the project only proposes to construct the community park, which represents approximately 13 percent of the total area of Village Four. This calculated ratio would, therefore, result in a steep slope allocation of 8.8 acres for Village Four.

In November 1998, the SPA One Plan revised the original steep slope allocations to Villages One, Five, Thirteen, and Fifteen. Based on this reallocation, the total number of estimated steep slopes impacted by development of Otay Ranch was reduced to 1,281.5 acres. Overall, the revisions to the Village One SPA Plan resulted in a net surplus of 18.8 acres of steep slope encroachment, as compared to the originally forecasted GDP impact of 1,301 acres. In addition, based on current tabulations for completed SPA Plans (Villages One, Five, Six, Seven, Eleven, and the Freeway Commercial), it has been estimated that an additional 1.0 acre of steep slopes were not impacted as a part of the grading for these projects. Therefore, the combination of both of these totals results in a surplus of 19.8 (18.8+1.0) acres of steep slopes that can be disturbed, while still maintaining the 83 percent slope preservation standard of the Otay Ranch GDP and Phase 2 RMP.

The Phase 2 RMP requires that the ranch-wide preservation standard must be reviewed and monitored as additional Otay Ranch villages are processed to ensure that the ranch-wide goal of steep slopes preservation is maintained. While maintaining consistency with the Otay Ranch GDP standard for steep slopes, the Phase 2 RMP further allows some flexibility on steep slope encroachment outside of the acreages allocated for each village if a justification is provided explaining why the excess encroachment would not jeopardize the ability to achieve the 83 percent slope preservation standard.

#### *Lighting/Astronomical Dark Sky*

Two major observatories are located within 50 miles of the project area: Mount Laguna Observatory, located 20 miles from the SPA Plan area, and Palomar Mountain Observatory, located 37 miles from the SPA Plan area. Both of these observatories use large telescopes and conduct astronomical and other related research. Light pollution within a 50 mile radius of the observatories must be controlled.

The County of San Diego has adopted a Light Pollution Code (Title 5, Division 9) that covers the installation and use of outdoor light fixtures within the unincorporated areas of

the county. Areas within a 15-mile radius of both observatories are more strictly regulated than the rest of the unincorporated areas. The SPA Plan site is outside the jurisdiction of the County. The City does not have a dark skies ordinance.

The project site is not currently lighted at night. However, areas to the north and east of the site are either developed or have been approved for development. Therefore, the project site is part of an urban lighted area, particularly when viewed from a distance of 50 miles.

### 5.2.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, the proposed project would have a significant impact on landform and visual quality if it would:

- Threshold 1: Have a substantial adverse effect on a scenic vista;
- Threshold 2: Substantially degrade scenic resources, including but not limited to trees, rock outcroppings, or historic buildings within a state scenic highway;
- Threshold 3: Substantially degrade the existing visual character or quality of the site and its surroundings;
- Threshold 4: Create a new source of substantial light or glare which would adversely affect day- or nighttime views in the area.

The Otay Ranch GDP Program EIR found that implementation of the Otay Ranch GDP would result in significant unmitigable impacts to landform/visual resources. This EIR tiers from the Otay Ranch GDP Program EIR; therefore, significant impacts may result if the proposed SPA Plan would:

- Threshold 5: Alter areas of sensitive landforms; and
- Threshold 6: Grade steep slopes that may be visible from future development and roadways.

### 5.2.3 Impacts

Thresholds 1, 2, and 3: Have a substantial adverse effect on a scenic vista; substantially degrade scenic resources, including but not limited to trees, rock outcroppings, or historic buildings within a state scenic highway; or substantially degrade the existing visual character or quality of the site and its surroundings.

Olympic Parkway is a General Plan–designated urban scenic highway, located adjacent to Village Two to the north. The Village Two development would be visible from Olympic

Parkway. Existing views from the Olympic Parkway segment fronting the SPA Plan project site currently include single-family and multi-family residential development on the north side of the roadway and agricultural land on the south side (see Figure 5.2-1). These views of the SPA Plan area from Olympic Parkway are not considered scenic vistas and no scenic resources are visible from this roadway.

The proposed SPA Plan includes design development standards for its residential districts and requires implementation of its landscaping concept within the village. A landscaped parkway would be located along the Village Two border with Olympic Parkway to minimize impacts to visual quality. Therefore, the proposed SPA Plan would not result in significant impacts to scenic vistas or resources.

The visual impacts of the proposed development on surrounding areas would depend upon several factors including visibility of the proposed development from scenic roadways, vista points, and other sensitive scenic resources that are identified by the City of Chula Vista as visual settings of particular concern.

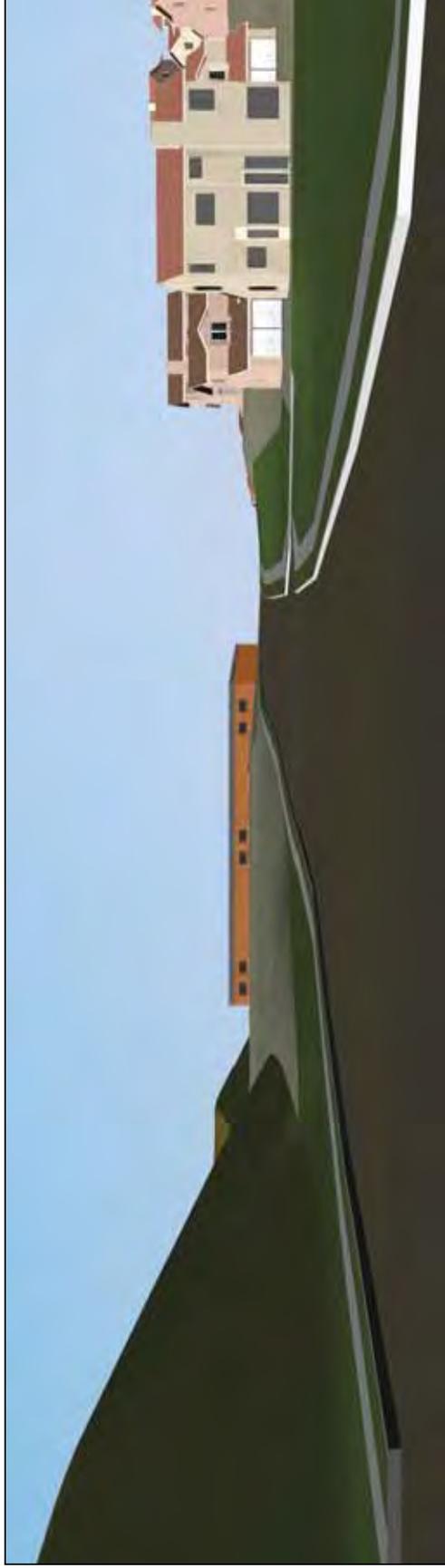
Development of the project site would change the view of the site from an undeveloped area used for agricultural activities to an urban area consisting of single-family residential, multi-family residential, community purpose facilities, an elementary school, parks, commercial uses, open space, and circulation rights-of-way. Potentially significant visual impacts from public areas include Olympic Parkway, La Media Road, Heritage Road, and the proposed Community Park in Village Four.

In order to demonstrate the change in the aesthetic character and describe the visibility of the developed project site from surrounding areas, two photosimulations were prepared using site photographs and computer-generated three-dimensional project modeling to illustrate potential visual impacts of the proposed project on off-site viewers and scenic resources. Figure 5.2-4 shows the photosimulations locations, which include: (1) a southeasterly view of Village Two from a location along Heritage Road (Figure 5.2-5), and (2) a northwesterly view of Village Two from the proposed Community park site in Village Four (Figure 5.2-6). Each of the photosimulations portrays the graded and developed site from Heritage Road and the proposed Community Park and depicts the existing, developed, and developed with landscaping conditions. The proposed landscaping treatment of the manufactured slopes has been included in the photosimulations to represent the anticipated condition and texture of the slopes approximately five years after planting.

Figure 5.2-5 shows the view of Village Two West from Heritage Road and D Street. An existing photograph could not be taken from this vantage point because this road has not yet been graded and the grading plan proposes a change in grade with development of the proposed project. The developed viewshed from this vantage point would include industrial buildings to the south of D Street and single-family residential units to the north. The



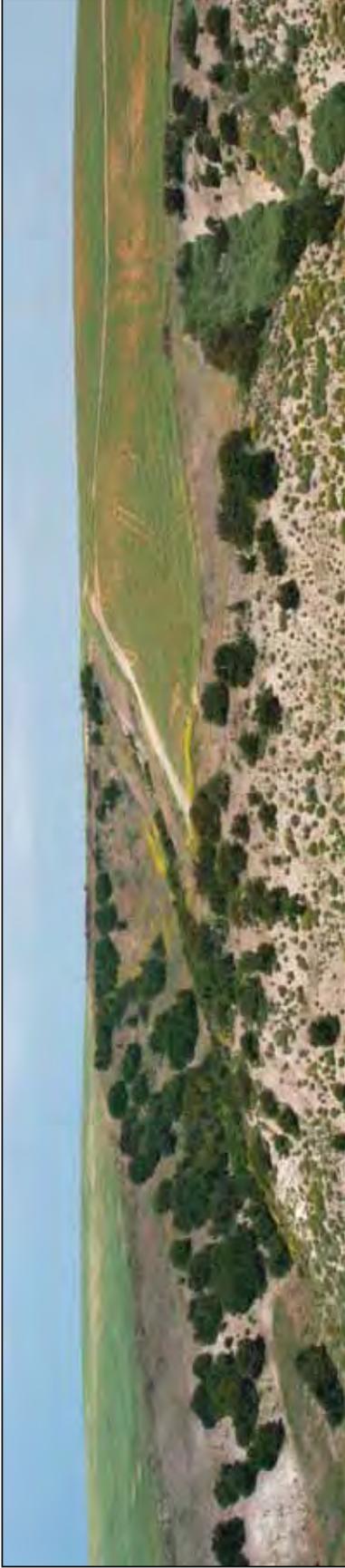
AFTER PROJECT  
DEVELOPMENT-  
Industrial in buffer



AFTER PROJECT  
LANDSCAPING-  
Industrial in buffer



FIGURE 5.2.-5  
Project Simulation View: Looking West Towards Village Two West From Intersection of Heritage Road and "D" Street



EXISTING  
CONDITIONS



AFTER PROJECT  
DEVELOPMENT



AFTER PROJECT  
LANDSCAPING

FIGURE 5.2.-6  
Project Simulation View: Looking Northwest Towards Project from Community Park

industrial buildings would be buffered by setbacks and landscaping along the roadway frontages.

Figure 5.2-6 shows the view of Village Two from the proposed community park site within Village Four looking northwest. The developed viewshed from this vantage point would include the landscaped community park in the foreground, and the steep slopes of Wolf Canyon with residential development in the background. Residential units seen from this vantage point would be two-story single-family detached residences and three-story single-family attached residences with a maximum height of 45 feet.

The proposed SPA Plan's residential densities within Village Two would be similar and generally compatible with the existing residential developments of surrounding areas. The design of the SPA Plan area is based on the unique characteristics of the landform and surrounding development. The pedestrian and transit-oriented village concept described in the Otay Ranch GDP provides additional focus within Village Two of the SPA Plan. The village concept intensifies residential densities and commercial uses to enhance transit use, reduce automotive dependency, consolidate open space, promote social interaction, and create a strong sense of community and identity within Otay Ranch. Other design influences reflect on-site conditions and characteristics, such as landforms, aesthetics, land use relationships, and circulation patterns. The SPA Plan contains Design Guidelines that include design features and development requirements for the SPA Plan area. The Design Guidelines include architectural design standards for new residences, and preservation of ridgelines and steep hillside slopes with native habitats.

According to the SPA Plan, the single-family residential units within the SPA Plan would include a variety of sizes, shapes, colors, and materials, which would promote a visual interest in the built environment. These styles would be compatible with one another and easily integrated into the individual style and scale of each neighborhood. The building façades would include building characteristics such as variation in architectural style, visually reduced garages, and detailed entry features such as windows, doors, porches, patios, and other features that are oriented toward the street. Similarly, the proposed multi-family residential structures would also utilize visually interesting architecture. These structures would be designed to promote variety and enhance the human-scale pedestrian activity of the Village Two area. The structures would be articulated with elements such as wall offsets, balconies, and windows. Street-facing façades would include features such as trellises, columns, archways, doorways, patios, and porches. The non-residential structures would include accents in color, texture, and pattern changes to provide visual interest to those buildings.

The industrial uses located in the SPA Plan area would be provided on large, level development parcels that can accommodate office and warehouse buildings, outdoor storage areas, truck loading areas, and employee and visitor parking. The SPA Plan

includes landscaping to unify the development and integrate it into the overall Otay Ranch design theme.

Conformance with the Design Guidelines outlined in the SPA Plan, including architectural design standards for new residences, and preservation of ridgelines and steep hillside slopes with native habitats, serve to reduce the significance of change to the existing visual character or quality of the site and its surroundings. However, as discussed in the Otay Ranch GDP Program EIR, the conversion of undeveloped land to urban uses is a significant and unmitigable impact of development. The proposed SPA Plan also would result in a similar significant visual impact due to the development of undeveloped land, and the resulting manufactured slopes.

According to the SPA Plan, perimeter walls or fencing would separate the SPA Plan site from adjacent areas and circulation element roadways surrounding the site. These walls would serve as noise and visual barriers, as well as security. As discussed in Section 5.12 of this EIR, noise walls would be required to reduce traffic noise from Olympic Parkway, Heritage Road and La Media Road. Required barrier heights may be achieved through the construction of walls, berms, or wall/berm combinations. Wall heights are limited to a maximum of eight feet by the City. Therefore, any noise wall exceeding this height would result in a significant visual quality impact.

Threshold 4: Create a new source of substantial light or glare which would adversely affect day- or nighttime views in the area.

The proposed SPA Plan includes lighting performance standards to address the proposed project's contribution to nighttime lighting. Currently, the proposed project site and vicinity are exposed to nighttime lighting from Villages One, Five, and parts of Six to the north and northeast of the project site. Village Seven is under construction to the east, and night lighting would also occur from this village once fully developed. There are only scattered light sources from the south, including the 51.9-acre aviation navigation facility owned by the FAA and referred to as the VORTAC.

The proposed project would contribute only a minor change to night-sky illumination. As noted above, the project site is outside the County's jurisdiction pursuant to the Light Pollution Code. However, development of the proposed project would require outdoor areas to be lighted at night (e.g., public use areas and commercial use parking lots, commercial buildings, street lights, walkways, entry nodes, park lighting for courts in neighborhood parks, and courts and fields on the community park site). The Design Guidelines of the SPA Plan incorporate measures applicable to exterior lighting to ensure that all lighting would conform to City standards or an approved theme lighting program acceptable to the City. These measures include use of low pressure sodium lights and shielding to direct the light emissions downward. Therefore, the proposed project's impact on lights and glare are considered to be less than significant.

To expand the usable time of park facilities, the proposed community park in Village Four would include uses that would require court lighting at night. Sport field and court lighting would be in operation from 6:30 P.M. to 10:30 P.M. seven days a week. During winter months park lighting may be turned on earlier. Park site security lighting in parking areas, walkways, and on exterior building walls or under eaves would be in operation from dusk to dawn. Radiating light would be visible from the proposed residences to the north of the park across Wolf Canyon and to planned or residential development south of the park within Village Four, which could represent a significant impact.

Off-site uses could also result in lighting impacts to on-site residences. The Otay Ranch High School is located adjacent to the northeast portion of the project site (see Figure 5.2-1). The high school includes recreational use such as playing fields and stadium seating with lighting. The lights are 60 feet in height, which is higher than surrounding house pads, future residents along the northern boundary of the proposed project site would have direct views of the existing field lights. Radiating light would also be visible from the proposed residences not directly adjacent to the high school. The stadium and baseball field lighting would be visible for short periods of time during evening activities. Lighting associated with the high school represents a significant adverse impact.

Thresholds 5 and 6: Alter areas of sensitive landforms; or grade steep slopes that may be visible from future development and roadways.

The proposed project would alter existing landforms and the visual characteristics of the SPA Plan area. Approximately 695.5 acres, or 58.3 percent of the site, would be disturbed by grading for residential, commercial, industrial, public facilities, and park uses. This would include excavation of the ridge tops to generate materials for infilling some of the canyons on the site. Figure 5.2-7 shows the Conceptual Grading Plan for the SPA Plan area.

Cuts of 30 to 40 feet and fills up to 50 feet high are proposed on the Conceptual Grading Plan. However, grading of manufactured slopes for the project would maintain a 2:1 to 5:1 maximum variable slope throughout the site, with variations used to emphasize the aesthetics of the natural rolling topography that predominates the site. The overall earthwork quantities are balanced for the project and are estimated at approximately 18,428,000 cubic yards of cut and fill (Figure 5.2-8). Table 5.2-3 shows the earthwork quantity breakdown within each of the Villages for the SPA Plan. It is anticipated that these grading quantities could be refined during the tentative map process for Village Three.

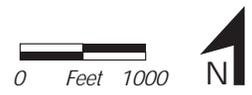
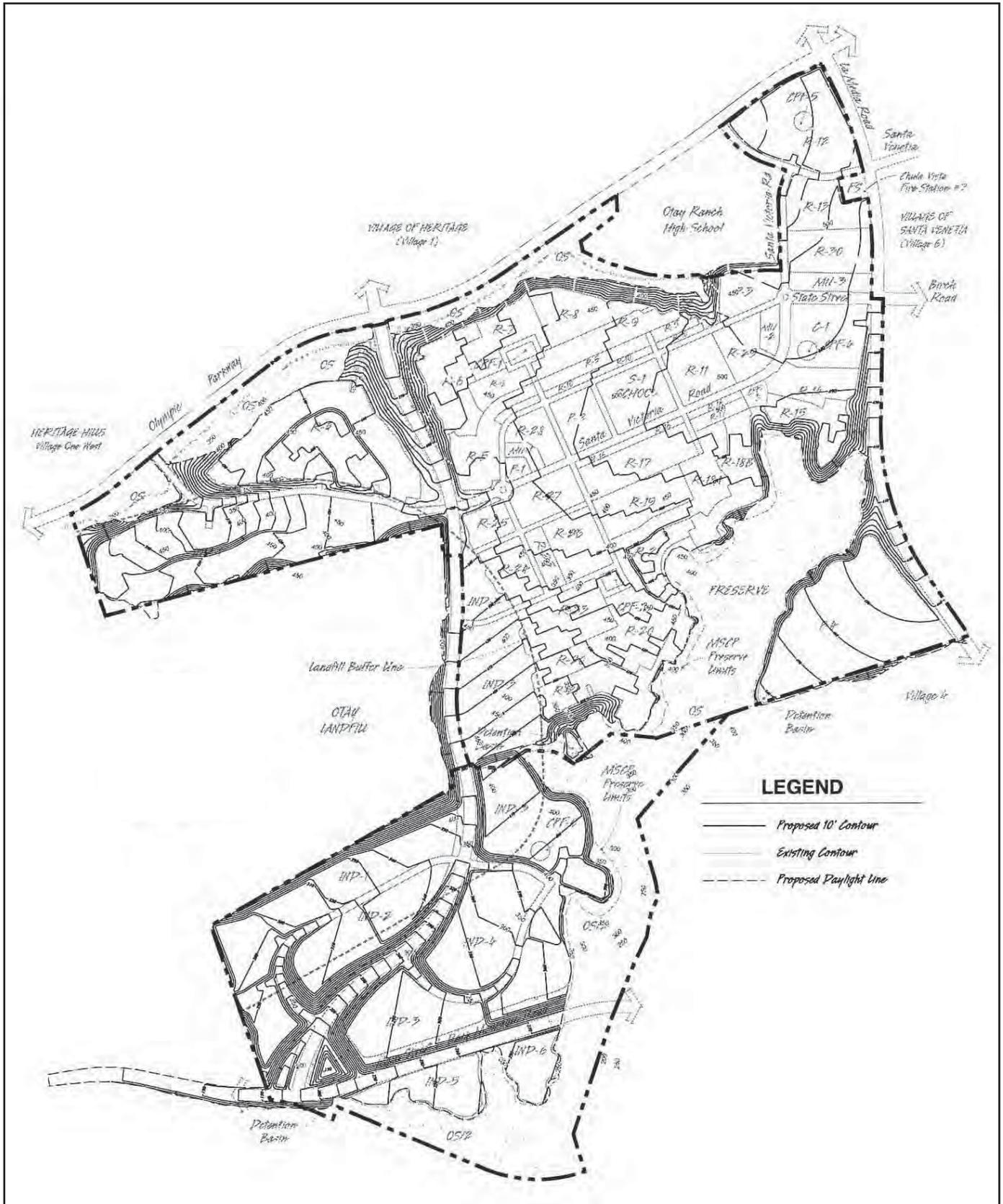


FIGURE 5.2-7  
Conceptual Grading Plan

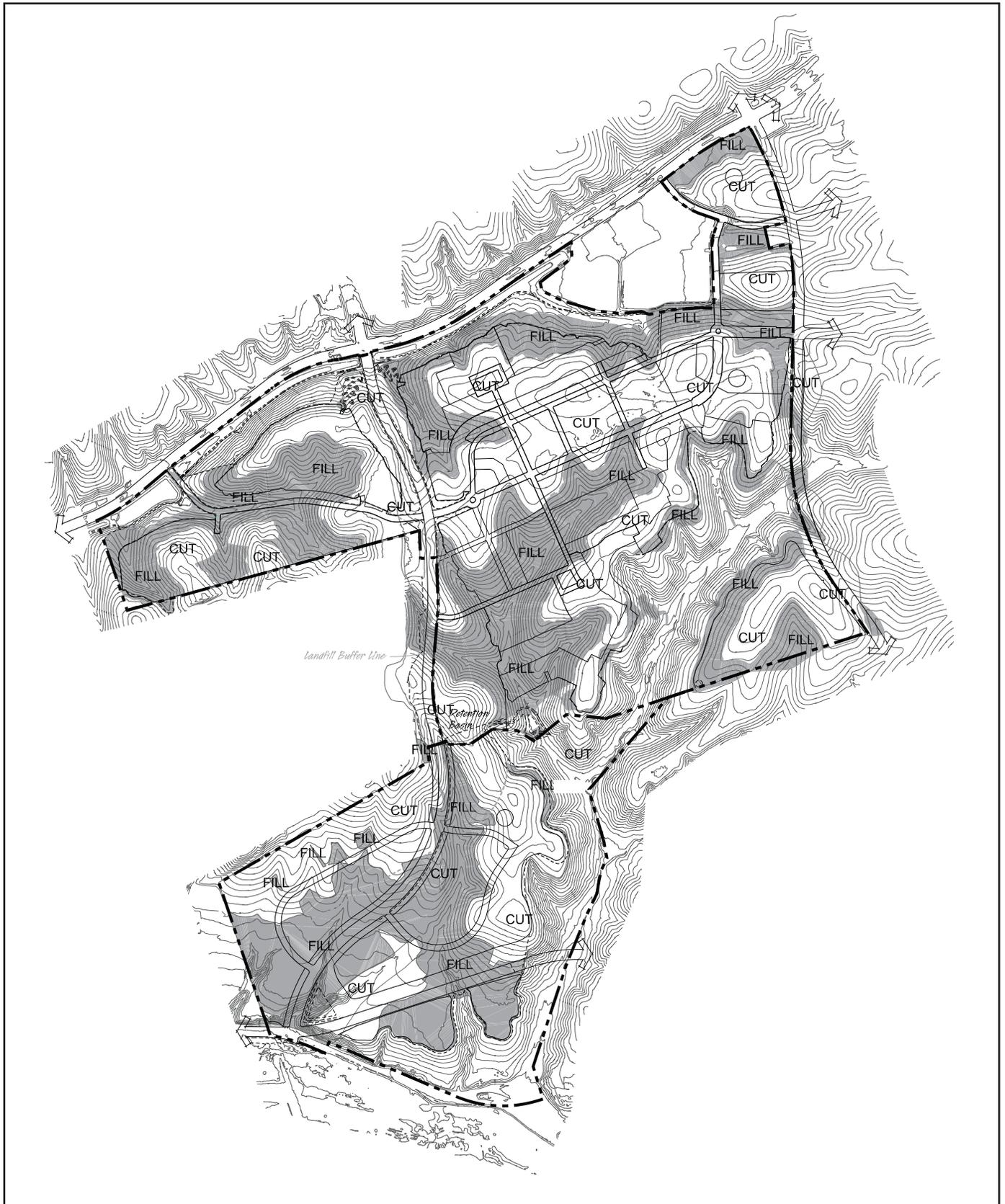


FIGURE 5.2-8  
Cut and Fill Plan

**TABLE 5.2-3  
PROPOSED SPA PLAN EARTHWORK QUANTITIES**

Location	Cubic Yards of Cut	Cubic Yards of Fill
Village Two	12,625,000	12,625,000
Village Three	4,661,000	5,306,000
Village Four (community park site)	1,142,000	497,000
<b>TOTAL</b>	<b>18,428,000</b>	<b>18,428,000</b>

As shown in the conceptual grading plan prepared for the SPA Plan, several of the manufactured slopes on the proposed project site would exceed 30 feet in height, with a maximum height of approximately 90 feet adjacent to Heritage Road just south of Olympic Parkway. Many of these larger manufactured slopes would be created in part to physically and visually separate residences from the abutting roadways. Manufactured slopes along Village Four, adjacent to Wolf Canyon, would be approximately 40 feet in height, and the proposed exterior slope ratios range from 2:1 to 2.5:1. Slopes between individual neighborhoods would not exceed a 2:1 ratio. The proposed lot lines and preliminary pad grading overlooking Olympic Parkway would be varied in angle and setback. The manufactured slopes would be contoured to blend with natural landform characteristics, including a terraced effect consistent with the natural ridgelines. The SPA Plan outlines such grading techniques as well as design guidelines, landscape concepts, and other methods designed to minimize landform alteration and any potential adverse effects on landform and visual quality. The SPA Plan contains a balanced grading plan which provides a preliminary grading concept identifying major slope locations. The preliminary grading design is as indicated on the Conceptual Grading Plan. The grading concept, contained in the SPA Plan, is based on the following objectives.

- Create efficient man-made landforms that visually respond to natural terrain characteristics where practical.
- Create and maintain on- and off-site views.
- When significant land forms are modified for project implementation, round the land form as much as possible to blend into the natural grade.
- With approval of the City Engineer, round the tops and toes of slopes.
- When slopes cannot be rounded, utilize vegetation to alleviate sharp angular appearances.
- Balance earthwork, utilizing an equal amount of cut for an equal amount of fill.
- Create, where possible, barriers or physical separation from traffic noise sources.
- Utilize elevation changes to separate potential land use conflicts.

- Create a fairly level area for a Village Core that will accommodate mixed-use, community purpose facility, elementary school, neighborhood park and multi-family residential development.
- Create useable areas that provide for a variety of residential housing types.
- Minimize, where feasible, impacts to sensitive areas adjacent to Poggi Canyon.
- Create a useable 44+/- acre Community Park acceptable to the City of Chula Vista.

Preliminary soils and geotechnical reports have been prepared for the SPA Plan area and have identified the site as suitable for development. The proposed grading is consistent with the Otay Ranch Overall Design Plan guidelines for modulation and blending of graded slopes within defined scenic corridors and avoidance of sharp or unnatural corners where cut and fill slopes intersect natural canyons and slopes.

The Land Use and Transportation Element of the General Plan includes objectives and policies to preserve and protect Otay Ranch's significant natural resources and open space lands with environmentally sensitive development. This includes the protection of the natural features of the Otay Ranch Preserve located in Wolf Canyon. The proposed SPA Plan conforms to the natural topography of the site and maintains views toward open spaces and distant mountains. The SPA Plan area is sited within land area designated for development, and the Plan provides for protection of the adjacent environmentally sensitive land as described in the Preserve Edge Plan. ~~An~~The objective of the General Plan regarding the protection of the natural features of the Otay Ranch Preserve located in Wolf Canyon will be met through the conveyance of approximately ~~1,052.74~~<sup>1,035.2</sup> acres of land to the Otay Ranch Preserve in accordance with the requirements of the RMP. Therefore, the proposed SPA Plan supports the objective of preserving and protecting the unique environmental and visual qualities of Otay Ranch and implements the goals and policies established for such purpose in the General Plan.

The Otay Ranch GDP and RMP established a ranch-wide standard that required preservation of at least 83 percent of the steep slopes (slopes with gradients of 25 percent or greater) throughout the Otay Ranch. As depicted on Figure 5.2-3, of the approximately 143 acres of steep slopes in the SPA Plan area, 130.1 acres would be impacted (104.4 acres within Village Two; 1.5 acres within the Village Four park site and 24.1 acres within Village Three. This estimated impact would exceed the 127.7 acres of RMP steep slopes allocated to the site by approximately 2.4 acres (130.1 acres of steep slope impacts -127.7 acres of steep slope allocation). Although the project is anticipated to exceed the steep slope allocation, the ranch-wide steep slope preservation standard would still be met given the surplus of 19.8 acres of steep slope allocation that has been generated from the SPA One revisions and the approved SPA Plans. Implementation of the proposed SPA will

further reduce the remaining ranch-wide surplus to 17.5 acres (19.8 acres of ranch-wide surplus - 2.4 acres of project impacts over the steep slope allocation for the SPA Plan area).

Along the southern boundary of Village Two, grading to accommodate residential development would result in a significant landform change. As shown in Figure 5.2-8 and Figure 3-6, a portion of Wolf Canyon on the southwest corner of Village Two proper would be filled to accommodate grading of the site. A finger canyon of Wolf Canyon would be filled to a height of 400 feet, approximately 90 to 100 feet above the canyon bottom. A 100-foot-high slope would be created within Wolf Canyon. The filling of Wolf Canyon and the related slope are considered significant landform alteration impacts.

#### **5.2.4 Summary of Significance Prior to Mitigation**

The Otay Ranch GDP Program EIR concluded that the overall change to the original Otay Ranch topography and the change in character from undeveloped to urban uses constituted significant, unavoidable landform and aesthetic impacts. While the proposed SPA Plan would be in accordance with the adopted Otay Ranch GDP and consistent with adjacent and planned development, a significant visual character and landform impact would result from implementation of the proposed SPA Plan and Composite TM.

Development would require grading of the project area grading of the site would involve the cut and fill of approximately 18,428,000 cubic yards. This grading would permanently alter the natural landform of the site which would be significant. A portion of Wolf Canyon would be filled to a height of 400 feet, approximately 90 to 100 feet above the canyon bottom. A 100-foot-high slope would be created within Wolf Canyon. The ranch-wide steep slope preservation standard would be met and, therefore, there would be no significant impact associated with this policy. However, the filling of Wolf Canyon is considered a significant landform alteration impact.

Development of the proposed SPA Plan and the Composite TM would result in long-term direct potentially significant nighttime view impacts. The direct line of sight of the lighting from the off-site high school athletic field and the general illumination over the existing high school stadium and illumination from the proposed community park would also have long-term direct and indirect potentially significant nighttime impacts.

Sound barriers built as part of the project would represent a significant visual impact if the portion of the barrier that is constructed as a wall is higher than eight feet.

#### **5.2.5 Mitigation Measures**

The following mitigation measures would reduce impacts to landform alteration and aesthetics:

- 5.2-1 Prior to approval of grading plans, the applicant(s) shall prepare grading and building plans that conform to the landform grading guidelines contained in the proposed SPA Plan, the City's Grading Ordinance, Otay Ranch GDP, and General Plan. The plans shall be prepared to the satisfaction of the Director of Planning and Building and the City Engineer.
- 5.2-2 Prior to approval of the site-specific master plan for the community park in Village Four, the applicant(s) shall provide funding through the payment of PAD fees for the preparation of a lighting plan that shows the proposed height, location, and intensity of sport field and court lighting on-site. Current sport facility lighting technologies including reflector devices that serve to reduce the occurrence of light spill and glare shall be used where appropriate. The plan shall be completed to the satisfaction of the Director of Planning and Building and Director of General Services.
- 5.2-3 Prior to the approval of the first rough grading permit, or first B-map, the applicant(s) shall have prepared, submitted to and received approval from the Director of General Services of a comprehensive Landscape Master Plan (LMP). Landscaping shall occur with each phase of development in accordance with the LMP. The contents of the LMP shall conform to the City staff checklist and include the following major components:
- a. Maintenance Responsibility Plan
  - b. Master Irrigation Plan
  - c. Master Planting Plan
  - d. Brush Management Plan
  - e. Hardscape Concept and Trail Plan
  - f. Utility Coordination Plan
  - g. Conceptual Wall and Fence Plan, and
  - h. Monumentation and Signage Plan

#### **5.2.6 Summary of Significance After Mitigation**

Application of the above mitigation measures would mitigate the majority of external and internal impacts to views and night lighting impacts to below a level of significance. However, the proposed SPA Plan and Composite TM would result in significant, unavoidable impacts to visual character and landform alteration. Therefore, adoption of a Statement of Overriding Considerations for visual character and landform alteration impacts will be required for implementation of the proposed project.

### **5.3 Biological Resources**

#### **5.3.1 Existing Conditions**

##### Governing Plans and Policies

The GDP and RMP were approved by the County and the City in October 1993. The RMP is comprised of two separate documents, the Phase 1 RMP and Phase 2 RMP. The Phase 1 RMP identifies Preserve areas within Otay Ranch, and contains policies regarding species and habitat conservation, as well as long-term management of the Otay Ranch Preserve. The Phase 2 RMP includes ranch-wide studies that were conducted pursuant to the Phase 1 RMP and provides additional detail on conveyance, management and funding for the Otay Ranch Preserve. The Otay Ranch RMP and the Preserve were the primary basis for CEQA mitigation of biological impacts identified in the GDP Program. Consistent with the Otay Ranch GDP, the proposed project design must demonstrate conformance with the conservation goals and Preserve boundaries of the Otay Ranch GDP and RMP.

In addition to the GDP/RMP for Otay Ranch, the municipalities of southern San Diego County collaborated in producing the MSCP Subregional Plan. The MSCP Subregional Plan is implemented through individual Subarea Plans adopted by each jurisdiction receiving “take authorization” for covered species. The MSCP serves as a Habitat Conservation Plan (HCP) pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act of 1973 (FESA), as well as a Natural Communities Conservation Plan (NCCP) under the NCCP Act of 2001. The MSCP, as implemented through the Subarea Plans, allow the participating jurisdictions to authorize “take” of plant and wildlife species identified within the plan area. The United States Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) have authority to regulate the take of threatened, endangered, and rare species. Under the MSCP, the wildlife agencies have granted take authorization to the local jurisdictions, including the City, for otherwise lawful actions, such as public and private development that may incidentally take or harm individual species or their habitat outside of the designated Preserve areas, in exchange for the assembly and management of a coordinated MSCP Preserve.

The proposed SPA Plan is considered a “Covered Project” under the City's Subarea Plan. This means that the areas to be preserved (100 percent Conservation Areas) are either already in public ownership or will be dedicated to the Otay Ranch Preserve as part of the development approval process for Covered Projects. Certain uses are allowable within the 100 percent Conservation Areas subject to specific conditions as outlined in Section 6.0 of the Subarea Plan. In addition, grading for Heritage Road is proposed within the Otay Landfill, which is within the County of San Diego's Subarea Plan area. The proposed grading is within a “take authorized” portion of the County's Subarea Plan, which is a similar designation as “Covered Project” under the City's Subarea Plan.

### Biological Surveys

Project-level biological surveys were conducted for the portions of Villages Two, Three, and Four, and Planning Area 18b property that are within the ownership of the Otay Project, L.P. by Dudek & Associates, Inc. between 1997 and 2004. The results of these surveys are contained in the Biological Resources Report and Impact Assessment for Otay Ranch Villages Two & Three, City of Chula Vista, January 2006 (Appendix B-1). In addition, URS Corporation prepared a Biological Resources Report for the portions of Village Three/Planning Area 18b owned by Flat Rock Land Company, in March 2005, which was revised in February 2006 (Appendix B-2).

### Biological Setting

The proposed SPA Plan area consists of rolling hills in its central portion and relatively steep tributary canyons in its northern and southern portions. There are numerous drainages that occur in the northeastern portion of the site. This area is traversed by a system of dirt roads and cattle trails and consists of active and fallow agricultural lands that have been historically cultivated and grazed. Figures 5.3-1 and 5.3-2 show the SPA Plan boundaries with vegetation and land cover types, as well as the proposed limits of grading.

### Vegetation

The SPA Plan area supports 15 vegetation and land cover types: coastal sage scrub, disturbed coastal sage scrub, alluvial scrub, maritime succulent scrub, revegetated maritime succulent scrub, disturbed maritime succulent scrub, southern willow scrub, mule fat scrub, valley needlegrass grassland, disturbed valley needlegrass grassland, annual (non-native) grassland, tamarisk scrub, agriculture, disturbed habitat, and developed land. Acreages for the vegetation communities/land covers for the SPA Plan area are presented in Table 5.3-1 and are discussed below. The project also includes off-site grading along the western edge (adjacent to the Otay Landfill) and along the eastern and southeastern edges of the SPA Plan area (south of the Village Four park site) (see Figure 5.3-1). The Village Four park site is located in the eastern portion of the SPA Plan area. The acreages for the vegetation communities/land covers for the off-site areas can also be found in Table 5.3-1 and are discussed below.

#### *Coastal Sage Scrub*

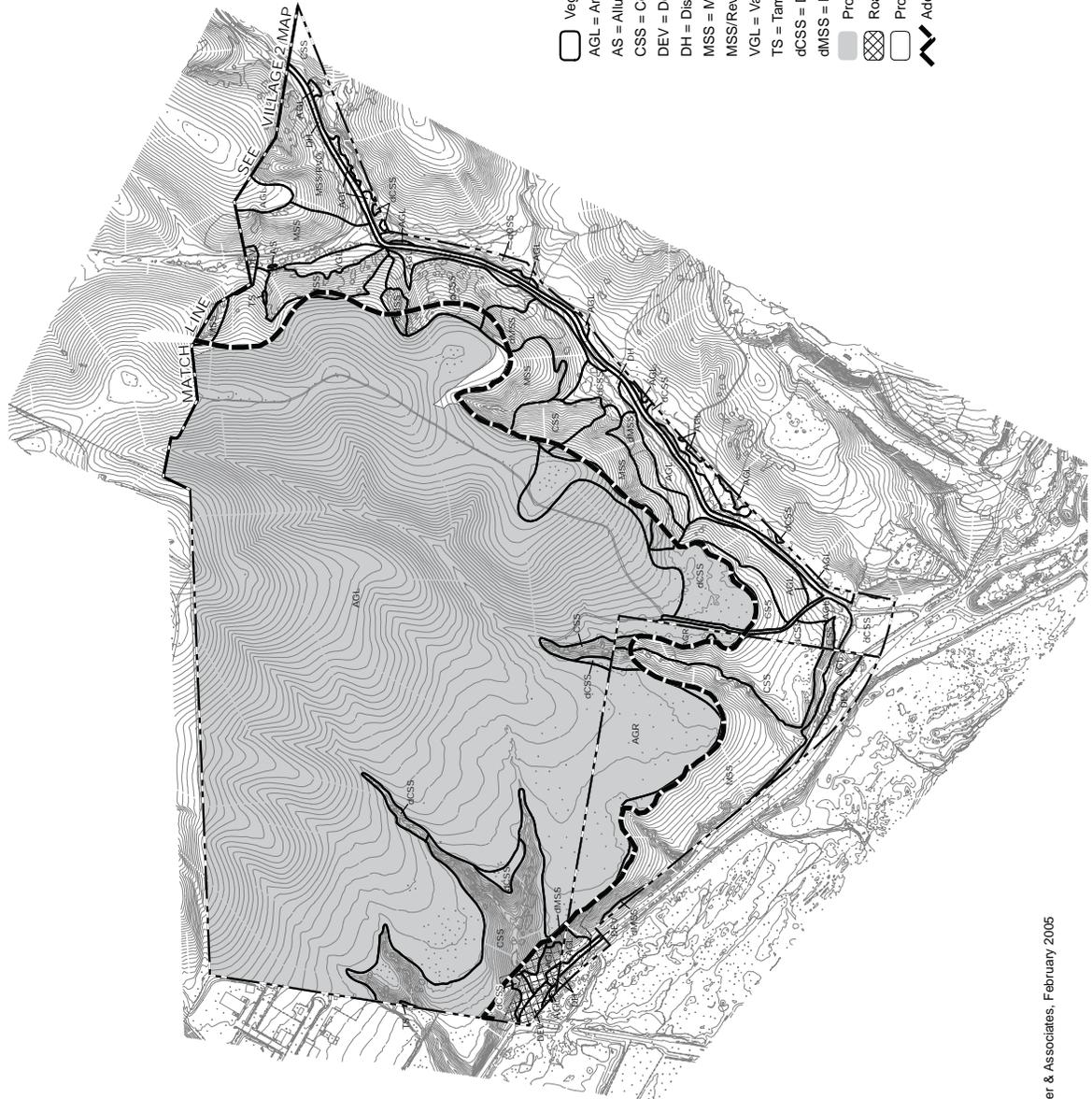
Coastal sage scrub is a native vegetation community composed of a variety of soft, low, aromatic shrubs, characteristically dominated by drought-deciduous species such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and sages (*Salvia* spp.), with scattered evergreen shrubs, including lemonadeberry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*), and toyon (*Heteromeles arbutifolia*). It typically develops on south-facing slopes and other xeric situations.



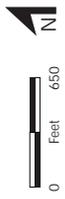
FIGURE 5.3-1  
Village Two and a Portion of Village Four Existing Biological Resources

- Vegetation Types/Landcovers:
- AGL = Annual Grassland
- AGR = Agriculture
- AS = Alluvial Scrub
- CSS = Coastal Sage Scrub
- DEV = Developed Land
- DH = Disturbed Habitat
- MFS = Mule Fat Scrub
- MSS = Maritime Succulent Scrub
- MSSRVG = MSS/Revegetated Area
- SWS = Southern Willow Scrub
- VGL = Valley Needlegrass Grassland
- dCSS = Disturbed CSS
- dVGL = Disturbed VGL
- ▨ Proposed Limits of Grading
- ▨ Proposed Offsite Grading
- Proposed Open Space
- ▨ Village 4 Project Site
- ▨ Adopted IMSCP Preserve Boundary

GRADING SOURCE: Hunsaker & Associates, July 2005



- Vegetation Types/Landcovers:  
 AGL = Annual Grassland  
 AS = Alluvial Scrub  
 CSS = Coastal Sage Scrub  
 DEV = Developed Land  
 DH = Disturbed Habitat  
 MSS = Maritime Succulent Scrub  
 MSS/Revegetation  
 VGL = Valley Needlegrass Grassland  
 TS = Tamarisk Scrub  
 dCSS = Disturbed CSS  
 dMSS = Disturbed MSS  
 ■ Proposed Limits of Grading  
 ▨ Road Grading  
 □ Proposed Open Space  
 ▬ Adopted MSCP Preserve Boundary



GRADING SOURCE: Hunsaker & Associates, February 2005

FIGURE 5.3-2  
Village Three Existing Biological Resources

TABLE 5.3-1  
ACREAGES OF EXISTING VEGETATION COMMUNITY AND LAND COVER TYPES

Vegetation/Land Cover	Onsite Acreage		Off-Site Acreage (Otay Project LP)	Total Acreage	MSCP Tier Designations <sup>11</sup>
	Otay Project LP Ownership	Flat Rock Land Co. Ownership			
Village Two and Village Four Park Site					
Coastal Sage Scrub	91.3	--	0.6	91.9	II
Disturbed Coastal Sage Scrub	23.9	--	3.3	27.2	II
Alluvial Scrub	0.2	--	--	0.2	-
Maritime Succulent Scrub	2.0	--	0.1	2.1	I
Revegetated Maritime Succulent Scrub	37.2	--	0.0	37.2	I
Southern Willow Scrub	0.1	--	0.0	0.1	-
Mule Fat Scrub	0.2	--	0.0	0.2	-
Valley Needlegrass (Native) Grassland	12.7	--	0.8	13.5	I
Disturbed Valley Needlegrass (Native) Grassland	--	--	1.5	1.5	I
Annual (Non-native) Grasslands	223.9	--	8.2	232.1	III
Agriculture	218.7	--	3.7	222.4	IV
Disturbed Habitat	2.9	--	0	2.9	IV
Developed Land	126.4	--	0.6	127.0	-
Subtotal (Village Two and Village Four Park Site)	739.8	--	18.9	758.7	
Village Three					
Coastal Sage Scrub	19.3	6.9	--	26.2	II
Disturbed Coastal Sage Scrub	25.9	--	--	25.9	II
Maritime Succulent Scrub	12.7	18.7	--	31.4	I
Disturbed Maritime Succulent Scrub	6.9	0.2	--	7.1	I
Alluvial Scrub	--	--	--	--	-
Tamarisk Scrub	0.1	--	--	0.1	-
Annual (Non-native) Grasslands	230.4	2.1	--	232.5	III
Agriculture	--	16.9	--	16.9	IV
Valley Needlegrass (Native) Grassland	1.2	--	--	1.2	I
Disturbed Habitat	5.6	0.6	--	6.2	IV
Developed Land	0.5	2.0	--	2.5	-
Subtotal (Village Three)	302.8	47.3	0.4	350.5	
TOTAL	1042.6	47.3	19.3	1109.2	

NOTE: Gross acreage is correct; columns will not precisely total due to rounding.

<sup>11</sup>Explanation of MSCP tier designations:

Tier I (rare uplands): Southern Foredunes, Coastal Bluff Scrub, Maritime Succulent Scrub, Native Grasslands, Oak Woodlands

Tier II (uncommon uplands): Coastal Sage Scrub, CSS/Chaparral

Tier III (common uplands): Mixed Chaparral, Chamise Chaparral, Non-native Grassland, Scrub Oak/Chaparral

Tier IV (other uplands): Disturbed Lands, Agricultural Lands, Eucalyptus

On-site, this community consists primarily of lemonadeberry, California buckwheat, and California sagebrush. A total of 118.1 acres of coastal sage scrub is found in the SPA Plan area.

#### *Disturbed Coastal Sage Scrub*

Disturbed coastal sage scrub habitat was identified throughout the SPA Plan area, but primarily adjacent to coastal sage scrub, and often between agricultural lands and steeper hillsides of undisturbed native vegetation. Floral species found in this area are characteristic of coastal sage scrub habitat, but also include several non-native grasses: ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), foxtail chess (*Bromus madritensis* ssp. *rubens*) and slender wild oat (*Avena barbata*). A total of 53.1 acres of disturbed coastal sage scrub is located in the SPA Plan area.

#### *Alluvial Scrub*

Alluvial scrub is not recognized as a native vegetation community by Holland (1986). Nonetheless, it is a distinct vegetational association in the southwestern United States and northern Baja California. Alluvial scrub is generally considered a subassociation of coastal sage scrub by the resource agencies because its general plant architecture and density are similar enough to support many of the “target” coastal sage scrub animal species, including the listed coastal California gnatcatcher. This vegetation association can be dominated by several species, including scale-broom (*Lepidospartum squamatum*), broom baccharis (*Baccharis sarothroides*), winged ragweed (*Hymenoclea* sp.), and other soft-leaved subshrubs with occasional evergreen shrubs. Alluvial scrub occurs within drainages where loosely consolidated alluvial substrates and natural or mechanical disturbance have favored this association. This association is similar to broom baccharis scrub in species composition and function.

Alluvial scrub on-site is poorly developed, consisting of mostly winged ragweed and lemonadeberry, with few native understory species. Other species present within this community include ripgut grass, Russian-thistle (*Salsola tragus*), and California sagebrush. Although this on-site community supports limited hydrophytic vegetation, it would be considered a wetland by CDFG due to its floodplain function. The habitat would not meet wetlands criteria of the U.S. Army Corps of Engineers (USACE) or Regional Water Quality Control Board (RWQCB). A total of 0.2 acre of alluvial scrub is located in the SPA Plan area.

#### *Maritime Succulent Scrub*

Maritime succulent scrub habitat is found on thin rocky or sandy soils, often on steep slopes, where there is a small amount of summer rainfall. It integrates with coastal sage scrub on better-developed soils away from the immediate coast. Maritime succulent scrub

is a low, open (25 to 75 percent cover) scrub dominated vegetation community consisting of drought-deciduous shrubs and succulents.

On-site maritime succulent scrub is composed of lemonadeberry, jojoba (*Simmondsia* sp.), cholla (*Opuntia* sp.), San Diego County viguiera (*Viguiera laciniata*), California sagebrush, and Mojave yucca (*Yucca schidigera*). Although the on-site occurrence of this vegetation type does not contain many of the coastal species generally associated with it (i.e., Shaw's agave [*Agave shawii*], coastal sagebrush [*Artemisia californica*], copper leaf [*Acalypha californica*], cliff spurge [*Euphorbia misera*], California bush sunflower [*Encelia californica*], and California box-thorn [*Lycium californicum*]), it does support native species in a relatively undisturbed state and, therefore, retains habitat function. A total of 33.5 acres of maritime succulent scrub is located in the SPA Plan area.

#### *Revegetated Maritime Succulent Scrub*

Portions of the southeast-facing slopes of Wolf Canyon were recently restored. Within the revegetated maritime succulent scrub, portions of the degraded slope are being revegetated as valley needlegrass grassland and Otay tarplant habitat. The remaining areas currently supporting maritime succulent scrub species are restored as maritime succulent scrub and/or Otay tarplant habitat. The mapping of this area defines a total of 37.2 acres in the SPA Plan area, 36.0 acres of which are within the boundary of Irrevocable Offers of Dedication (IODs) that were recorded for mitigation purposes related to Otay Ranch Village One, as mitigation for Section 4(d) permits issued for take of coastal sage scrub on Village One. The IODs are in favor of the City and County. An additional 1.2 acres of revegetated maritime succulent scrub are within the SPA Plan area but are outside of the IOD areas.

#### *Disturbed Maritime Succulent Scrub*

Floral species of this habitat type found in the SPA Plan area are characteristic of maritime succulent scrub habitat with components of bareground, non-native grasses and forbs, including ripgut grass (*Bromus diandrus*) and tocalote (*Centaurea melitensis*).

Disturbed maritime succulent scrub habitat was identified primarily along the eastern border of the SPA Plan area on the slopes of Wolf Canyon. There is also a patch of disturbed maritime succulent scrub in the southwest corner of the SPA Plan area. A total of 7.1 acres of disturbed maritime succulent scrub is located in the SPA Plan area.

#### *Southern Willow Scrub*

Southern willow scrub is a broad-leafed, winter-deciduous riparian community dominated by willow (*Salix* spp.) species, with scattered Fremont's cottonwood (*Populus fremontii*) and western sycamore (*Platanus racemosa*). Due to the high density of the shrub canopy, the

understory is fairly depauperate. This community is typically found along intermittent streams and creeks in southern California.

Within the SPA Plan area, 0.1 acre of southern willow scrub occurs in one patch within Wolf Canyon. This area is considered a wetland under the jurisdiction of CDFG, USACE, and RWQCB.

#### *Mule Fat Scrub*

Mule fat scrub is a tall, depauperate riparian community typically dominated by mule fat (*Baccharis salicifolia*), which develops along intermittent stream channels. This vegetation type can withstand frequent flooding and often occurs as an understory between patches of sycamore stands. Common species include arroyo willow (*Salix lasiolepis*), narrow-leaved willow (*Salix exigua*), stinging nettle (*Urtica dioica*), and sedge (*Carex barbarae*) (Holland 1986).

Within Village Two, mule fat scrub occurs in three patches along Wolf Canyon, totaling 0.2 acre. This community is considered a wetland and, as such, is under the jurisdiction of CDFG, USACE, and RWQCB.

#### *Tamarisk Scrub*

Tamarisk scrub is a non-native riparian community dominated by stands of tamarisk (*Tamarix* spp.). Other species commonly associated within this community include Bermuda grass (*Cynodon dactylon*), mule fat, and San Diego marsh elder (*Iva hayesiana*).

Less than 0.1 acre of tamarisk scrub occurs within a small drainage on the western edge of the Village Three portion of the SPA Plan area. The area contains a dominant overstory of tamarisk, but no other hydrophytic vegetation occurs. Given the lack of predominant hydrophytic vegetation this community would not be considered a wetland by USACE or RWQCB; however, given the riparian overstory and association with a drainage, it would be considered a wetland community under the jurisdiction of CDFG.

#### *Valley Needlegrass (Native) Grassland*

Valley needlegrass (native) grassland is a grassland dominated by perennial bunchgrasses, such as needlegrass (*Nassella* spp.). This vegetation community typically intergrades with coastal sage scrub on some clay soils, often on more mesic exposures and at the bases of slopes, but also may occur in large patches. A total of 14.7 acres of valley needlegrass grassland occurs within the SPA Plan area.

*Disturbed Valley Needlegrass (Native) Grassland*

Disturbed valley needlegrass (native) grassland is the same as described above but with non-native grasses and forbs more prevalent. A total of 1.5 acres of disturbed valley needlegrass grassland occurs within the SPA Plan area.

*Annual (Non-Native) Grassland*

Where the native vegetation has been disturbed frequently or intensively by grazing, fire, agriculture, or other activities, the native community usually is incapable of recovering. These areas are characterized by weedy, introduced annuals, primarily grasses, including especially slender wild oat, bromes, mustards (*Brassica* and *Sisymbrium* spp.), broad-lobed filaree (*Erodium botrys*), and Russian-thistle. A total of 464.6 acres of annual (non-native) grassland occurs within the SPA Plan area.

*Agriculture*

Agriculture lands refer to areas that have been under cultivation or are pastures actively grazed by livestock and contain fewer than 20 percent native plant cover. These areas contain very few native shrubs, and pastures are dominated by non-native grasses, doveweed, and black mustard. A total of 239.3 acres of agriculture lands occurs within the SPA Plan area.

*Disturbed Habitat*

For purposes of this EIR, disturbed habitat includes all dirt roads, graded areas, and other places that lack vegetation, or areas where the native vegetation has been removed by mechanical means and weedy non-native annual dicots, such as telegraph weed (*Heterotheca grandiflora*), Russian-thistle, and tocalote, predominate as opposed to annual grasses. This habitat type includes a total of 9.1 acres within the SPA Plan area.

*Developed Land*

Developed land refers to areas that lack vegetation and support permanent or temporary structures and roads. A total of 128.0 acres of developed land is located within the SPA Plan area.

Wildlife

Over the surveyed area, 7 mammal, 2 reptile, 9 invertebrate, and 55 bird species were identified.

### *Birds*

A total of 55 species of birds were observed on-site or immediately off-site during surveys of the site (see Appendixes B-1 and B-2). Some of the species observed include California gnatcatcher, rufous-crowned sparrow (*Aimophila ruficeps*), California quail (*Callipepla californica*), Anna's hummingbird (*Calypte anna*), scrub jay (*Aphelocoma coerulescens*), California towhee (*Pipilo crissalis*), house finch (*Carpodacus mexicanus*), red-tailed hawk (*Buteo jamaicensis*), and northern mockingbird (*Mimus polyglottos*).

### *Reptiles and Amphibians*

Two species of reptiles have been observed on-site during the surveys: western whiptail (*Cnemidophorus tigris*) and side-blotched lizard (*Uta stansburiana*). Based on on-site habitat present and knowledge of the area, it is presumed that several other reptile and amphibian species occur on-site. Some of these include western skink (*Eumeces skiltonianus*), orange-throated whiptail (*Cnemidophorus hyperythrus*), red-diamond rattlesnake (*Crotalus ruber*), western rattlesnake (*Crotalus viridis*), western fence lizard (*Sceloporus occidentalis*), coast horned lizard (*Phrynosoma coronatum*), western toad (*Bufo boreas*), and Pacific treefrog (*Hyla regilla*).

### *Mammals*

Seven species of mammals have been detected on-site by direct observation or sign: black-tailed jackrabbit (*Lepus californicus*), brush rabbit (*Sylvilagus bachmani*), wood rat (*Neotoma* spp.), Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), striped skunk (*Mephitis mephitis*), and coyote (*Canis latrans*). Other mammal species that likely use the site include Dulzura kangaroo rat (*Dipodomys simulans*), common raccoon (*Procyon lotor*), and bobcat (*Lynx rufus*).

### *Invertebrates*

Nine species of invertebrates, all butterflies, have been identified on-site by direct observation. One listed endangered species, Quino checkerspot (*Euphydryas editha quino*) was found within the southern portion of Village Three. Common species on-site include Behr's metalmark (*Apodemia mormo virgulti*), California ringlet (*Coenonympha tullia*), Sara's orangetip (*Anthocharis sara*), and common white (*Pontia protodice*). Invertebrate diversity is expected to be moderately high, especially with naturally vegetated portions of the site.

### Sensitive Biological Resources

Sensitive resources include habitat areas that are unique, are of relatively limited distribution, or are of particular value. Plant and animal species are considered sensitive when given special recognition by federal, state, or local jurisdictions due to declining,

limited, or threatened populations. The following sensitive resources are discussed in this section.

#### *Sensitive Vegetation Communities*

Sensitive habitats are those that are considered rare within the region, support sensitive plant and/or wildlife species, or provide connections for wildlife movement. Habitat types found on-site that are considered sensitive include coastal sage scrub, disturbed coastal sage scrub, maritime succulent scrub, southern willow scrub, alluvial scrub, mule fat scrub, valley needlegrass grassland, and annual (non-native) grassland.

Coastal Sage Scrub: Coastal sage scrub (and disturbed coastal sage scrub) is considered a sensitive vegetation community by the Chula Vista MSCP Subarea Plan because it supports species that are covered under that plan. In addition, it may support the federally listed threatened California gnatcatcher and federally listed endangered quino checkerspot butterfly. Many other federal, state, or regionally recognized sensitive plant and wildlife species may occur in coastal sage scrub. Oberbauer (1991) estimated the historic loss of coastal sage scrub in San Diego County at approximately 72 percent. The primary cause for this loss has been agriculture, grazing, and more recently, urban development. A total of 118.1 acres of coastal sage scrub and 53.1 acres of disturbed coastal sage scrub are found within the SPA Plan area.

Maritime Succulent Scrub: Maritime succulent scrub (including areas mapped as disturbed maritime succulent scrub and revegetated maritime succulent scrub) is considered a sensitive vegetation community by the Chula Vista MSCP Subarea Plan because it supports species that are covered under the plan. A total of 33.5 acres of maritime succulent scrub is found within the SPA Plan area.

Southern Willow Scrub: Southern willow scrub is considered a sensitive vegetation community by the Chula Vista MSCP Subarea Plan because it supports species that are covered under that plan and is considered to be a wetland habitat as defined by the Subarea Plan. This habitat, which also provides foraging and movement opportunities for various wildlife species, is declining in range due to development and indirect impacts from adjacent land uses. A total of 0.1 acre of southern willow scrub is found within the SPA Plan area.

Mule Fat Scrub: Mule fat scrub is considered a riparian community and, as such, is under the jurisdiction of CDFG, pursuant to Section 1601-1603 of the California Fish and Game Code. Portions of the mule fat scrub also are considered wetlands as defined by Section 404 of the federal Clean Water Act, and, thus, are under the jurisdiction of USACE. Mule fat scrub is considered a sensitive vegetation community by the Chula Vista MSCP Subarea Plan because it supports species that are covered under that plan and is considered to be a wetland habitat as defined by the Subarea Plan. However, because of its low biotic and structural diversity mule fat scrub provides limited wildlife habitat. This vegetation

community type is declining in range due to development and indirect impacts from adjacent land uses. A total of 0.2 acre of mule fat scrub is found within the SPA Plan area.

Valley Needlegrass (Native) Grassland: Valley needlegrass (native) grassland (including areas mapped as disturbed valley needlegrass grassland) is considered a sensitive vegetation community by the Chula Vista MSCP Subarea Plan because it supports species that are covered under that plan. This vegetation community type supports sensitive species such as grasshopper sparrow and provides foraging opportunities for various wildlife species. This vegetation community type is declining in range due to encroaching development and land use. A total of 14.7 acres of valley needlegrass (native) grassland is found within the SPA Plan area.

Alluvial Scrub: Alluvial scrub is considered a sensitive vegetation community by the Chula Vista MSCP Subarea Plan because it supports species that are covered under the plan, and because of its function as a native scrub community and floodplain area. It is also considered to be a wetland habitat as defined by the Subarea Plan. Alluvial scrub often supports rare plant species and contributes to nutrient retention and transformation of water. This vegetation type is also rare, especially in southwestern San Diego County. Due to its drainage function, this habitat type is considered a wetland under the jurisdiction of CDFG. A total of 0.2 acre of alluvial scrub occurs within the SPA Plan area.

Annual (non-native) Grassland: Annual (non-native) grassland is generally considered sensitive by the Chula Vista MSCP Subarea Plan because it supports species that are covered under that plan. The sensitivity of this community is based on its function as foraging habitat for several wildlife species, including raptors as well as its function as resident habitat for sensitive species such as loggerhead shrike, horned lark, and burrowing owl. A total of 464.6 acres of annual (non-native) grassland occurs within the SPA Plan area and off-site grading areas.

Jurisdictional Waters: Several open ephemeral drainages occur throughout the SPA Plan area and a portion of the intermittent Wolf Canyon drainage also is within the SPA Plan area. These drainages are considered waters of the United States and waters of the state under jurisdiction of the USACE and CDFG, respectively. These drainages are located in Wolf Canyon and associated side canyons and tributary drainage canyons to Poggi Canyon to the north. Several of the drainages flow into the Otay River either directly or through Wolf Canyon. A total of 1.9 acres of jurisdictional waters, as well as 203 square feet of vernal pool basin area are found within the SPA Plan area.

#### *Sensitive Plants*

The reports contained in Appendixes B-1 and B-2 provide complete lists of plant species that may potentially occur within the SPA Plan area. Species listed include all those within the range of the SPA Plan area and the approximate general habitat requirements. For

each species, a determination of potential to occur or brief description of the on-site occurrence is provided. Two listed plant species were detected within the SPA Plan area: Otay tarplant (*Deinandra conjugens*) (federally threatened and state endangered) and San Diego thornmint (*Acanthomintha ilicifolia*) (federally threatened and state endangered).

Otay Tarplant: Within Village Two, Otay tarplant occurs mainly in the northwestern portion of the SPA Plan area and within Wolf Canyon. The population in the northwestern portion of the site is spread sporadically over a large area (approximately 45 acres), all of which may not support the species. The population in Wolf Canyon largely occurs within the revegetated maritime succulent scrub area with more sparse occurrence along dirt roads and within other open areas. The total number of individuals on-site is estimated at 48,000 covering approximately 52 acres.

On the Village Three site, locations of Otay tarplant are clustered along the western slopes of Wolf Canyon and within the canyon topography within the southwest corner of the site. In total, the on-site population was estimated in 2003 at 832,000 individuals. It should be noted that population size of this species varies dramatically from year to year depending on rainfall patterns

San Diego Thornmint: San Diego thornmint occurs in one patch at the south central edge of the Village Two site and was estimated as supporting 100 to 200 individuals.

Eight other plant species considered sensitive by various resource agencies also occur in the SPA Plan area: San Diego barrel cactus (*Ferocactus viridescens*), San Diego County viguiera (*Viguiera laciniata*), Palmer's grappling-hook (*Harpagonella palmeri*), California boxthorn (*Lycium californicum*), San Diego bur-sage (*Ambrosia chenopodifolia*), south coast saltscale (*Atriplex pacifica*), small-flowered morning glory (*Convolvulus simulans*), variegated dudleya (*Dudleya variegata*), coast barrel cactus (*Ferocactus viridescens*), San Diego marsh-elder (*Iva hayesiana*), and seaside calandrinia (*Calandrinia maritime*). In addition, there are historical records of the occurrence of two other sensitive plant species: San Diego goldenstar (*Muilla clevelandii*) and prostrate navarretia (*Navarretia fossalis*), which is federally threatened; however, these species were not detected during current (2000-2004) plant surveys.

Although not listed as sensitive by resource agencies, one species, smooth-stemmed fagonia (*Fagonia laevis*), is considered noteworthy due to its occurrence outside of its common range. It is a common species in the Colorado desert, but occurs rarely in the southwestern portion of San Diego County. The species is not currently listed by the resource agencies or the California Native Plant Society (CNPS), and there are no known conserved locations of this species in southwestern San Diego County. It is known from the southwestern portion of San Diego County only from historic accounts (Munz 1974) and a few anecdotal locations. Three disjunct populations are located in coastal sage scrub

patches in the northwest corner and along the western edge and in the maritime succulent scrub at the southern edge of Village Two.

### *Sensitive Wildlife*

Appendixes B-1 and B-2 list the sensitive wildlife species observed or potentially occurring on the project property. Based on previous wildlife surveys, one animal species listed by the USFWS, coastal California gnatcatcher (*Polioptila californica californica*), occurs in the SPA Plan area. Fifteen other wildlife species regarded as sensitive, either by CDFG as “species of special concern” or USFWS as federal “sensitive species,” have been reported from the site, either for breeding or occasionally for foraging and/or resting (e.g., some raptor species). These species consist of the Cooper’s hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), golden eagle (*Aquila chrysaetos*), northern harrier (*Circus cyaneus*), tricolored blackbird (*Agelaius tricolor*), white-tailed kite (*Elanus leucurus*), grasshopper sparrow (*Ammodrammus savannarum*), Bell’s sage sparrow (*Amphispiza belli belli*), rufous-crowned sparrow (*Aimophila ruficeps*), burrowing owl (*Speotyto cunicularia*), cactus wren (*Campylorhynchus brunneicapillus*), loggerhead shrike (*Lanius ludovicianus*), California horned lark (*Eremophila alpestris actia*), orange-throated whiptail lizard (*Cnemidophorus hyperythrus beldingi*), western spadefoot toad (*Scaphiopus hammondi*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and American badger (*Taxidea taxus*). In addition, the observation of the mountain bluebird (*Sialia currucoides*) on-site is notable given its rarity in the southwestern portion of the County.

Surveys conducted between 2002 and 2004 confirmed the presence of coastal California gnatcatcher, sharp-shinned hawk, rufous-crowned sparrow, loggerhead shrike, California horned lark, and San Diego black-tailed jackrabbit. In addition, one raptor nest in the central portion of the Village Two site was observed in Summer 2003. Due to the timing of the survey, no specific raptor species was identified using the nest site.

Listed wildlife species potentially occurring in the SPA Plan area, but not observed, include the federally-listed endangered Riverside fairy shrimp (*Streptocephalus woottoni*), and San Diego fairy shrimp (*Branchinecta sandiegonensis*). Vernal pool branchiopods were determined to be absent from Village Two and Village Three vernal pools based on two years of negative wet season protocol surveys.

Surveys for quino checkerspot butterfly (QCB) were conducted on the Flat Rock Land Company portion of the SPA Plan area by URS Corporation. Those surveys indicate an observation of QCB within the development area of Village Three, immediately adjacent to the Preserve boundary. Small isolated patches of the larval host food plant of the QCB (*Plantago erecta*) were identified within Village Three. However, the Subarea Plan identifies Otay Ranch as a Covered Project and includes Village Two and Three within Habitat Category B. This category means that further QCB surveys are not required and any

incidental take of the species is authorized, except for future planned facilities within the Preserve, which have specific requirements for avoidance of QCB.

Sensitive bird species that may occur on-site include a variety of raptors using the site for foraging and some grassland bird species. These potentially occurring sensitive bird species include Cooper's hawk (*Accipiter cooperii*), golden eagle (*Aquila chrysaetos*), northern harrier (*Circus cyaneus*), tricolored blackbird (*Agelaius tricolor*), grasshopper sparrow (*Ammodrammus savannarum*), Bell's sage sparrow (*Amphispiza belli belli*), and burrowing owl (*Speotyto cunicularia*).

The California horned lark is a resident of grasslands and open habitats such as agricultural fields and disturbed areas. It forages and nests on the ground and forms large flocks during the non-breeding season. This species is listed as a state species of special concern, but is not covered under the MSCP subregional and subarea plans. This species was observed at the interface between the agricultural fields and the native habitat at the crest of the slopes above the Otay River valley. This location is within the limits of grading for the industrial/office park.

Several sensitive reptile species are presumed to occur in the SPA Plan area, but have not been observed during previous surveys. These species include San Diego horned lizard (*Phrynosoma coronatum blainvillei*), silvery legless lizard (*Aniella pulchra pulchra*), and coastal rosy boa (*Lichanura trivirgata roseofusca*).

Sensitive mammals with high potential to occur in the coastal sage scrub and maritime succulent scrub include Dulzura California pocket mouse (*Chaetodipus californicus femoralis*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), and San Diego desert woodrat (*Neotoma lepida intermedia*).

#### *Jurisdictional Waters*

The SPA Plan area supports several open ephemeral drainages and one intermittent drainage that eventually flow south into the Otay River and that total 1.9 acres. These drainages do not contain a predominance of hydrophytic vegetation or hydric soils; however, they do exhibit evidence of hydrology and a clear bed and bank. Intermittent drainages are found only within Wolf Canyon itself. These drainages may support hydric soils and sparse hydrophytic vegetation, but do not support significant stands of vegetation such that they would be considered jurisdictional wetlands. These unvegetated drainages are considered waters of the United States under the jurisdiction of the USACE and waters of the state under the jurisdiction of the CDFG and RWQCB.

As part of the wetland delineation for the SPA Plan area, areas supporting mima mound topography were examined for the potential presence of vernal pools. Potential vernal pools were identified on the Village Two and Village Three portions of the SPA Plan area. A ridge

in the northern portion of Village Two with mima mound topography historically has been known to support vernal pools. These pools were identified in 1979, and were known to support prostrate navarretia (*Navarretia fossalis*), a vernal pool indicator species. These pools were revisited in 1986, and were labeled as the M2 vernal pools. These pools were recorded as severely disturbed. While previously reported to support prostrate navarretia, no navarretia was observed during recent surveys. This area is shown within the designated Critical Habitat for prostrate navarretia (Federal Register / Vol. 70, No. 200 / Tuesday, October 18, 2005, 50 CFR Part 17). However, the species is a Covered Species under the Chula Vista MSCP Subarea Plan, and within a Development Area of a Covered Project, meaning that take of the species is authorized under the Subarea Plan without additional mitigation. Further, as noted previously, the species was not observed during recent surveys of the SPA Plan area.

Based on surveys conducted through 1991, the Otay Ranch GDP and RMP designated areas of development and conservation. The proposed development of the M2 vernal pool area was analyzed and determined to be offset through ranch-wide conservation and management of vernal pool complexes mainly located on Otay Mesa (Vernal pool group code J29, J30, J31 North and J31 South). The Otay Mesa vernal pools were targeted for conservation due to the greater size and presence of sensitive vernal pool plant species such as San Diego button-celery (*Eryngium aristulatum*) and Otay Mesa mint (*Pogogyne nudiuscula*) which were absent from the M2 vernal pools.

The locations of potential M2 vernal pools in Village Two are shown in Figure 5.3-3. All four potential vernal pools on the M2 Mesa are not connected to any other waters of the U.S. Based on observations of the site, it appears that water is collected on the mesa following rain events and eventually either percolates into the ground or evaporates. Because the potential vernal pools on the mesa are not connected to any other waters of the U.S., they are not under the jurisdiction of the USACE. The pools are also not under the jurisdiction of CDFG, as the Fish and Game Code only allows regulation of stream channels (i.e., areas with a defined bed and bank) and adjacent wetlands.

Wet season surveys of all potential vernal pools on the M2 Mesa were conducted during winter 2000/01 and winter 2002/03, in accordance with the accepted USFWS survey protocol. The mesa was surveyed by foot following rain events to determine the location and duration of ponding water. The survey protocol requires that ponded water be at least three centimeters deep for at least seven days before sampling can be conducted. Sufficient water ponding was observed in 2000/01 only, and in only two pools (Vernal pool 3 and Vernal Pool 4) that year. Sampling at both pools was negative for presence of vernal pool brachiopods. For each pool, a visual estimate of the maximum size of the basin (based on topography) and size of the ponded area was made during each visit. The ponded area is a subset of the maximum basin area. An approximate 23-square-foot (ft<sup>2</sup>) area was the observed ponding area for Vernal Pool 3; therefore, the estimated maximum basin area for

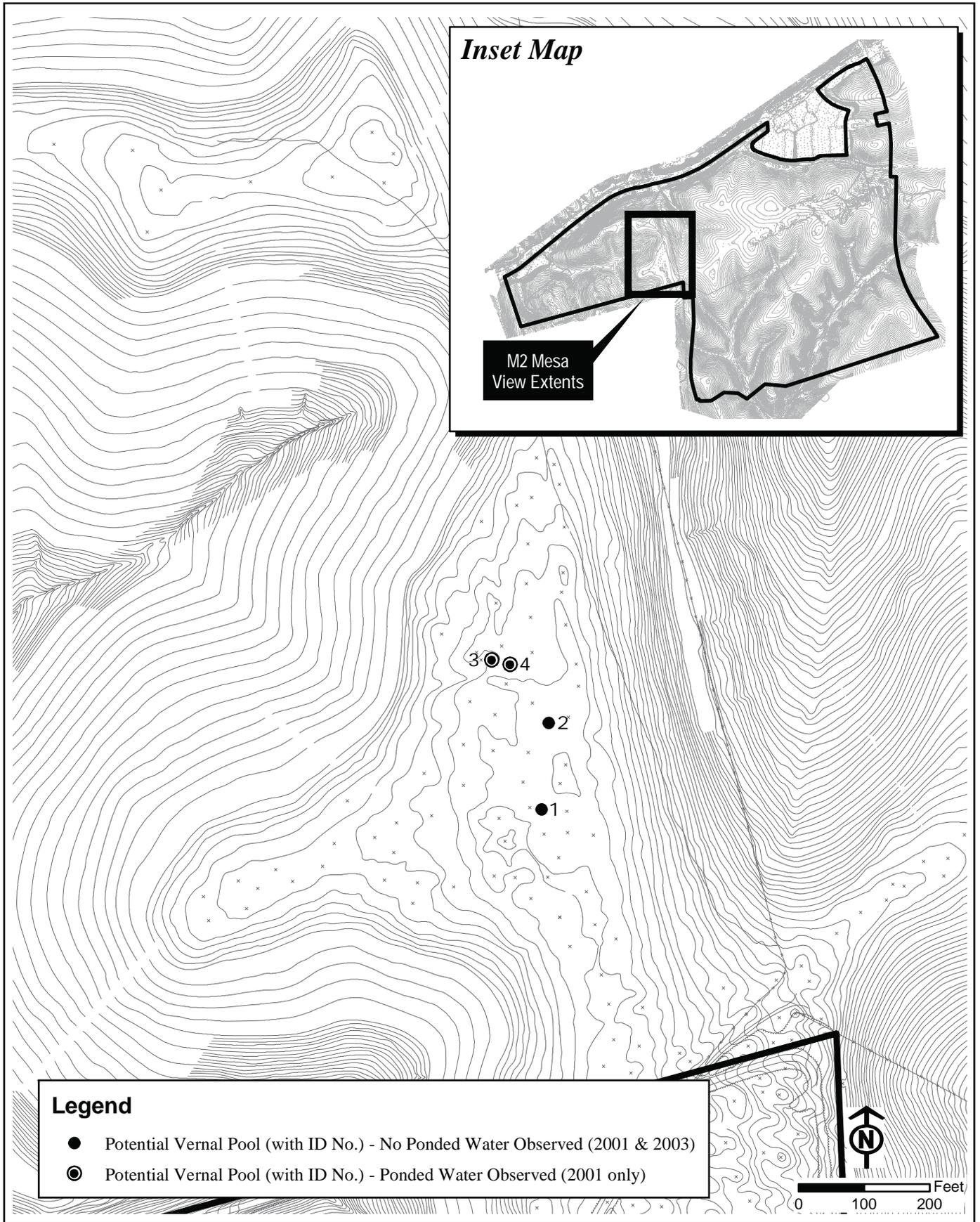


FIGURE 5.3-3  
Existing Vernal Pool locations  
within Village Two

Vernal Pool 3 is 41 ft<sup>2</sup>. An approximate 28 ft<sup>2</sup> area was the observed ponding area for Vernal Pool 4; therefore, the estimated maximum basin area for Vernal Pool 4 is 42 ft<sup>2</sup>.

Based on the results of Dudek's surveys between spring 2000 and spring 2001, two of the four potential vernal pools identified on the M2 Mesa exhibit characteristics identified by the USACE as indicative of vernal pools that would be considered jurisdictional under former USACE criteria. These criteria are no longer applicable for determining USACE jurisdiction as a result of a 2001 U.S. Supreme Court decision; however, the criteria are useful in distinguishing vernal pool features. Based on this criteria, no vernal pool indicator species were identified within any of the pools, but because ponded water was observed in Vernal Pool 3 and Vernal Pool 4, these areas would have been considered jurisdictional under the former USACE regulatory program. Vernal Pool 1 and Vernal Pool 2, however, were not observed with ponded water and are not considered jurisdictional under the USACE regulatory program. Therefore, under the former USACE guidelines, the total jurisdictional vernal pool basin area within Village Two would be 83 square feet.

The location of the potential vernal pool in the Village Three portion of the SPA Plan area is shown in Figure 5.3-4. This feature is located within the area identified as the K17 vernal pool complex in Appendix F2 of the RMP2. Located on the edge of the mesa in the extreme southwestern portion of the site, initial surveys indicate the presence of a circular shaped depression that may support ponding water following significant rain events. In general, the southern portions of the mesas on-site appear to have historically supported vernal pool topography. However, this topography has been severely damaged by long-term agricultural practices and no significant mima mound topography remains on-site. Although previous vernal pool mapping efforts on Otay Ranch did not record any potential vernal pools on the Village Three portion of the SPA Plan area (Bauder 1986; Dudek 1992), initial reconnaissance surveys in February 2003, located the single depression in the southwestern corner of the site. The area was revisited during spring rare plant surveys and was found to support hydrophytic vegetation, including rabbit's foot grass (*Polygonum monspelinensis*), dwarf stonecrop (*Crassula connata*), and toad rush (*Juncus bufonius*); however no vernal pool indicator species were detected. Although approximately three weeks of inundation greater than three centimeters has been observed (February - March 2004), no vernal pool branchiopods have been observed based on surveys conducted in 2003/4 and 2004/5. The maximum ponded area is estimated at 120 square feet. Similar to the evaluation of M2 Vernal Pools on Village Two, observations indicate characteristics formerly considered by USACE as indicative of jurisdictional vernal pools. Therefore, the vernal pool basin area on Village Three is 120 square feet. However, based on existing information, the area is not considered a jurisdictional water due to the lack of indicator species.

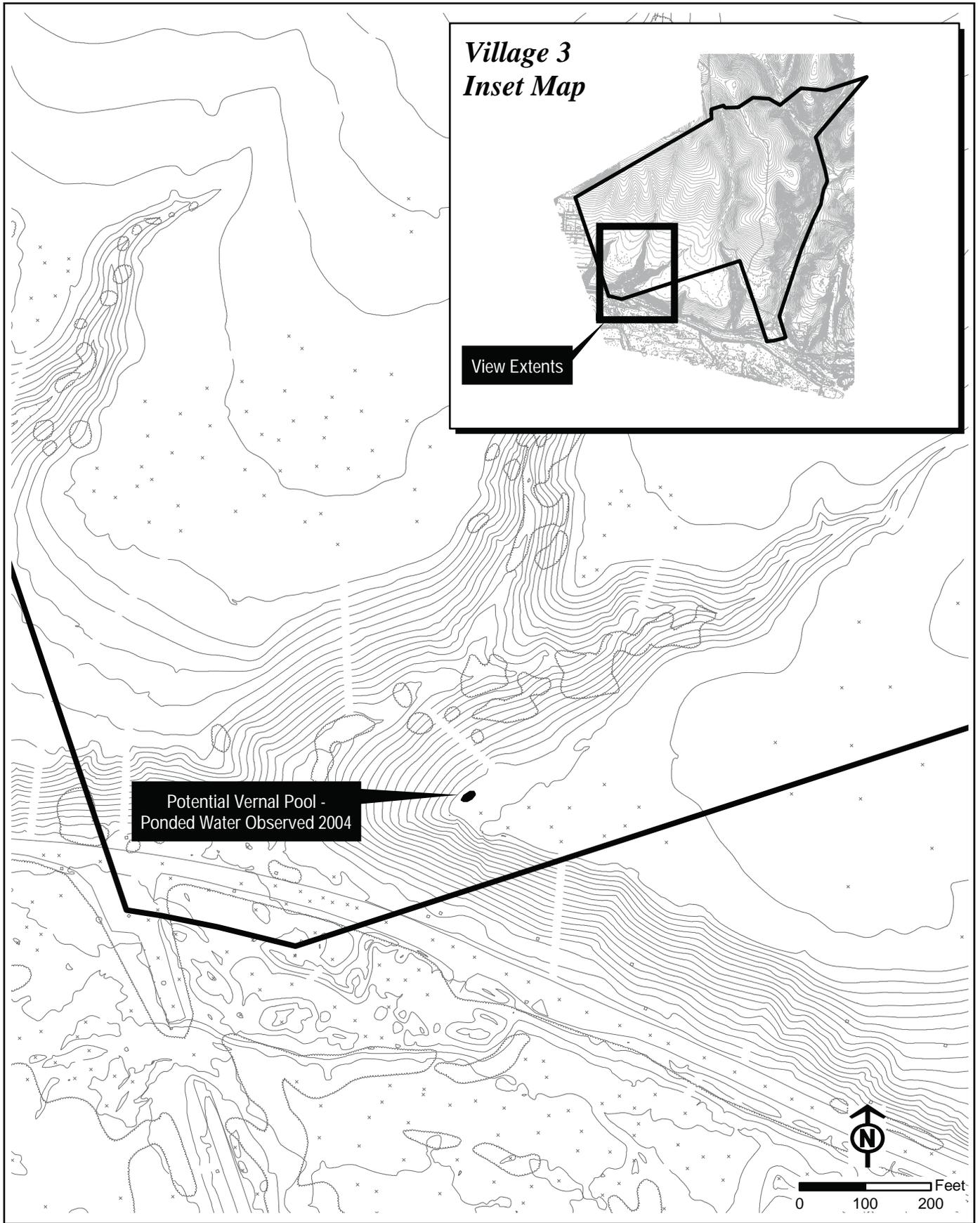


FIGURE 5.3-4  
Existing Vernal Pool locations  
within Village Three

### Wildlife Movement Corridors

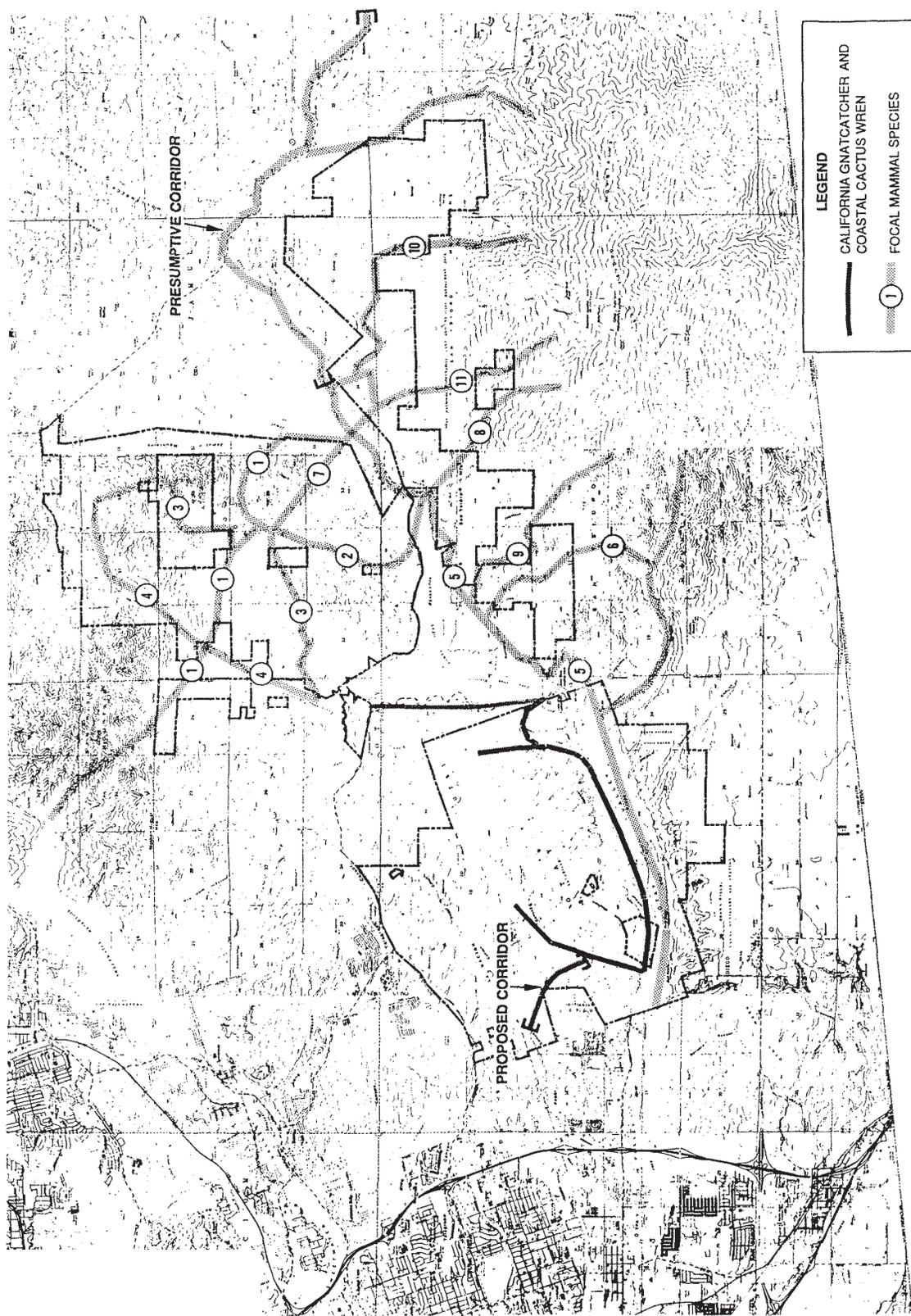
The Wildlife Corridor Study prepared by Ogden (1992) concluded that Wolf Canyon, located south of Village Two and north of Village Four, functions as a “local” corridor for mammal species, including mule deer (*Odocoileus hemionus*), and as a “regional” connection for California gnatcatchers and cactus wrens located in Wolf Canyon. Figure 5.3-5 depicts the wildlife corridors shown on Figure 13 of the RMP. For Wolf Canyon to function as an avian connection, one or two of the low passes that connect Poggi Canyon with Wolf Canyon would require revegetation. Currently, Wolf Canyon does not link two or more patches of habitat, as is required of a corridor. Furthermore, the Ogden wildlife corridor report suggests that it may not be biologically justified to manufacture corridors for large mammals between Poggi and Wolf Canyons because of the proximity to planned urban development. Further, in an agreement made as part of the adoption of the County's MSCP Subarea Plan, the area potentially connecting Wolf Canyon to Poggi Canyon via the Otay Landfill was shown as non-preserve in exchange for areas considered to be more desirable for conservation. In addition, the City's MSCP Subarea Plan does not show a connection between Wolf and Poggi Canyons. Therefore, the SPA Plan area does not support habitat linkage or regional wildlife corridor functions, but does provide function for local movement of wildlife.

### Otay Ranch Resource Management Plan

The RMP was established in the 1993 Otay Ranch GDP in order to establish a permanent preserve within Otay Ranch. The purpose of the Otay Ranch Preserve is to protect and enhance biological, paleontological, cultural, and scenic resources, and to provide CEQA mitigation for impacts to these resources. The Otay Ranch RMP identifies a Preserve system of 11,375 acres dedicated within Otay Ranch. Within the SPA Plan area, the Preserve includes portions of Wolf Canyon, Salt Creek Canyon, and Otay Valley.

To ensure that Preserve land is transferred to the Preserve Owner Manager in step with development, the RMP incorporates a preserve conveyance plan, which includes a conveyance ratio of 1.188 acres of Preserve for each acre of development area (excluding common areas as defined in the RMP2).

The RMP identifies the obligation to restore coastal sage scrub and maritime succulent scrub on a village-by-village basis as a means of achieving the stated conservation objectives for these vegetation communities. The RMP currently establishes a restoration ratio of 0.4:1 acre for coastal sage scrub impacts and 1:1 for maritime succulent scrub impacts. The coastal sage scrub restoration requirement is proposed to be deleted with this project application.



SOURCE: Baldwin Otay Ranch Wildlife Corridor Studies, Ogden 1992

FIGURE 5.3-5  
Proposed RMP Boundary Modifications

### Multiple Species Conservation Program

As previously noted, the municipalities of southern San Diego County collaborated in producing the MSCP Subregional Plan. The MSCP Subregional Plan is implemented through individual Subarea Plans adopted by each jurisdiction receiving take authorization for covered species. The City's Subarea Plan provides for conservation of upland habitats and species through Preserve design, regulation of impacts and uses, and management of the Preserve. The proposed project is considered a "Covered Project" under the Subarea Plan. This means that the areas proposed to be preserved (100 percent Conservation Areas) are either already in public ownership or will be dedicated to the Preserve as part of the development approval process for Covered Projects. Any portions of Covered Projects that are located within 100 percent Conservation Areas must be consistent with conditions allowing specific land uses within the Preserve as outlined in Section 6.0 of the Subarea Plan and are subject to the Narrow Endemic Species Policy (avoidance and minimization) and Wetlands Protection Program.

#### *Narrow Endemic Species Protection*

The following specific provisions are applicable to the SPA Plan area:

- Development Areas within Covered Projects: Covered Projects provide protection of Narrow Endemic Species through consideration of Narrow Endemic Species in the Preserve design for those projects. Take of Covered Species, including Narrow Endemic Species, for development areas within Covered Projects will be extended at the time of development approval. There are no limitations on impacts to Narrow Endemic Species within the development areas of Covered Projects, like the proposed project.
- 100 Percent Conservation Areas within Covered Projects: Projects located within the 100 Percent Conservation Areas of Covered Projects (i.e., within the Preserve) are limited to uses described in Sections 6.1, 6.2 and 6.3 of the City's Subarea Plan. Impacts to covered Narrow Endemic Species from Planned and Future Facilities located within the 100 Percent Conservation Areas of Covered Projects will be avoided to the maximum extent practicable. Where impacts are demonstrated to be unavoidable, impacts will be limited to 5 percent of the total Narrow Endemic Species population within the SPA Plan area.
- If impacts exceed 5 percent of the covered Narrow Endemic Species population within the SPA Plan area after comprehensive consideration of avoidance and minimization measures, the City must make a determination of biologically superior preservation, consistent with Section 5.2.3.7 of the City's Subarea Plan.

*Wetlands Protection*

As part of the CEQA review, development projects that contain wetlands will be required to demonstrate that impacts to wetlands have been avoided to the greatest extent practicable and, where impacts are nonetheless proposed, such impacts have been minimized. For unavoidable impacts to wetlands, the City will apply the wetlands mitigation ratios identified in Table 5-6 of the City's Subarea Plan. The wetlands mitigation ratios provide a standard for each habitat type, but may be adjusted depending on the functions and values of both the impacted wetlands as well as the wetlands mitigation proposed by the project. The City may also consider the wetland habitat type(s) being impacted and utilized for mitigation in establishing whether the Subarea Plan standards have been met.

**5.3.2 Thresholds of Significance**

According to Appendix G of the CEQA Guidelines (2005), impacts to biological resources would be significant if the proposed project would:

- Threshold 1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Threshold 2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Threshold 3: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Threshold 4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Threshold 5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Threshold 6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

### 5.3.3 Impacts

Threshold 1: Does the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

This threshold evaluates effects to both habitat and species. The total proposed project impacts to habitats within the SPA Plan area (both on-site and off-site grading areas) are summarized in Table 5.3-2. Sensitive habitats are those that support sensitive species, and are identified as Tier I, II or III habitats in the City's Subarea Plan.

*Tier I Habitats:* maritime succulent scrub (3.0 acres), revegetated maritime succulent scrub (3.6 acres), disturbed maritime succulent scrub (0.4 acre), valley needlegrass (native) grassland (12.7 acres), and disturbed valley needlegrass grassland (1.5 acres).

*Tier II Habitats:* coastal sage scrub (95.0 acres), disturbed coastal sage scrub (37.3 acres), and alluvial scrub (0.2 acre).

*Tier III Habitats:* annual (non-native) grassland (424.0 acres).

Impacts to these vegetation communities would be considered significant.

*Sensitive Plants:* Significant direct impacts to sensitive plant species include impacts to the following species that are identified as covered under the Subarea Plan: Otay tarplant, variegated dudleya and San Diego barrel cactus. Otay tarplant and variegated dudleya are identified in the City's Subarea Plan as Narrow Endemics. Impacts to these three species would be significant.

Impacts to non-covered species that are also considered to be sensitive include south coast salt-scale, smooth-stemmed fagonia, San Diego bur-sage, Palmer's grappling-hook, California box-thorn, and San Diego County viguiera. Impacts to San Diego bur-sage are not considered significant under CEQA, in accordance with the established significance thresholds, because it occurs as a very small population onsite (one individual observed), which is not significant on a regional scale. Therefore, project impacts do not constitute a substantial adverse effect. Palmer's grappling-hook, California box-thorn, and San Diego County viguiera are relatively common species in this portion of the County and, therefore, are not considered sufficiently rare for the proposed loss to represent a substantial adverse effect on these species under CEQA, in accordance with the established significance thresholds. In contrast, although the three individuals of smooth-stemmed fagonia are not considered sensitive by the Chula Vista Subarea Plan or by any agency, they are notable due to their occurrence outside of their common range within the desert regions of southern California. As such, species occurrence in the SPA Plan area represents a potential range

TABLE 5.3-2  
IMPACTS BY HABITAT TYPE

Vegetation Type	Impacts						Total Impacts
	Otay Project LP	Flat Rock Land Co.	Village Four Park Site	County Landfill	Main Street (in Preserve)		
Village Two and Village Four Park Site							
Sensitive Vegetation Communities							
Coastal Sage Scrub	79.6	-	0	0.5	-	80.1	
Disturbed Coastal Sage Scrub	23.9	-	0	3.3	-	27.2	
Alluvial Scrub	0.2	-	0	0	-	0.2	
Maritime Succulent Scrub	0.4	-	0	0	-	0.4	
Revegetated Maritime Succulent Scrub	3.6	-	0	0	-	3.6	
Valley Needlegrass (Native) Grassland	11.9	-	0	0.8	-	12.7	
Disturbed Valley Needlegrass (Native) Grassland	0	-	0	1.5	-	1.5	
Annual (Non-native) Grassland	<u>198.2</u>	-	-	<u>8.1</u>	-	<u>206.3</u>	
Subtotal (Sensitive Vegetation)	318.2	-	-	14.2	-	332.4	
Non-Sensitive Vegetation Communities							
Agriculture	207.2	-	3.7	-	-	210.9	
Disturbed Habitat	4.3	-	-	-	-	4.3	
Developed Land	88.3	-	-	0.6	-	88.9	
Subtotal (Village Two/Village Four Park Site)	618.0	-	3.7	14.8	-	636.5	
Village Three							
Sensitive Vegetation Communities							
Coastal Sage Scrub	13.2	0.4	-	-	1.3	14.9	
Disturbed Coastal Sage Scrub	9.7	-	-	-	0.4	10.1	
Maritime Succulent Scrub	0.7	1.9	-	-	-	2.6	
Disturbed Maritime Succulent Scrub	0.2	-	-	-	0.2	0.4	
Annual (Non-native) Grasslands	216.2	0.5	0.1	-	0.9	217.7	
Subtotal Sensitive Vegetation	240.0	2.8	0.1	-	2.8	245.7	
Non-Sensitive Vegetation Communities							
Agriculture	-	16.8	-	-	-	16.8	
Disturbed Habitat	0.3	0.3	-	-	0.2	0.8	
Developed Land	-	0.3	0.3	-	0.5	1.1	
Subtotal (Village Three)	240.3	17.4	0.4	-	3.5	264.4	
<b>TOTAL</b>	<b>858.3</b>	<b>17.4</b>	<b>4.1</b>	<b>14.8</b>	<b>3.5</b>	<b>898.1</b>	

NOTE: Gross acreage is correct; columns may not precisely total due to rounding.

extension of desert species into southwestern San Diego and, as such, impacts to the species on-site are considered significant.

*Sensitive Animals:* Surveys conducted for the proposed project confirmed the presence of coastal California gnatcatcher, quino checkerspot butterfly, sharp-shinned hawk, rufous-crowned sparrow, loggerhead shrike, California horned lark, and San Diego black-tailed jackrabbit. In addition, one raptor nest in the central portion of the Village Two site was observed. Implementation of the proposed project would result in the direct loss of habitat for all of the sensitive animals discussed in this section, including twelve pairs of coastal California gnatcatchers and one individual Quino checkerspot butterfly. These impacts are considered significant.

In addition to survey data collected for this project, previous biological data is also available for the site, including data used in preparation of the Otay Ranch GDP and RMP and accompanying Otay Ranch GDP Program EIR. Information on species identified in previous surveys is provided in Section 5.3.1 of that EIR, and in Appendix B-1. Impacts to sensitive wildlife species that are expected to occur based on previous occurrence data, but were not found in recent surveys, are considered to be significant due to the loss of potential habitat for these species.

It should be noted that offsite impacts to sensitive habitats and species within the Otay Landfill area are outside of the Chula Vista Subarea Plan area. This area is identified as a Take Authorized area in the County's Subarea Plan.

In addition to the direct impacts to sensitive species and habitat identified above, indirect impacts to these resources could also result from project implementation. Indirect impacts to sensitive biological resources primarily would result from adverse edge effects. During construction of the project, edge effects may include dust that could disrupt plant vitality in the short term or construction-related soil erosion and runoff. Long-term indirect impacts most likely would occur as a result of vegetation trampling by humans and domestic pets, invasion by exotic species, alteration of the natural fire regime, and exposure to urban pollutants. Indirect impacts to biological resources are considered significant. As required by the GDP, the SPA Plan includes an Edge Plan that identifies design treatments to be applied along the Preserve edge to address these impacts. Requirements for Edge Plan treatments are included in Section 5.3.5 of this EIR.

Threshold 2: Does the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Riparian habitats and other sensitive natural communities identified in local or regional plans policies, regulations or by CDFG or USFWS, are identified in the discussion under Threshold 1. Specifically, the City's Subarea Plan serves as a local conservation plan that

was developed to be consistent with a regional conservation plan. The Subarea Plan also serves as an NCCP-recognized plan by CDFG, and an HCP-recognized plan by USFWS. The discussion provided above includes an analysis of all of the habitats considered to be sensitive, including riparian habitats, under the Subarea Plan.

Threshold 3. Does the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

#### *Wetlands*

Impacts to jurisdictional waters would occur as a result of implementation of the proposed SPA Plan, consisting of 0.5 acre of ephemeral and intermittent unvegetated stream channels, in addition to the 0.2 acre of alluvial scrub, mentioned above. Impacts to ephemeral and intermittent unvegetated waters and alluvial scrub are considered significant.

Section 5.2.4 of the Subarea Plan states that development projects are required to demonstrate that impacts to wetlands have been avoided or minimized to the greatest extent practicable. The major drainages within Wolf Canyon are included in the Preserve. Therefore, the majority of wetland impacts within the project area will be protected and impacts to wetlands have been minimized. Impacts to wetlands are considered to be significant, and wetland mitigation will be required consistent with Table 5-6 of the Subarea Plan.

#### *Vernal Pools*

In Village Two, two vernal pools on the M2 mesa will be impacted by the proposed project, and one vernal pool within the K17 complex in Village Three will be impacted. Impacts to these three vernal pools are considered significant under CEQA. The total surface area of the three pools is 203 square feet.

Section 5.2.4 of the Subarea Plan states that development projects are required to demonstrate that impacts to vernal pools have been avoided or minimized to the greatest extent practicable. It further states that for Covered Projects located within Otay Ranch, mitigation for vernal pool impacts will be consistent with the policies and guidelines of the Otay Ranch RMP.

The RMP1 contains a policy for preservation of 95 percent of vernal pools within Otay Ranch, and requires that the RMP2 include a vernal pool preservation and management plan. Appendix F-2 of the RMP2 includes a study entitled "Report of the Hydrology and Flora of the Otay Ranch Vernal Pools." That study provides preservation recommendations and identifies restoration potential for vernal pools within Otay Ranch. The vernal pools

located within the SPA Plan area are identified as the M2 and portions of the K17 series pools. Neither of these pool series are included within the vernal pools recommended for preservation and enhancement, largely due to the fact that they lack sensitive resources and are within areas that have been subject to disturbance as a result of historic agricultural activities.

Avoidance and minimization of impacts to all of the vernal pool resources within Otay Ranch was considered in the development of the GDP. Because of the lack of resources and relative quality of the M2 and K17 pool complexes, these pool complexes were not included in the conservation planning. Instead, it was determined that enhancement and restoration of the J23, J24 or J25 pools on Otay Mesa would provide the best overall strategy for conservation of vernal pool resources within Otay Ranch.

The M2 and K17 pool complexes lack sensitive resources and were not identified for preservation in the RMP Mitigation for impacts to these pool complexes is identified in Section 5.3.5 of this EIR. The proposed mitigation option consisting of restoration within the J23, J24 or J25 pools on Otay Mesa would be consistent with mitigation identified in the RMP. In addition, optional mitigation is provided in consideration of proposed changes in conservation strategies for vernal pool complexes within Village 13.

#### *Indirect Effects to Jurisdictional Waters and Vernal Pools*

Indirect, adverse edge effects to jurisdictional waters and vernal pools include potential runoff, sedimentation, erosion, exotics introduction, and habitat type conversion in the short and long term, particularly within the Wolf Canyon drainage. Indirect impacts to jurisdictional waters are considered significant.

#### Threshold 4: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites?

As noted in Section 5.3.1, above, the Wolf Canyon portion of the SPA Plan area does not function as a regional habitat linkage or wildlife corridor, but is identified as a local corridor for focused mammal species. In addition, the SPA Plan proposes to conserve additional acreage in Wolf Canyon and with the proposed Boundary Adjustment, would improve the overall area of the local corridor by increasing both the length and width of Wolf Canyon at its northern terminus. The Otay River valley immediately south of and outside of the SPA Plan area provides for regional wildlife movement and habitat connectivity function. The Otay River valley would not be impacted by development of the SPA Plan area as proposed would not adversely affect the habitat connectivity or wildlife movement functions of the Otay River valley because the project would not impact the Otay River valley. Therefore, development of the project as proposed would not interfere substantially with the movement of wildlife species or impede the use of native wildlife nursery sites.

Thresholds 5 and 6: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?

The SPA Plan area is subject to the Chula Vista MSCP Subarea Plan (an HCP and NCCP) and the Otay Ranch RMP (a local habitat conservation plan). The following discussion addresses consistency with each of those plans. It should be noted that the Preserve boundaries for the MSCP and RMP are not identical. The MSCP boundary was adopted subsequent to the RMP approval and therefore more accurately reflects the City's hard-line Preserve area. However, impact acreages on each of these Preserve boundaries are shown for comparison purposes in Tables 5.3-3 and 5.3-4.

*Otay Ranch Resource Management Plan*

The development of the Village Two portion of the SPA Plan area would require a modification to the boundary of the RMP Preserve in the northern portion of Wolf Canyon. Modifications are only proposed for the Village Two area. Policies 9.6 and 9.8 of the RMP 1 allow for amendments to the RMP to address Boundary Modifications. Relevant standards and guidelines related to these policies include:

1. (Policy 9.6 - Standard) Following notice of public hearing, the RMP may be amended by the legislative body having jurisdiction over the use of land affected by the amendment (in this case the Chula Vista City Council), provided that all such amendments shall be subject to review and comment by the POM, by the City of Chula Vista, and by the County of San Diego.
2. (Policy 9.6 - Guideline) The overall size of the Preserve shall not be reduced by a Preserve Boundary Modification unless the County Board of Supervisors and the Chula Vista City Council are satisfied that the biological standards and guidelines set forth in the RMP can nevertheless be met and that Preserve design is not adversely affected by a Preserve Boundary Modification that results in a reduced acreage.
3. (Policy 9.8 - Standard) The overall size of the Preserve shall not be reduced by a Preserve Boundary Modification unless it can be demonstrated that the biological standards and guidelines can be met and that Preserve design is not adversely affected by a Preserve Boundary Modification that results in reduced acreage.

The standard from Policy 9.6 related to processing and review requirements for RMP amendments will be satisfied through public hearings with the City and County that are required for adoption of the SPA Plan.

The Guideline from Policy 9.6 and the Standard from Policy 9.8 are addressed below.

#### HABITATS AND HABITAT VALUE

The proposed Boundary Modification would remove Preserve in the western fork of upper Wolf Canyon, and add Preserve in the northern portion of the main drainage of the canyon, resulting in net reduction in Preserve acreage within Wolf Canyon of 24.64 acres, as shown in Table 5.3-3 and Figure 5.3-65. Full scale maps showing the relationship of the proposed Preserve boundary to the existing Otay Ranch RMP boundary are included in Appendix B-2.

**TABLE 5.3-3  
RMP BOUNDARY MODIFICATION CHANGE IN PRESERVE ACREAGE**

Vegetation Type	Net Change in Preserve Acreage
Maritime Succulent Scrub	+5.00
Coastal Sage Scrub	+0.32
Alluvial Scrub	-0.20
Annual Grassland	-33.89
Agriculture	+4.81
<b>TOTAL</b>	<b>-24.64</b>

As noted in Table 5.3-3, reductions in acreage consist primarily of annual grassland (33.89 acres), with a small amount of loss in alluvial scrub (0.20 acre). However, the modification would increase conservation of maritime succulent scrub habitat (5.0 acres), and coastal sage scrub (0.32 acre).

The Otay Ranch RMP does not provide a specific qualitative ranking of habitat types, however, the Chula Vista Subarea Plan establishes mitigation ratios for upland habitat types based on their relative sensitivity. Table 5-3 of the Subarea Plan identifies Tier I through Tier IV upland habitats, with Tier I being the most sensitive and Tier IV the least. Maritime succulent scrub is listed as a Tier I habitat, coastal sage scrub is listed as a Tier II habitat, and non-native grassland is listed as a Tier III habitat. Alluvial scrub is not an upland habitat type and is therefore not ranked in the Subarea Plan. However, alluvial scrub is a CDFG jurisdictional wetland and will be mitigated within the Preserve pursuant to the requirements of CEQA and the Subarea Plan at a 3:1 ratio.

The proposed Boundary Modification would exchange lower value non-native grassland habitat for higher value coastal sage scrub and maritime succulent scrub. It should also be noted that the non-native grassland areas that would be developed have historically been farmed and are former agricultural lands. The added areas support high concentrations of sensitive and listed species, including California gnatcatcher and Otay tarplant. While the proposed modification would result in a net reduction in acreage of Preserve within Wolf Canyon, the modification would be consistent with the biological standards and guidelines in the Otay Ranch RMP, because it would result in increased conservation of sensitive

habitats. In addition, the overall effect of project implementation would be a net increase in Preserve acreage, as further discussed below.

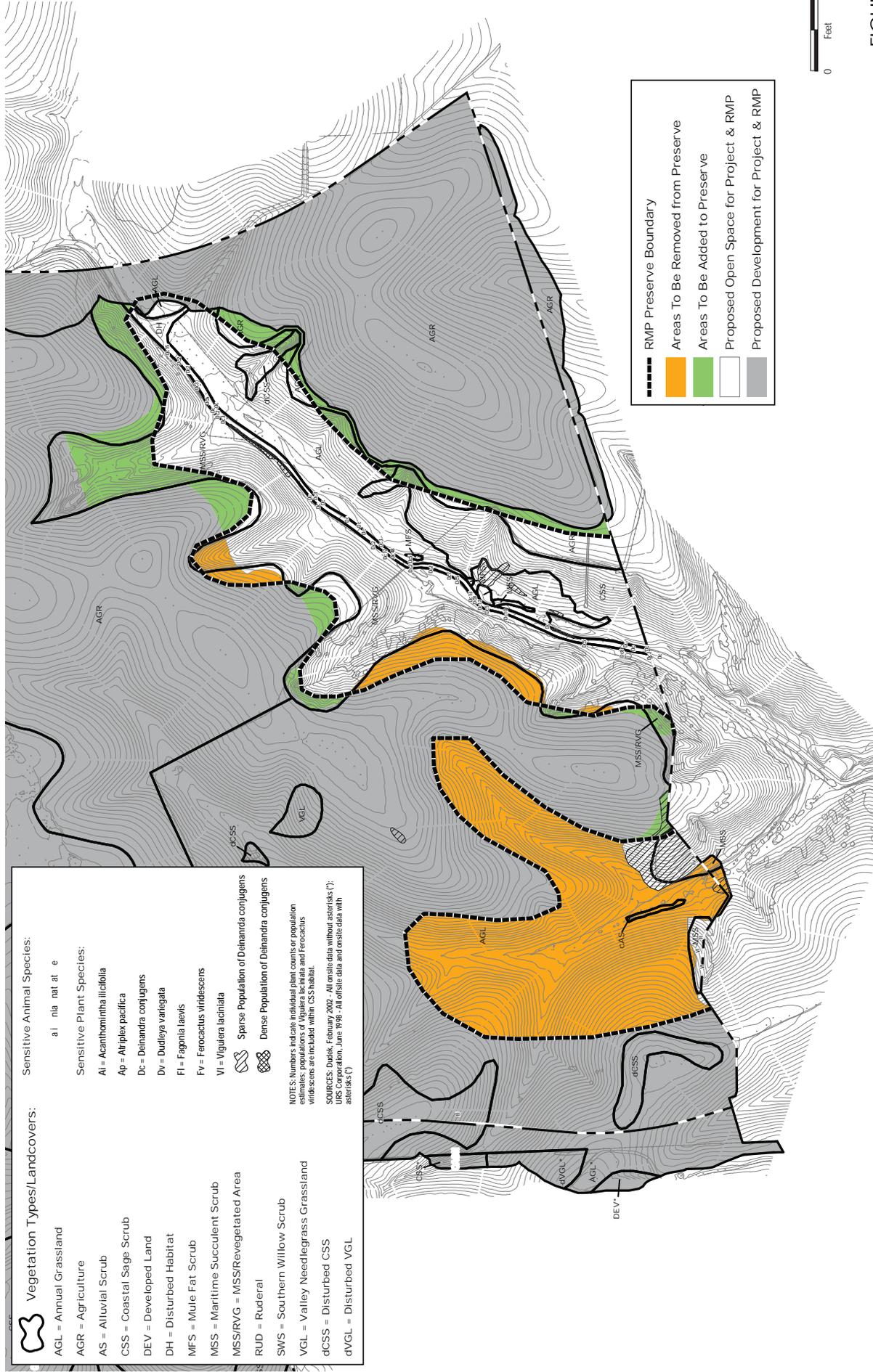
#### PRESERVE DESIGN

Otay Ranch RMP policies related to Preserve design that are relevant to the proposed Preserve Boundary Modification are listed in the RMP under Objective 4 - Wildlife Corridors. This section is relevant because the primary function of the western fork of Wolf Canyon in the original Otay Ranch RMP Preserve design was to provide for a potential corridor between Wolf Canyon and coastal sage scrub resources in Poggi Canyon. This potential corridor is shown on Figure 13 of the Otay Ranch RMP (Figure 5.3-6). However, as a result of adoption by the County MSCP Subarea Plan and City amendments to the GDP, the coastal sage scrub resources in Poggi Canyon were eliminated from the proposed Preserve in exchange for additional conservation within Villages 13 and 15 of the Otay Ranch (approximately 240 acres). Therefore, the corridor depicted in the adopted RMP no longer serves a functional purpose. Removal of the western fork of Wolf Canyon from the Preserve would not adversely affect Preserve design for the Otay Ranch RMP Preserve, since its primary function in the affected area has already been modified by previously approved actions.

The proposed Otay Ranch RMP Preserve Boundary Modification would not adversely affect the ability to meet the objectives, policies, standards and guidelines related to conservation of biological resources and design and configuration of the Preserve. The proposed Otay Ranch RMP Boundary Modification would provide a net benefit to conservation of species and habitats within the Preserve by the inclusion of additional sensitive habitat. The Boundary Adjustment would result in a reduction of the overall conservation of non-native grassland within the Preserve, but would increase conservation of maritime succulent scrub, coastal sage scrub, and native grasslands. The proposed Boundary Modification provides for higher biological value of the Preserve, and therefore no significant impacts related to a conflict with local policies or ordinances protecting biological resources would result.

#### *Multiple Species Conservation Program*

There are three project features that relate to consistency with the City's Subarea Plan that require analysis of consistency with respect to direct biological impacts: (1) the proposed Boundary Adjustment to accommodate the project grading limits; (2) extension of Main Street through Village Three; and (3) extension of a storm drain pipe and outlet structure within the Preserve. As noted above, the Subarea Plan is considered an HCP under applicable federal law, and an NCCP under applicable state law.



**Vegetation Types/Landcovers:**

- AGL = Annual Grassland
- AGR = Agriculture
- AS = Alluvial Scrub
- CSS = Coastal Sage Scrub
- DEV = Developed Land
- DH = Disturbed Habitat
- MFS = Mule Fat Scrub
- MSS = Maritime Succulent Scrub
- MSS/RVG = MSS/Revegetated Area
- RUD = Ruderal
- SWS = Southern Willow Scrub
- VGL = Valley Needlegrass Grassland
- dCSS = Disturbed CSS
- dVGL = Disturbed VGL

**Sensitive Animal Species:**

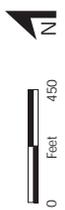
- ai = *ai nia nat a e*
- Sensitive Plant Species:**
- Al = *Acanthomintha liliifolia*
- Ap = *Atriplex pacifica*
- Dc = *Delonidia conjugans*
- Dv = *Dudleya variegata*
- Fl = *Fagonia laevis*
- Fv = *Ferocactus viridescens*
- VI = *Viguiera lacinata*
- Sparse Population of *Delonidia conjugans*
- Dense Population of *Delonidia conjugans*

NOTES: Numbers indicate individual plant counts or population estimates; populations of *Viguiera lacinata* and *Ferocactus viridescens* are included within CSS habitat.

SOURCES: Dudek, February 2002. All onsite data without asterisks (\*); URS Corporation, June 1998. All offsite data and onsite data with asterisks (\*)

**RMP Preserve Boundary**

- Areas To Be Removed from Preserve
- Areas To Be Added to Preserve
- Proposed Open Space for Project & RMP
- Proposed Development for Project & RMP



**FIGURE 5.3-6**  
Wolf Canyon and Poggi Canyon Wildlife Corridor

BOUNDARY ADJUSTMENT

The proposed Boundary Adjustment would encroach upon the Preserve in the western fork of Wolf Canyon and add Preserve in the northern portion of the main drainage of the canyon. Figure 5.3-7 shows a comparison of the adopted MSCP boundary with the proposed SPA Plan Preserve boundary. The Boundary Adjustment would convert approximately ~~26.32~~<sup>41.4</sup> acres of developable land (i.e., land that is approved for development within the Subarea Plan) to Preserve, and proposes development on approximately ~~18.38~~<sup>30.0</sup> acres of land that is identified as Preserve in the Subarea Plan. As shown in Table 5.3-4, the proposed Boundary Adjustment would result in a net increase in MSCP Preserve land of approximately 7.94 acres.

**TABLE 5.3-4  
VEGETATION IN MSCP PRESERVE  
VERSUS VILLAGE TWO/THREE BOUNDARY ADJUSTMENT**

Conserved Vegetation Type	MSCP Preserve (acres)	Proposed Boundary Adjustment (acres)	Net Change in Preserve Acreage
Coastal Sage Scrub	11.28	13.23	+1.95
Maritime Succulent Scrub	6.34	6.15	- 0.19
Revegetated Maritime Succulent Scrub	24.81	40.25	+15.44
Annual Grassland	36.63	18.44	- 18.19
Agriculture	2.73	9.84	+ 7.11
Disturbed Habitat	1.96	3.78	+1.82
<b>TOTAL</b>	<b>85.23</b>	<b>93.17</b>	<b>+7.94</b>

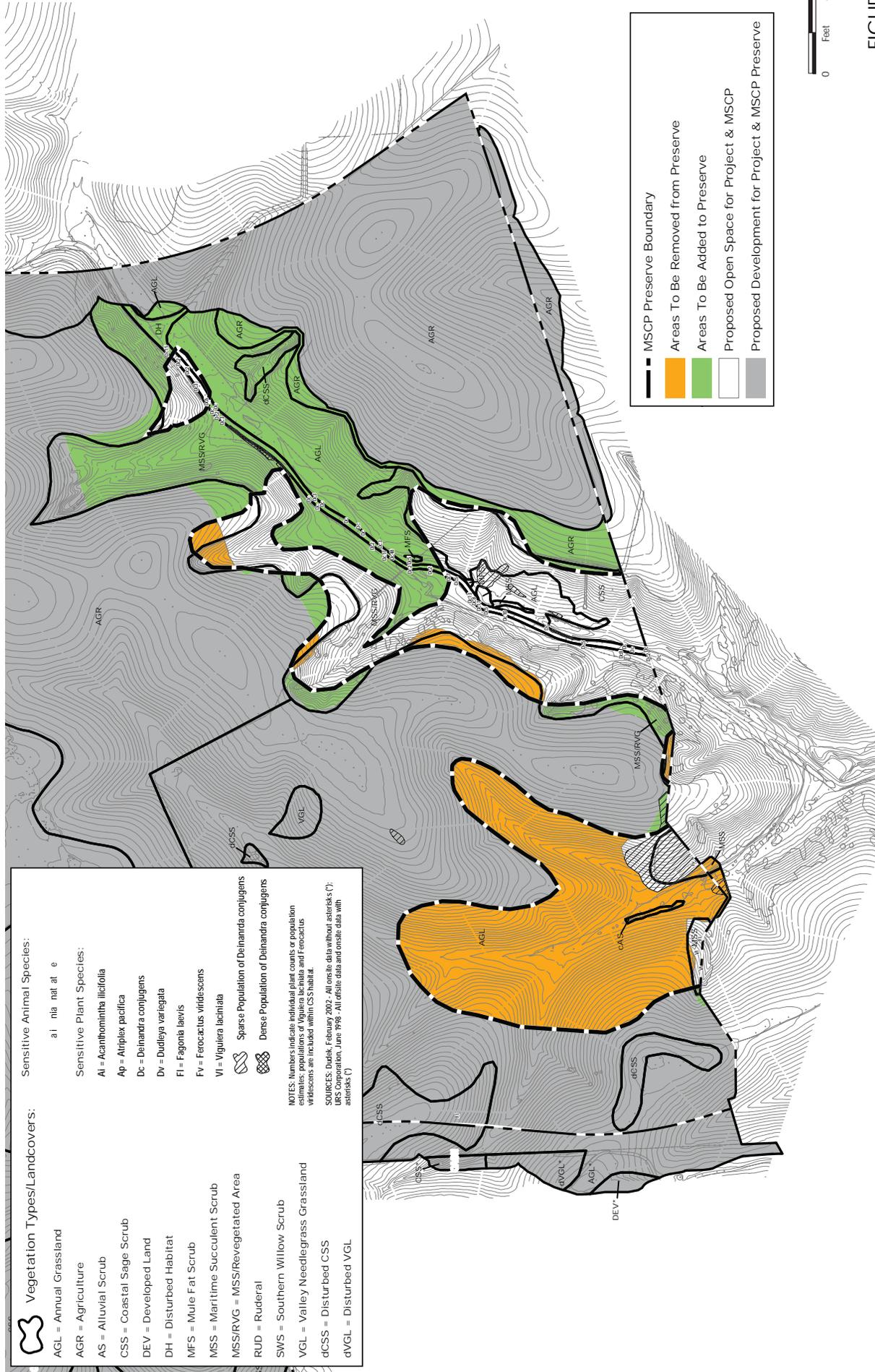
a) Applicable Subarea Plan Policies

Pursuant to the Subarea Plan, the standard of review for the proposed Boundary Adjustment is one of “biological equivalency.” As defined in Section 1.3 of the Subarea Plan:

Biological Functional Equivalency — A modification to a Preserve boundary which results in a Preserve configuration with a biological value that is equal to or higher than the original Preserve configuration. The comparison of biological value is based on the “like or equivalent” exchange concept for biological factors identified in Section 5.4.2 of the MSCP Subregional Plan.

The Subarea Plan permits boundary adjustments without processing plan amendments as provided in Section 5.4, as follows:

Adjustments to the Preserve boundaries may be made without the need to amend either this Subarea Plan or the MSCP Subregional Plan where the new Preserve boundary results in the same or higher biological value of the Preserve.



**Vegetation Types/Landcovers:**

- AGL = Annual Grassland
- AGR = Agriculture
- AS = Alluvial Scrub
- CSS = Coastal Sage Scrub
- DEV = Developed Land
- DH = Disturbed Habitat
- MFS = Mule Fat Scrub
- MSS = Maritime Succulent Scrub
- MSS/IRVG = MSS/Revegetated Area
- RUD = Ruderal
- SWS = Southern Willow Scrub
- VGL = Valley Needlegrass Grassland
- dCSS = Disturbed CSS
- dVGL = Disturbed VGL

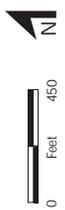
**Sensitive Animal Species:**

- ai nia nat at e
- Sensitive Plant Species:**
- AI = *Acanthomitha ilicifolia*
  - Ap = *Atriplex pacifica*
  - Dc = *Deinandra conjugens*
  - Dv = *Dudleya variegata*
  - Fl = *Fagonia laevis*
  - Fv = *Ferocactus viridescens*
  - VI = *Viguiera laciniala*
- Sparse Population of *Deinandra conjugens*  
 Dense Population of *Deinandra conjugens*

NOTES: Numbers indicate individual plant counts or population estimates; populations of *Viguiera laciniala* and *Ferocactus viridescens* are included within CS Habitat.

SOURCES: Durak, February 2002. All onsite data without asterisks (\*); URS Corporation, June 1998. All offsite data and onsite data with asterisks (\*)

- MSCP Preserve Boundary
- Areas To Be Removed from Preserve
- Areas To Be Added to Preserve
- Proposed Open Space for Project & MSCP
- Proposed Development for Project & MSCP Preserve



**FIGURE 5.3-7**  
Proposed MSCP Boundary Modifications

Section 5.4.2 further states that:

Boundary adjustments may occur for reasons such as: (1) new biological information obtained through site-specific studies; (2) unforeseen engineering design opportunities or constraints; (3) a landowner or other constituent request to change boundaries in the context of the equivalency standard set forth in this section, and/or (4) timely and adequate notice of objection by the Wildlife Agencies to a mapping conflict determination made by the City Director of Planning and Building as defined by Section 5.4.1 of this Subarea Plan. In the case of a Boundary Adjustment, the City will determine the adjusted Preserve boundary pursuant to the following process:

1. A preliminary determination of the biological value of a proposed boundary adjustment will be made by the City Director of Planning and Building (or designee) in accordance with Section 5.4.2 of the MSCP Subregional Plan and/or Section 5.2.3.6 of this Subarea Plan, if appropriate.
2. The City notifies the Wildlife Agencies in writing of the boundary adjustment, including written findings of equivalency made by the City Director of Planning and Building.
3. The adjusted boundary becomes the adopted boundary upon project approval unless the Wildlife Agencies object to the adjusted boundary within 30 days of receipt of City's written notice to the Wildlife Agencies. Objections by the Wildlife Agencies to boundary adjustments must be in writing and must state the rationale in support of the objection.
4. If the City receives written objection to a determination of a boundary adjustment by the Wildlife Agencies within 30 days of receipt of City's written notice to the Wildlife Agencies, then the City and Wildlife Agencies will have 60 days to meet, confer, and reach agreement upon final Preserve boundaries.
5. If the Wildlife Agencies fail to respond to the City's notice within 30 days of receipt of the City's determination, the decision by the City Director of Planning and Building shall be deemed accepted.

The following is a discussion and comparison of biological value of the proposed Boundary Adjustment, pursuant to the provisions of Section 5.4.2 of the MSCP Subregional Plan.

1. Effects on Significantly and Sufficiently Conserved Habitats (i.e., the exchange maintains or improves the conservation, configuration, or status of significantly or sufficiently conserved habitats)

The proposed Boundary Adjustment would result in a net increase to the Preserve of approximately 7.94 acres. The Boundary Adjustment would convert approximately 30.0 acres of land that is identified as Preserve in the Subarea Plan to development. However, the 30.0 acres of land to be removed from the Preserve has been and can continue to be cultivated, and are thus generally void of sensitive habitat.

The project provides for more conservation of higher value habitat, including a net increase in conservation of 15.5 acres of maritime succulent scrub, a Tier I (rare uplands) habitat according to the Subarea Plan. In addition, the project Boundary Adjustment conserves an estimated 25,000 Otay tarplants that would be otherwise impacted without the Boundary Adjustment. This additional conservation of Otay tarplant substantially offsets the impacts associated with the Main Street extension, an impact to a Planned Facility that is not feasibly avoidable under any circumstances.

2. Effects on Covered Species (i.e., the exchange maintains or increases the conservation of covered species)

As detailed in Table 5.3-4, the Boundary Adjustment increases conservation of maritime succulent scrub habitat within the Preserve, providing habitat for Covered Species with affinities toward that habitat type.

3. Effects on Habitat Linkages and Function of Preserve Areas (i.e., the exchange maintains or improves a habitat linkage or wildlife corridor)

Wolf Canyon is an extension of the preserve system from the Otay River valley, capturing live-in habitat for birds and smaller mammal species. While Wolf Canyon is identified in the Otay Ranch Wildlife Corridor Study as a local corridor for target mammal species, it is not designated a regional wildlife movement corridor and, therefore, offers little linkage value. The proposed Boundary Adjustment does not significantly alter the ability of wildlife (including target mammal species as identified in the Wildlife Corridor Study) to move through the area, and does not preclude linkages of habitat. The Boundary Adjustment would enhance habitat linkages by providing improved preserve design, additional Preserve acreage, and increased amounts of coastal sage scrub and maritime succulent scrub.

4. Effects on Preserve Configuration and Management (i.e., the exchange results in similar or improved management efficiency and/or protection for biological resources)

Preserve management efficiency or effectiveness is not compromised by the proposed Preserve Boundary Adjustments. As part of the Otay Ranch Resource Management Plan, preserve lands are required to be dedicated to the Otay Ranch

Preserve Management. Ongoing funding for preserve management is assured through an already established Community Facilities District within Otay Ranch. This Preserve Management funding and maintenance program is not altered by the Boundary Adjustment.

In addition, the reconfigured Preserve contains maritime succulent scrub restoration areas not contained in the adopted Preserve, thus the modified design resulting from the Boundary Adjustment provides for better contiguity of habitat. The proposed Boundary Adjustment provides for a more effective and contiguous Preserve design. The adopted MSCP Preserve in the northern Wolf Canyon is compromised by substantial edge effects. The adopted Preserve design is very narrow (approximately 200 feet wide and 1,200 feet long) with an isolated Preserve island (surrounded by development) with dimensions of approximately 200 by 400 feet. This gives the adopted Preserve a high perimeter to area ratio, meaning that the Preserve is fragmented and interspersed with development areas. The revised Preserve configuration resulting from the Boundary Adjustment creates a larger, wider, more contiguous preserve design in the north eastern segment of Wolf Canyon.

5. Effects on Ecotones or Other Conditions Affecting Species Diversity (i.e., the exchange maintains topographic and structural diversity and habitat interfaces of the preserve)

The proposed Preserve Boundary Adjustment results in a preserve with similar topographic and structural diversity as the existing Preserve. The general consideration for this issue is that the components of the Boundary Adjustment are all within a confined geographical area, with variation in ecotone elements and habitat diversity throughout. Therefore, the proposed Boundary Adjustment would not result in a significant overall difference in ecotone considerations.

6. Effects on Species of Concern not on the Covered Species List (i.e., the exchange does not significantly increase the likelihood that an uncovered species will meet the criteria for listing under either the federal or state Endangered Species Acts).

Species of concern that are not on the Covered Species List and known within the area of the proposed Boundary Adjustment, including both the added and deleted areas include white-tailed kite, grasshopper sparrow, Bell's sage sparrow, loggerhead shrike, horned lark, northwestern San Diego pocket mouse, Dulzura pocket mouse, desert woodrat, and San Diego black-tailed jackrabbit. These species would not be adversely affected by the Boundary Adjustment, because they have affinities toward the types of habitats that are being conserved with the Boundary Adjustment, and the improved contiguous preserve design increases the size of the Preserve, including greater conservation of maritime succulent scrub and coastal sage scrub.

Summary of Biological Value Comparison: Based on the analysis contained in this section, the proposed Boundary Adjustment and Main Street Extension provides for higher biological value of the Preserve, and therefore no significant impacts to regional resource planning would result.

b) Equivalency Analysis

Equivalency finding requirements are contained in Section 5.2.3.6 of the Subarea Plan. Equivalency findings are required when a Boundary Adjustment results in impacts to covered Narrow Endemic species beyond the threshold limits identified in the Subarea Plan. The proposed Boundary Adjustment does not result in impacts to Narrow Endemic species, therefore, the following analysis is not required, but is provided for purposes of providing additional information relative to the findings required for biological functional equivalency.

(1) Definition of the Project Area.

The project area includes Otay Ranch Villages Two, Three, and a portion of Village Four and portions of Wolf Canyon and the Otay River valley.

(2) A written description of the project.

The proposed Boundary Adjustment would remove the western fork of Wolf Canyon from the Preserve and add the northern portion of the main drainage of the canyon to the Preserve, resulting in a net increase to the Preserve of approximately 7.94 acres. The land to be removed from the Preserve has been and can continue to be cultivated, and is thus generally void of sensitive habitat.

(3) A written description of biological information available for the project site including the results of Narrow Endemic surveys.

Section 4.0 of the Biological Resources Report contains a complete description of biological information for the site, including survey methodologies and results. The primary vegetation components of the adopted MSCP Preserve within the Boundary Adjustment area include approximately 11 acres of coastal sage scrub, 6 acres of maritime succulent scrub, 25 acres of revegetated maritime succulent scrub and 37 acres of annual grassland. One Narrow Endemic Plant species was detected within the project area: the Otay tarplant (*Deinandra conjugens*) (also listed as federally threatened and state endangered). Otay tarplant occurs in several patches within the project area. One of the patches consisting of an estimated 25,000 individual Otay tarplant occurs in the vicinity of the proposed Preserve Boundary Adjustment. These 25,000 individuals are currently permitted to be impacted under the adopted Subarea Plan, because these plants are within an area designated for development. The proposed Boundary Adjustment would completely avoid impacts to the 25,000 individual tarplant, by placing this area in the Preserve.

- (4) Written finding of infeasibility of total avoidance of Narrow Endemic Species population(s).

The current development footprint pursuant to the adopted Subarea Plan permits an impact to 0.98 acre of Otay tarplant containing 25,000 tarplants. The proposed Boundary Adjustment conserves this 0.98 acre area, preserving the 25,000 individual Otay tarplants. The Boundary Adjustment would not impact Narrow Endemic Species. Therefore, this finding is not applicable.

- (5) Quantification of impacts to Narrow Endemic Species associated with the project including direct and indirect effects.

The proposed Boundary Adjustment would preserve approximately 25,000 individual Otay tarplants that would otherwise be impacted. No impacts to Narrow Endemic Species would occur. Therefore, this finding is not applicable.

- (6) A written description of project design features that reduce indirect effects such as edge treatments, landscaping, elevation differences; minimization; and/or compensation through restoration or enhancement.

The Village Two and Three SPA Plan includes a Preserve Edge Plan, as required by the Otay Ranch RMP. The Preserve Edge Plan addresses drainage, toxic substances, lighting, noise, fuel modification, fencing, and invasive species. Drainage facilities will be equipped with mechanisms for removing pollutants prior to leaving developed areas en route to natural water bodies. Toxic substances related to agricultural uses on Otay Ranch will be phased out as development ensues. Lighting requirements will mandate screening of exterior light in order to avoid spillover into the Preserve. Specifications such as preconstruction surveys have been mandated through the Edge Plan; this will reduce impacts to sensitive avian species during project construction. Fuel modification and building setback requirements will result in fuel modification maintenance activities being conducted outside of the preserve. Fencing and wall treatments have been designed to control human access into the Preserve, and to control predation by domestic animals. Landscaping materials have been selected to avoid the use of invasive exotic species and provide a landscape pallet that provides consistency with the Preserve.

- (7) Description of measures proposed to compensate for identified impacts in a manner that demonstrates that the proposed design including compensation would result in a long-term Preserve design for the species of concern that is functionally equivalent to or better than the Preserve design that would occur in the absence of the identified impact. The equivalency analysis will be based on the particular requirements of the species of concern.

As summarized in Table 5.3-4 the following table, the MSCP Preserve area within the defined project site analysis boundaries is approximately 85 acres. As shown earlier in Table 5.3-4, the proposed Boundary Adjustment would result in an overall net increase of 7.94 acres, and

resulting in Preserve acreage within the project study area. The area that would be converted from Preserve to development is in an area that has been actively cultivated, and therefore, generally lacks sensitive habitat and species, with the exception of a small amount of maritime succulent scrub (0.19 acre).

The project provides for more conservation of higher value habitat, including a net increase in conservation of 15.44 acres of maritime succulent scrub, a Tier I (rare uplands) habitat according to the Subarea Plan. In addition, the project Boundary Adjustment conserves an estimated 25,000 Otay tarplants that would be otherwise impacted without the Boundary Adjustment.

- (8) A summary conclusion, including findings of consistency with the applicable percentage criterion.

Based on the information contained in (7) above, the proposed Preserve Boundary Adjustment would provide a net benefit to conservation of Covered Species and habitats within the modified Preserve by inclusion of additional Tier I habitat. The Boundary Adjustment would result in a reduction of the overall conservation of grassland within the Preserve of 0.45 percent, but would increase conservation of maritime succulent scrub by 5.86 percent.

#### Village Three Main Street Extension

- a) Applicable Subarea Plan Policies

Main Street is identified as a Planned Facility as described in Section 6.3.3.1 of the Subarea Plan, and is an integral part of the Otay Ranch GDP, essential to provide circulation to the project area, as well as other portions of Otay Ranch. The status of Main Street as a Planned Facility, provides it with coverage under the Subarea Plan, subject to meeting the requirements identified in the Plan. Those requirements are summarized as follows:

- Planned Facilities located in the Preserve are subject to siting criteria identified in Section 6.3.3.4 of the Subarea Plan, with no further mitigation required, beyond the mitigation identified for the SPA Plan. The siting criteria and Table 6-1 sets forth the design standards for the proper alignment and construction of Planned Facilities within the Preserve. One of the criteria is that the facilities should be located in the least environmentally sensitive location feasible. In the context of Planned Facilities, “feasible” refers to minor changes in the alignments shown on Figures 6-1, 6-2, and 6-3 of the Subarea Plan, in order to site facilities in the least environmentally sensitive location practicable, and where the fewest impacts to Covered Species would occur to minimize habitat disruption and fragmentation and to minimize impacts to covered Narrow Endemic Species. Those minor changes shall not involve extraordinary engineering design, including but not limited to tunnels, bridges

and other significantly costly features, except where indicated on Table 6-1 of the Subarea Plan.

- Impacts to covered Narrow Endemic Species from Planned and Future Facilities located within the 100 percent conservation areas of covered projects will be avoided to the maximum extent practicable (Section 5.2.3.2), and where impacts are demonstrated to be unavoidable, impacts will be limited to 5 percent of the total Narrow Endemic Species population within the project area (Section 5.2.3.2).
- If impacts exceed 5 percent of the covered Narrow Endemic Species population within the project area after comprehensive consideration of avoidance and minimization measures, the City must make a determination of biologically superior preservation consistent with Section 5.2.3.7 of the Subarea Plan (Section 5.2.3.2).
- The Planned and Future Facilities listed in Section 6.3.3.1 and 6.3.3.2 of the Subarea Plan are an integral part of that plan, and will necessarily traverse the Preserve. None of the requirements for these facilities will not result in any prohibition of construction of any planned or future facility through the Preserve (Section 5.2.3.2).

The alignment of the extension of Main Street within the Village Three area has been modified from the Otay Ranch GDP alignment for purposes of avoiding impacts to the Preserve by moving the road away from the Preserve edge along the Otay River valley and into the development area of Otay Ranch. The following is an analysis of the facilities siting criteria (Section 6.3.3.4 of the Subarea Plan), relative to the Main Street extension:

- (1) *Such facilities will be located in the least environmentally sensitive location feasible, and use existing roads, trails and other disturbed areas, including use of the active recreation areas in the Otay River valley, as much as possible (except where such areas are occupied by the QCB). Facilities should be routed through developed or developing areas where possible. If no other routing is feasible, alignments should follow previously existing roads, easements, rights of way, and disturbed areas, minimizing habitat fragmentation.*

Within the project area, the alignment for the Main Street extension reflects an overall design that provides for better overall avoidance of impacts to the Preserve than the original General Plan alignment consider in the Subarea Plan. Within the SPA Plan area, construction of Main Street will impact the following habitats within the Preserve:

Disturbed maritime succulent scrub (Tier I)	0.2 acre
Coastal sage scrub (Tier II)	0.7 acre
Disturbed coastal sage scrub (Tier II)	0.3 acre

Annual grassland (Tier III)	0.8 acre
Disturbed habitat (Tier IV)	0.2 acre
Developed	0.5 acre

In addition, the following covered species would be impacted by Main Street construction within the Preserve:

Otay tarplant ( <i>Deinandra conjugens</i> )	29,950 individuals
Variiegated dudleya ( <i>Dudleya variegata</i> )	2 individuals
San Diego barrel cactus ( <i>Ferocactus viridescens</i> )	3 individuals
Palmer's grappling-hook ( <i>Harpogonella palermi</i> )	1 individual
California box-thorn ( <i>Lycium californicum</i> )	5-10 individuals
San Diego County viguiera ( <i>Viguiera laciniata</i> )	20 individuals
South coast saltscale ( <i>Atriplex pacifica</i> )	10-20 individuals

The proposed alignment would also impact approximately 0.01 acre of ephemeral unvegetated stream channel within the Preserve in the SPA Plan area. Impacts to sensitive habitats and covered species resulting from the proposed roadway alignment are unavoidable. The only way to avoid these impacts would be to relocate and reconstruct the existing portion of Main Street, either north or south several hundred feet, so that the Main Street Extension could physically avoid sensitive resources within the Preserve. However, reconstructing the existing Main Street to a more southerly location would encroach upon Otay River valley's riparian habitats and wetland resources and result in additional fragmentation within the Preserve by further separating the road from development and placing the road farther into the Preserve. Realigning the road to a more northerly location is not physically practical due to topographical constraints that could not be overcome without extraordinary engineering design, such as massive grading and/or use of extraordinary structural design features. Neither of these options are considered feasible, because relative to Planned Facilities, "feasible" is defined in the Subarea Plan as minor changes in the alignments shown on Figures 6-1, 6-2, and 6-3 of the Subarea Plan within the Preserve. The Subarea Plan further states that such minor changes shall not involve extraordinary engineering design. Therefore, there are no alignment or design options that could feasibly avoid impacts to these habitats.

The segment of the originally planned alignment for the extension of Main Street between Hunte Parkway and Rock Mountain Road would be eliminated, and the extension of Main Street would extend northerly and proceed within the planned alignment for Rock Mountain Road. The proposed alignment eliminates the eastern leg of Main Street, thereby reducing direct impacts on the Preserve, as well as adverse edge effects associated with locating the road adjacent to the Preserve.

For comparison purposes, impacts from both the originally planned alignment of the Main Street extension included in the Chula Vista Subarea Plan and the proposed roadway alignment were analyzed. Impacts on the Preserve from the original alignment, would be approximately 33 acres. Whereas the proposed alignment would impact approximately 12 acres, representing an overall net reduction of impacts on the Preserve of approximately 21 acres.

- (2) *Such facilities shall avoid, to the maximum extent practicable, impacts to Covered Species and Wetlands, and will be subject to the provisions, limits, and mitigation requirements for Narrow Endemic Species and Wetlands pursuant to Section 5.2.3 and 5.2.4 of this Subarea Plan.*

As noted in item (1), the proposed alignment of Main Street removes the original alignment for the road that was analyzed in the Subarea Plan away from the Otay River, thereby reducing direct impacts on the Preserve by approximately 21 acres and avoids potential adverse effects on wetlands and covered species to the maximum extent practicable. Mitigation required by the Subarea Plan is identified in Section 5.3.5 of this EIR. A discussion of the Subarea Plan provisions related to Narrow Endemic Species is provided below under criterion (7).

- (3) *Where roads cross the Preserve they should provide for wildlife movement in areas that are graphically depicted on and listed in the MSCP Subregional Plan Generalized Core Biological Resource Areas and Linkages map (Figure 1-4 of the Subregional Plan) as a core biological area or a regional linkage between core biological areas. All roads crossing the Preserve should be designed to result in the least impact feasible to Covered Species and Wetlands. Where possible at wildlife crossings, road bridges for vehicular traffic rather than tunnels for wildlife use will be employed. Culverts will only be used when they can achieve the wildlife crossing/movement goals for a specific location. To the extent feasible, crossings will be designed as follows: the substrate will be left in a natural condition or revegetated if soils engineering requirements force subsurface excavation and vegetated with native vegetation if possible; a line-of-sight to the other end will be provided; and if necessary, low-level illumination will be installed in the tunnel.*

The impacts to sensitive habitats, wetlands and covered species are addressed in Siting Criterion (1) above. In addition, relative to wildlife crossings, the portion of the Main Street extension that is within the project area is adjacent to the Otay River valley, which provides wildlife movement function and habitat connectivity for a variety of species. However, the proposed Main Street extension alignment has been realigned primarily within a designated development area and is not within an area of Otay River valley that functions as a wildlife corridor or linkage. The proposed alignment would therefore not affect the integrity of Wolf Canyon as a wildlife corridor or linkage.

- (4) *To minimize habitat disruption, habitat fragmentation, impediments to wildlife movement and impact to breeding areas, road and/or right-of-way width shall be narrowed from existing City design and engineering standards, to the maximum extent practicable. In addition, roads shall be located in lower quality habitat or disturbed areas to the maximum extent practicable.*

As noted in (1), above, the proposed alignment for Main Street has been moved out of the Preserve to the maximum extent practicable, given the location of the existing terminus for Main Street and engineering constraints involved in reconstructing and relocating the existing road. Therefore, narrowing of the road within the project area is not considered to be feasible. Further, the location of the proposed roadway alignment has been significantly realigned out of the Preserve to an area primarily within the development area of a Covered Project. These proposed design changes will help to minimize habitat disruption, habitat fragmentation, impediments to wildlife movement and impacts to breeding areas.

- (5) *Impacts to Covered Species and habitats within the Preserve resulting from construction of Future Facilities will be evaluated by the City during project review and permitting. The City may authorize Take for impacts to Covered Species and habitats resulting from construction of Future Facilities located outside the Preserve, pursuant to this Subarea Plan and consistent with the Facility Siting Criteria in this Section.*

Main Street is not a Future Facility as defined in the Subarea Plan. Therefore, this criterion is not applicable.

- (6) *The City may authorize Take for impacts to Covered Species resulting from construction of Future Facilities located within the Preserve, subject to a limitation of two acres of impact for individual projects and a cumulative total of 50 acres for all Future Facilities. Wildlife Agency concurrence will be required for authorization of Take for any impacts to Covered Species and habitat within the Preserve that exceed two acres that may result from construction of any individual Future Facility. Wildlife Agency concurrence will be required for authorization of Take for impacts to Covered Species and habitat within the Preserve that exceed fifty acres that may result from all Future Facilities combined.*

Main Street is not a Future Facility as defined in the Subarea Plan. Therefore, this criterion is not applicable.

- (7) *Planned and Future Facilities must avoid impacts to covered Narrow Endemic Species and the QCB to the maximum extent practicable. When such impacts cannot be avoided, Planned and Future Facilities located within the Preserve are subject to the provisions of Section 5.2.3.6 of the Subarea Plan. Impacts to QCB*

*that will result from construction of Planned and Future Facilities within the Preserve are subject to the provisions of Section 5.2.8 of this Subarea Plan.*

Relative to impacts to Narrow Endemic Species, there is a population of Otay tarplant containing approximately 29,950 individual plants located immediately east of the easterly terminus of the existing Main Street, within the 100% Preserve area identified in the Subarea Plan. There are no alignment or design options that could feasibly avoid impacts to this population due to its location relative to the existing road. It should also be noted that impacts to these 29,950 Otay tarplant would also occur under the alignment considered in the Subarea Plan or any other alignment that would tie into the existing road, because the location of the tarplant population is adjacent to the eastern terminus of the existing road. This impact is within the 5% impact limitation threshold for Narrow Endemic Species identified in Section 5.2.3.2 of the Subarea Plan, since there are an estimated 830,000 Otay tarplants within the Project Area. The impact would therefore represent approximately 3.6% of the population.

Surveys for QCB conducted by URS Corporation indicate an observation of QCB that is mapped within the development area, immediately adjacent to the Preserve boundary that would be affected by construction of Main Street. Project impacts to QCB are considered significant, as noted under Impact Threshold #1 (Section 5.3.2 of this EIR). However, because the location of the QCB was sighted within a development area of a Covered Project, (i.e. outside of the Preserve), the avoidance and minimization requirements are not applicable, and take authorization of QCB is provided pursuant to Section 4.4.4.2 (page 4-59) and Section 5.2.8.2 (page 5-25) of the MSCP Subarea Plan. For portions of the road that are proposed within the Preserve, the following is a discussion of measures required for avoidance and minimization of QCB impacts:

In accordance with Section 5.2.8.1 of the Subarea Plan, infrastructure projects constructed within the Preserve will be subject to the following sequence of measures to avoid and minimize impacts to QCB and QCB habitat:

- (1) *A habitat assessment will be conducted in potential facility locations as part of the project siting and design process.*

A habitat assessment and focused adult flight surveys were conducted for some, but not all of the portion of the Preserve that will be impacted by the Main Street extension. As noted in siting criterion (1), above, avoidance of impacts to the portion of the Preserve that is affected by the extension of Main Street is not feasible. The specific procedures required for assessing QCB habitat resources are therefore not useful in this instance, because even if such assessment were to reveal potential QCB habitat or the sighting

of QCB during adult flight surveys, there is no possibility for further impact avoidance or reduction through realignment, siting or design considerations for the road. Therefore, this measure is not meaningful to the segment of the proposed extension of Main Street that is included within the proposed SPA Plan.

- (2) *QCB surveys will be conducted in appropriate habitat by a qualified biologist in accordance with the most recent survey protocol adopted by the USFWS.*

See discussion under measure (1). This measure is not meaningful in the context of the planning for the segment of the proposed extension of Main Street that is included within the proposed SPA Plan.

- (3) *If QCB are observed within the proposed Project Area, the project will be designed to avoid impacts to QCB habitat to the maximum extent practicable.*

See discussion under measure (1). As mentioned above, there is no possibility for further impact avoidance or reduction through realignment, siting or design considerations for the road.

- (4) *The following avoidance criteria will be applied specifically to Preserve Habitat-Category A areas located east of SR-125...:*

The SPA Plan area is not located east of SR-125, and therefore this measure is not applicable.

- (5) *For construction in areas adjacent to occupied habitat, dust control measures (i.e., watering) will be applied during grading activities.*

Dust control measures are included in the mitigation measures related to indirect impacts (Section 5.3.4 of this EIR).

- (6) *As part of the overall Preserve management strategy, a weed control program will be established for all water/sewer line access roads built through potential QCB habitat. This will include road construction using a concrete-treated base material with aggregate rock to prevent vegetation growth on the road surface, while allowing sufficient percolation to minimize flows. The zone of influence to be subject to the weed control program will be determined by the City's Habitat Manager based on site-specific conditions.*

The Main Street extension does not involve a sewer or water line in the Preserve. Therefore, this measure is not applicable.

b) Equivalency Findings

The proposed Main Street extension would impact a population of Otay tarplant containing approximately 29,950 individual plants located immediately east of the easterly terminus of the existing Main Street, within the Preserve. The following Equivalency Findings are provided pursuant to the requirements of Section 5.2.3.7 of the Subarea Plan.

(1) Definition of the project area.

The Subarea Plan defines Project Area as: *the entire contiguous land under the same ownership or like property interest, or in the case of development proposed by a public agency, the area required for development as determined by the Director of Planning and Building.* (Section 1.3)

The project area includes the SPA Plan area, encompassing Otay Ranch Villages Two, Three, and a portion of Village Four and portions of Wolf Canyon and the Otay River valley within the Villages Two and Three SPA area. Main Street would be a Planned Facility within the Preserve portion of the project area of the SPA. The road would occupy approximately four acres within the Preserve. In total, the Preserve area within the Project Area is approximately 153 acres.

(2) A written description of the project.

According to the definitions provided in the Subarea Plan (Section 1.3 of the Subarea Plan), Project Area is “An area considered for development and shall include the entire contiguous land under the same ownership or like property interest or, in the case of development proposed by a public agency, the area required for development as determined by the Director of Planning and Building.”

The project consists of the Villages Two and Three SPA area, including the construction of Main Street/Rock Mountain Road in an alignment that has been modified from the GDP alignment for purposes of avoiding impacts to the Preserve. The segment of the planned alignment for the extension of Main Street between Hunte Parkway and Rock Mountain Road would be eliminated, and the extension of Main Street would extend northerly and proceed within roughly the planned alignment for Rock Mountain Road. The proposed alignment would result in reduced impacts (21 acres less impact) on the Preserve when compared to the alignment identified and analyzed in the Subarea Plan.

(3) A written description of biological information available for the project site including the results of Narrow Endemic surveys.

Biological information available for this project includes vegetation mapping, wetland mapping and estimates of Otay tarplant (*Deinandra conjugens*) populations within the Otay

Valley and Wolf Canyon. A patch of an estimated 29,950 Otay tarplant occurs within the impact area for the Main Street/Rock Mountain Road extension. Total population of Otay tarplant within the Project Area is in excess of 830,000 plants.

- (4) Written finding of infeasibility of total avoidance of Narrow Endemic Species' population(s).

The impact to the 29,950 tarplant caused by the Main Street Extension cannot be avoided because of the close proximity of the existing roadway to the tarplant. The tarplant within the Main Street impact area is approximately 300 feet east of the easterly terminus of the existing Main Street. The Main Street Extension is defined as a Planned Facility in the Subarea Plan and is essential for the circulation within the Otay Ranch development. Extension of the road from the terminus of the existing roadway in any alignment or configuration impacts the entire tarplant population. Impacts to these 29,950 Otay tarplant would occur under any alignment for the road extension that would tie into the existing road, because the location of the population of tarplant is nearly adjacent to the eastern terminus of the existing road.

The only way to avoid impacts to Otay tarplant would be to relocate and reconstruct the existing portion of Main Street, either north or south several hundred feet, so that the Main Street Extension could physically avoid the tarplant. However, reconstructing the existing Main Street to a more southerly location would encroach upon Otay River valley's riparian habitats and wetland resources. Realigning the road to a more northerly location is not physically practical due to topographical constraints. Neither of these options are feasible, because relative to Planned Facilities, "feasible" is defined in the Subarea Plan as minor changes in the alignments shown on Figures 6-1, 6-2, and 6-3 (of the Subarea Plan) within the Preserve. The Subarea Plan further states that such minor changes shall not involve extraordinary engineering design. Realignment to the north would encounter severe topological constraints that could not be overcome without extraordinary engineering design, such as massive grading and/or use of extraordinary structural design features. The southerly option would have substantial impacts to wetland resources within the Otay River and result in additional fragmentation within the Preserve by further separating the road from development and placing the road farther into the Preserve. Therefore, there are no alignment or design options that could feasibly avoid impacts to the tarplant. In addition, as previously noted, the proposed alignment would result in a 21-acre reduction of impacts to the Preserve, because it has been realigned to contain most of the impacts from the road within areas designated for development.

- (5) Quantification of impacts to Narrow Endemic Species associated with the project including direct and indirect effects.

As noted above, impacts to Otay tarplant within the Village Three project area, regardless of whether the original alignment depicted in the GDP and the Subarea Plan, or the proposed

alignment were implemented, would include an impact of approximately 29,950 Otay tarplant individuals.

- (6) A written description of project design features that reduce indirect effects such as edge treatments, landscaping, elevation differences; minimization; and/or compensation through restoration or enhancement.

The Village Two and Three SPA Plan includes a Preserve Edge Plan, as required by the Otay Ranch RMP. The Preserve Edge Plan addresses drainage, toxic substances, lighting, noise, fuel modification, fencing, and invasive species. Drainage facilities will be equipped with mechanisms for removing pollutants prior to leaving developed areas en route to natural water bodies. Toxic substances related to agricultural uses on Otay Ranch will be phased out as development ensues. Lighting requirements will mandate screening of exterior light in order to avoid spillover into the Preserve. Specifications such as preconstruction surveys have been mandated through the Edge Plan; this will reduce impacts to sensitive avian species during project construction. Fuel modification and building setback requirements will result in fuel modification maintenance activities being conducted outside of the preserve. Fencing and wall treatments have been designed to control human access into the Preserve, and to control predation by domestic animals. Landscaping materials have been selected to avoid the use of invasive exotic species and provide a landscape palette that provides consistency with the Preserve. These project design features will be applied to the Main Street Extension.

- (7) Description of measures proposed to compensate for identified impacts in a manner that demonstrates that the proposed design including compensation would result in a long-term Preserve design for the species of concern that is functionally equivalent to or better than the Preserve design that would occur in the absence of the identified impact. The equivalency analysis will be based on the particular requirements of the species of concern.

The governing provisions in the Subarea Plan for the Main Street extension are identified in Section 5.2.3.2 of the Subarea Plan, which states that while the City and the Wildlife Agencies shall coordinate to ensure that Planned Facilities are located in the least environmentally sensitive location possible, no provisions or processes identified in the Subarea Plan will result in any prohibition of construction of any Planned Facility through the Preserve.

As noted previously, the proposed alignment for the Main Street extension would result in an overall reduction in acreage impacts to the Preserve. The alignment shown in the GDP and in the Subarea Plan would result in approximately 33 acres of impact on the Preserve, while the proposed alignment would impact approximately 12 acres of Preserve. In addition, the SPA Plan project includes adjustments to the MSCP Preserve boundary that would increase conservation as compared to the adopted MSCP Preserve boundary. The proposed project would result in an overall net increase of Preserve area (8 acres), which

provides for more conservation of higher value habitat, including a net increase in conservation of 15.5 acres of maritime succulent scrub, a Tier I (rare uplands) habitat according to the Subarea Plan. In addition, the project conserves an estimated 25,000 Otay tarplants that would be otherwise impacted with the current Preserve boundary. The proposed project also includes maritime succulent scrub restoration areas not contained in the adopted Preserve, thus the modified design resulting from the project provides for better contiguity of habitat and a more effective and contiguous Preserve design. The adopted MSCP Preserve in the northern Wolf Canyon includes a disjunct area that results in fragmentation of the Preserve and reduces its overall biological function and value. The project proposes a Preserve configuration with a larger, wider, more contiguous design in the north eastern segment of Wolf Canyon.

- (8) A summary conclusion, including findings of consistency with the applicable percentage criterion.

Based on the information contained in this analysis, the proposed project, including the Main Street extension would result in overall benefits to the Preserve through increased conservation of covered habitats and species, and particularly since it would reduce edge effects and provide equivalent conservation within Wolf Canyon.

Based on the preceding discussion, the Main Street extension portion of the proposed SPA Plan is considered to be consistent with the relative requirements and Criteria of the Subarea Plan and would not conflict with the adopted HCP/NCCP. Therefore, impacts would be less than significant.

#### “FUTURE FACILITIES”

Otay Ranch is a “Covered Project” in the Subarea Plan. Any portions of Covered Projects that are located within 100 percent Conservation Areas must be consistent with conditions allowing specific land uses within the preserve as outlined in Section 6.0 of the Subarea Plan. In addition, such areas will be subject to the Narrow Endemic Species Policy (avoidance and minimization) and Wetlands Protection Program. Grading associated with the proposed drainage pipeline and associated energy dissipater are planned within the 100 percent Conservation Area within Wolf Canyon. The drainage facilities are within the definition of “Future Facilities” according to the Subarea Plan.

The siting of these facilities must meet criteria outlined in the Subarea Plan Section 6.3.3.4 and Table 6-2. The following is a list of the various criteria and a discussion of the proposed facilities:

- (1) *Such facilities will be located in the least environmentally sensitive location feasible, and use existing roads, trails and other disturbed areas.*

Wolf Canyon through the SPA Plan area is characterized by maritime succulent scrub and revegetated maritime succulent scrub on the north slope, a road and wash-like channel in the middle of the canyon, and a mixture of annual (non-native) grassland and coastal sage scrub on the south slope. The Future Facility proposed as part of the project requires access to areas within the Preserve (i.e., for gravity storm water flow). Thus, the facility must traverse the canyon slopes and have the potential to impact sensitive biological resources.

The drainage facilities have been designed to limit impacts to coastal sage scrub to 0.05 acre, with the remaining impacts being to annual grassland and agriculture land. Therefore, the facility has been sited in the least environmentally sensitive locations feasible and demonstrates conformance with this criterion.

- (2) *Such facilities shall avoid, to the maximum extent practicable, impacts to Covered Species and Wetlands, and will be subject to the provisions, limits, and mitigation requirements for Narrow Endemic Species and Wetlands pursuant to Section 5.2.3 and 5.2.4 of this Subarea Plan.*

No covered Narrow Endemic Species are affected by the Future Facility. Therefore, impacts would be less than significant and this criterion is satisfied.

Section 5.2.4 requires avoidance, minimization, and mitigation for impacts to wetlands from Future Facilities. The Future Facility would not result in any impacts to jurisdictional wetlands. Therefore this criterion is satisfied.

- (3) *Where roads cross the Preserve they should provide for wildlife movement in areas that are graphically depicted on and listed in the MSCP Subregional Plan Generalized Core Biological Resource Areas and Linkages map (Figure 1-4) as a core biological area or a regional linkage between core biological areas. All roads crossing the Preserve should be designed to result in the least impact feasible to Covered Species and Wetlands. Where possible at wildlife crossings, road bridges for vehicular traffic rather than tunnels for wildlife use will be employed. Culverts will only be used when they can achieve the wildlife crossing/movement goals for a specific location. To the extent feasible, crossings will be designed as follows: the substrate will be left in a natural condition or revegetated if soils engineering requirements force subsurface excavation and vegetated with native vegetation if possible; a line-of-sight to the other end will be provided; and if necessary, low-level illumination will be installed in the tunnel.*

The drainage facilities are not roads which would cross the Preserve.

- (4) *To minimize habitat disruption, habitat fragmentation, impediments to wildlife movement and impact to breeding areas, road and/or right-of-way width shall be*

*narrowed from existing City design and engineering standards, to the maximum extent practicable.*

There are no roads that are considered to be Future Facilities that would cross the Preserve.

- (5) *Impacts to Covered Species and habitats within the Preserve resulting from construction of Future Facilities will be evaluated by the City during project review and permitting.*

This criterion is noted and for that reason, this discussion is included in the biological resources technical reports in Appendixes B-1 and B-2 to this EIR.

- (6) *The City may authorize Take for impacts to Covered Species resulting from construction of Future Facilities located within the Preserve, subject to a limitation of two acres of impact for individuals projects and a cumulative total of 50 acres for all Future Facilities.*

Impacts to covered habitats related to the Future Facility are within the prescribed threshold as follows:

Wolf Canyon Drainage pipelines - 0.1 acre.

These impacts would not exceed the maximum allowable impacts to covered habitats of two acres per facility, and as of the date of publication of this report, there have been limited impacts resulting from Future Facilities within the Preserve. Future monitoring of projects proposing Future Facilities in the Preserve will ensure that cumulative total will not exceed the maximum 50-acre impact limit.

- (7) *Planned and Future Facilities must avoid impacts to covered Narrow Endemic Species and the QCB to the maximum extent practicable. When such impacts cannot be avoided, Planned and Future Facilities located within the Preserve are subject to the provisions of Section 5.2.3.6 and Section 5.2.8 of the Subarea Plan.*

The impact to Narrow Endemic Species is presented in response to Facilities Siting Criterion 2 above. With respect to avoidance of impacts to QCB, the following is a discussion of measures required for avoidance and minimization of QCB impacts:

In accordance with Section 5.2.8.1 of the Subarea Plan, infrastructure projects constructed within the Preserve will be subject to the following sequence of measures to avoid and minimize impacts to QCB and QCB habitat:

In accordance with Section 5.2.8.1 of the Subarea Plan, infrastructure projects constructed within the Preserve will be subject to the following sequence of measures to avoid and minimize impacts to QCB and QCB habitat:

- (1) *A habitat assessment will be conducted in potential facility locations as part of the project siting and design process.*

The facility is located in a portion of the SPA Plan area which was only surveyed in 2002. Due to the abnormally low rainfall during the winter prior to that season, host plant germination was very low and therefore an adequate habitat assessment or adult flight survey could not be conducted.

- (2) *QCB surveys will be conducted in appropriate habitat by a qualified biologist in accordance with the most recent survey protocol adopted by the USFWS.*

Avoidance and minimization of potential impacts to Quino checkerspot butterfly within the Preserve shall be demonstrated through the following measures: conducting a habitat assessment within the footprint of potential facilities, conducting an adult flight season survey in accordance with the most recent survey protocol adopted by USFWS, and avoidance of impacts to habitat for Quino checkerspot butterfly, if observed, to the maximum extent practicable. According to the current survey protocol, the habitat assessment and adult flight season would need to be conducted during the spring prior to grading. If Quino checkerspot butterfly is observed, the property owner shall redesign or eliminate facilities which would impact habitat for the species such that impacts are minimized.

- (3) *If QCB are observed within the proposed project area, the project will be designed to avoid impacts to QCB habitat to the maximum extent practicable.*

See (2), above.

- (4) *The following avoidance criteria will be applied specifically to Preserve Habitat-Category A areas located east of SR-125...:*

The SPA Plan area is located west of SR-125.

- (5) *For construction in areas adjacent to occupied habitat, dust control measures (i.e., watering) will be applied during grading activities.*

Dust control measures are included in the mitigation measures related to indirect impacts (Section 5.3.6 of this EIR).

- (6) *As part of the overall Preserve management strategy, a weed control program will be established for all water/sewer line access roads built through potential QCB habitat. This will include road construction using a concrete-treated base material with aggregate rock to prevent vegetation growth on the road surface, while allowing sufficient percolation to minimize*

*flows. The zone of influence to be subject to the weed control program will be determined by the City's Habitat Manager based on site-specific conditions.*

The drainage facilities will not require an access road, and therefore, this criterion is not applicable.

The drainage facilities are anticipated to impact a total of 0.1 acre of Preserve area, including approximately 0.05 acre of coastal sage scrub, 0.04 acre of annual grassland, and 0.01 acre of agricultural land. Based on the preceding discussion, the proposed drainage facilities associated with the SPA Plan that would be located within the Preserve are considered to be consistent with the relative requirements and Criteria of the Subarea Plan and would not conflict with the adopted HCP/NCCP. Therefore, impacts would be less than significant.

#### **5.3.4 Level of Significance Prior to Mitigation**

The following significant impacts have been identified for the proposed project:

1. The project would have a substantial adverse effect, both directly and through habitat modifications, on species identified as candidate, sensitive, and special status species in the Otay Ranch RMP, the City's Subarea Plan, and by CDFG and USFWS;
2. The project would have a substantial adverse effect on riparian habitats and other sensitive natural communities identified in the Otay Ranch RMP, the City's Subarea Plan, and by CDFG and USFWS; and
3. The project would have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act, including jurisdictional waters and vernal pools.
4. The project will result in impacts to non-native grasslands and agricultural lands that would contribute to impacts to regional raptor foraging habitat.

#### **5.3.5 Mitigation Measures**

##### Mitigation for Effects on Sensitive Species and Habitats, including Riparian Habitats

- 5.3-1 Prior to recording each final map, the property owner(s) shall either convey land within the Otay Ranch RMP Resource Preserve at a ratio of 1.188 acres for each acre of development area or pay a fee in lieu.
- 5.3-2 Prior to issuance of land development permits, including clearing or grubbing and grading permits, for areas with salvageable resources, including Narrow Endemic

Species, *Plantago erecta* (QCB larval host plant), south coast saltscale and smooth-stemmed fagonia (including plant materials and soils/seed bank), the project property owner (s) shall be required to develop and implement a Resource Salvage Plan. The Resource Salvage Plan shall, at a minimum, evaluate options for plant salvage and relocation, including native plant mulching, selective soil salvaging, application of plant materials on manufactured slopes, and application/relocation of resources within the preserve. The Resource Salvage Plan shall include incorporation of relocation efforts for non-covered species, including south coast saltscale and smooth-stemmed fagonia. Relocation efforts may include seed collection or transplantation to a suitable receptor site and will be based on the most reliable methods of successful relocation. The program shall also contain a recommendation for method of salvage and relocation/ application based on feasibility of implementation and likelihood of success. The program shall include, but not be limited to, an implementation plan, maintenance and monitoring program, estimated completion time, and any relevant contingency measures. The program shall be subject to review and approval of the City's Director of Planning and Building.

5.3-3 Pursuant to the requirements of the RMP, mitigation beyond the conveyance requirements for impacts to maritime succulent scrub shall consist of on-site restoration at 1:1 ratio. If final design plans indicate that impacts will be avoided, this measure will not be applicable. Prior to issuance of land development permits, including clearing or grubbing and grading permits, that impact maritime succulent scrub resources, the developer(s) shall prepare and implement a restoration plan to restore 3.4 acres of maritime succulent scrub (1.5 acres from impacts within the Otay Ranch Company ownership and 1.9 acres within the Flat Rock Land Company ownership), pursuant to the Otay Ranch RMP restoration requirements. The maritime succulent scrub restoration plan shall be approved by the City's Director of Planning and Building, and shall include an implementation plan, maintenance and monitoring program, estimated completion time, and any relevant contingency measures.

5.3-4 Prior to issuance of land development permits, including clearing or grubbing and grading permits, in portions of the SPA Plan area that are adjacent to the Preserve, the property owner shall install fencing in accordance with CVMC 17.35.030.

Prominently colored, well-installed fencing shall be in place wherever the limits of grading are adjacent to sensitive vegetation communities or other biological resources, as identified by the qualified monitoring biologist. Fencing shall remain in place during all construction activities. All temporary and permanent fencing shall be shown on grading plans. Prior to release of grading bonds, a qualified biologist shall provide evidence that work was conducted as authorized under the approved land development permit and associated plans.

5.3-5 Prior to issuance of grading permits, a Storm Water Pollution Prevention Plan (SWPPP) shall be developed, approved, and implemented during construction to control storm water runoff, such that erosion, sedimentation, pollution, etc. are minimized. The following measures contained in the Edge Plans shall be implemented to avoid the release of toxic substances associated with urban runoff:

- Sediment shall be retained on-site by a system of sediment basins, traps, or other appropriate measures.
- Where deemed necessary, storm drains shall be equipped with silt and oil traps to remove oils, debris and other pollutants. Storm drain inlets shall be labeled “No Dumping-Drains to Ocean.” Storm drains shall be regularly maintained to ensure their effectiveness.
- The parking lots shall be designed to allow storm water runoff to be directed to vegetative filter strips and/or oil-water separators to control sediment, oil, and other contaminants.
- Permanent energy dissipaters shall be included for drainage outlets.
- The SPA Plan area drainage basins shall be designed to provide effective water quality control measures. Design and operational features of the drainage basins shall include design features to provide maximum detention time for settling of fine particles; maximize the distance between basin inlets and outlets to reduce velocities; and establish maintenance schedules for periodic removal of sedimentation, excessive vegetation and debris.

5.3-6 Prior to issuance of land development permits, including clearing or grubbing and grading permits, the following notes shall be included on the plans to the satisfaction of the Environmental Review Coordinator:

- (1) A qualified biologist shall be on-site to monitor all vegetation clearing and periodically thereafter to ensure implementation of appropriate resource protection measures.
- (2) Dewatering shall be conducted in accordance with standard regulations of the RWQCB. A permit to discharge water from dewatering activities will be required. This will minimize erosion, siltation, and pollution within sensitive communities.
- (3) During construction, material stockpiles shall be placed such that they cause minimal interference with on-site drainage patterns. This will protect sensitive vegetation from being inundated with sediment-laden runoff.
- (4) Material stockpiles shall be covered when not in use. This will prevent fly-off that could damage nearby sensitive vegetation communities.
- (5) Graded area shall be periodically watered to minimize dust affecting adjacent vegetation.

5.3-7 Lighting of all developed areas adjacent to the Preserve shall be directed away from the Preserve, wherever feasible and consistent with public safety. Where necessary, development shall provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the Preserve and sensitive species from night lighting. Consideration shall be given to the use of low-pressure sodium lighting. In compliance with the Chula Vista MSCP Subarea Plan, all lighting shall be shielded and directed away from the Preserve. Prior to issuance of improvement plans, a lighting plan and photometric analysis shall be submitted to the City's Environmental review Coordinator for review and approval. The lighting plan shall illustrate the location of the proposed lighting standards and type of shielding measures. Low-pressure sodium lighting shall be used if feasible and shall be subject to the approval of the City's Environmental Review Coordinator and City Engineer. No night-time construction lighting shall occur within the Preserve Edge.

5.3-8 Noise impacts adjacent to the Preserve lands shall be minimized. Berms or walls shall be constructed adjacent to commercial areas and any other use that may introduce noises that could impact or interfere with wildlife utilization of the Preserve. Construction activities shall include noise reduction measures or be conducted outside the breeding season of sensitive bird species. Based on current information, these conditions would be limited to areas within 500 feet of Wolf Canyon. When clearing, grading or grubbing activities occur during the breeding season for coastal California gnatcatcher (February 15 to August 15, annually) or raptors (January 15 to July 31, annually), nesting bird surveys shall be conducted by a qualified biologist to identify active nest locations. Construction activities shall be restricted such that

noise levels related to those activities are below 60 average sound level ( $L_{eq}$ ) at the location of the active nest site.

5.3-9 Prior to issuance of land development permits, including clearing or grubbing and grading permits, the property owner shall submit evidence showing that the following features of the Preserve Edge Plan have been incorporated into grading and landscaping plans:

- (1) No invasive non-native plant species shall be introduced into areas immediately adjacent to the Preserve. All slopes immediately adjacent to the Preserve shall be planted with native species per the Edge Plan, that reflect the adjacent native habitat.
- (2) All fuel modification shall be incorporated into development plans and shall not include any areas within the Preserve.

5.3-10 Prior to issuance of grading permits, the property owner shall submit wall and fence plans depicting appropriate barriers to prevent unauthorized access into the Preserve. The wall and fence plans shall illustrate the locations and cross sections of proposed walls and fences along the Preserve boundary, subject to the approval the City's Director of Planning and Building.

#### Mitigation for Effects on Federal and State Protected Wetlands

5.3-11 The City requires that impacts to wetlands be avoided to the maximum extent possible. When avoidance is not feasible, the property owner(s) shall be required to minimize impacts to the greatest extent possible and mitigate for loss of wetland habitat, including wetland habitat creation of at a 1:1 ratio for unvegetated waters of the U.S. and 3:1 for impacts to alluvial scrub. To mitigate direct impacts to jurisdictional waters, the following conditions would be required prior to issuance of land development permits, including clearing or grubbing and grading permits for any area impacting jurisdictional waters:

- A total of 1.1 acres of wetlands shall be created. Prior to issuance of land development permits, including clearing or grubbing and grading permits that impacts jurisdictional waters, the developer(s) shall prepare a Wetlands Mitigation Plan to the satisfaction of the wetland resource agencies and the City's Director of Planning and Building. This plan shall include, but not be limited to, an implementation plan, maintenance and monitoring program, estimated completion time, and any relevant contingency measures.
- Prior to issuance of land development permits, including clearing or grubbing and grading permits for areas that impact jurisdictional waters, the property owner shall provide evidence that all required regulatory permits, such as those

required under Section 404 of the federal Clean Water Act, Section 1600 of the California Fish and Game Code, and the Porter Cologne Water Quality Act.

5.3-12 One of the following options shall be implemented by the property owner(s) prior to issuance of land development permits, including clearing or grubbing and grading permits for areas impacting vernal pools:

- (1) **Option #1:** The property owner(s) shall restore 406 square feet of vernal pools within the J23, 24, or 25 pools (eastern Otay Mesa) or within the Village 13 (resort) planning area. The restoration would involve reconfiguration and reconstruction of the mima mounds and basins, removal of weedy vegetation, revegetation of the mounds with upland sage scrub species and inoculation of the pools with vernal pool species. The property owner shall prepare a Vernal Pool Mitigation Plan to the satisfaction of the resource agencies (if applicable/jurisdictional) and the City's Director of Planning and Building. The Plan shall include, but not be limited to an implementation plan, maintenance and monitoring program, estimated completion time, and any relevant contingency measures.
- (2) **Option #2:** The project property owner(s) shall purchase vernal pool mitigation bank credits within an approved mitigation bank. Evidence of the purchase and appropriate monitoring and maintenance requirements shall be provided to the Director of Planning and Building.

### 5.3.6 Level of Significance After Mitigation

The Program EIR identified significant and unmitigable impacts to regional raptor foraging habitat. The SPA Plan will result in impacts to non-native grasslands and agricultural lands that would contribute to this impact. Therefore, implementation of the proposed SPA Plan will result in significant and unmitigable impacts to regional raptor foraging habitat. Implementation of the above mitigation measures would reduce the all other identified direct and indirect impacts to biological resources to below a level of significance.

## **5.4 Cultural Resources**

The analysis presented in this section is based in part on the Otay Ranch GDP Program EIR, which analyzed the existing conditions, potential impacts, and mitigation measures related to cultural resources for the entire Otay Ranch. The analysis was derived from records, literature searches, and several confidential reports of cultural studies conducted within the SPA Plan area. The Otay Ranch GDP Program EIR concluded that implementation of the Otay Ranch GDP would result in a significant, unmitigable impact on cultural resources. The analysis and discussion of cultural resources in the Otay Ranch GDP Program EIR is incorporated by reference.

Three reports were prepared by BFS and Associates addressing the potential effects of the SPA Plan on cultural resources: (1) Report of an Archaeological Evaluation of Cultural Resources at the Otay Ranch Village Two SPA and the Village Seven Disposal Site, dated September 2000, and revised February 2004(a) (Appendix C-1), details the investigations at seven archaeological sites on Villages Two, Four, and Seven; (2) Archaeological Investigations and Cultural Resource Evaluations for the Otay Ranch Company's Property within Village Three of Otay Ranch, dated January 2003, and updated February 2004(b) (Appendix C-2), presents the results of investigations of eight sites on Village Three; and (3) Archaeological Investigations and Cultural Resource Evaluations for the Otay Land Company's Ownership within Village Three of Otay Ranch, dated May 2003, and updated February 2004(c) (Appendix C-3), presents the results of testing of four archaeological sites within Village Three. Copies of these three reports are attached to this EIR as Appendixes C-1 through C-3.

There are 16 archaeological sites described within the SPA Plan area. Several of these sites are discussed in more than one of the three reports. Table 5.4-1 presents the site numbers and the reports in which they are discussed. Table 5.4-2 presents the results of the archaeological site evaluations and testing programs.

### **5.4.1 Existing Conditions**

#### **Historic Resources**

The cultural resources in this area of Otay Ranch include the artifacts typical of both the Milling Stone stage and the Late Prehistoric stage. The Milling Stone stage is dated as occurring as early as 8,000 years before present (B.P.). The cultural remains include grinding stones (metates and manos), scraper planes, relatively large-size debitage (flaking waste), and shellfish deposits. During this time period the dead were buried.

The Late Prehistoric stage is considered ancestral to the Kumeyaay, who have lived in the area since the time of contact with the Spanish. Sites of this stage have been dated as early as 1500 years B.P., and their cultural remains reflect an emphasis on inland plant food

**TABLE 5.4-1  
ARCHAEOLOGICAL SITES BY REPORT**

Site (CA-SDI-)	Report		
	Report of An Archaeological Evaluation of Cultural Resources at the Otay Ranch Village Two SPA and the Village Seven Disposal Site (February 2004)*	Archaeological Investigations and Cultural Resource Evaluations for the Otay Ranch Company's Property within Village Three of Otay Ranch (February 2004)*	Archaeological Investigations and Cultural Resource Evaluations for the Otay Land Company's Property within Village Three of Otay Ranch (February 2004)*
11,384H	X		
11,968		X	
12,282	X		
12,283	X		
12,289	X		
12,290		X	
12,291a		X	X
12,291b		X	X
12,292		X	
12,293		X	X
13,226	X		
14,177	X		
14,203		X	X
14,211		X	
16,437		X	
16,679	X		
16,680	X		
16,681	X		

\*Cultural Resources Reports for Village Two SPA and Village Seven (dated September 2000), the Otay Ranch portion of Village Three (dated January 2003), and the Otay Land Company portion of Village Three (dated May 2003) were updated by BFS in February 2004.

**TABLE 5.4-2**  
**ARCHAEOLOGICAL SITE EVALUATIONS AND TEST RESULTS**

Site Number	Site Description
Village Two	
CA-11,384H	<u>The testing performed at CA-SDI-11,384H resulted in the determination that no significant cultural resources are present. Most of the original structures at the site were demolished before 1995. The remaining foundations have no historical or architectural significance, nor do they retain any research potential. The lack of historic period archaeological deposits associated with the Farm Complex, coupled with the fact that the buildings have been removed, resulted in the finding of no significance for the site.</u>
CA-SDI-12,282	The archaeological testing of this site demonstrated that the previously identified surface expression has been destroyed. The testing further concluded that the site had no subsurface deposits. Not Significant.
CA-SDI-12,283	The testing of CA-SDI-12,283 determined that the site consists of a sparse, disturbed deposit of cultural material demonstrated by the recovery of a shell fragment and the observance of a small metal fragment. The surface expression of the site was limited to a mano and a core, both recovered during the testing program. The site exhibits a high level of disturbance, few artifacts, no features, and no unique elements. Not Significant.
CA-SDI-12,289	The testing of CA-SDI-12,289 determined that the site consists exclusively of a sparse scatter of surface artifacts. The surface expression consisted of lithic production waste, including cores, a mano, two hammer/cores, and a retouched flake. Subsurface excavations revealed no evidence of a cultural deposit, and no features or darkened soil were noted. Not Significant.
CA-SDI-13,226	The testing of CA-SDI-13,226 determined that the site consists of a sparse, disturbed deposit of cultural material demonstrated by the recovery of a flake scraper and a flake. The surface expression of the site was limited to a metate fragment and eight pieces of lithic production waste. No culturally diagnostic artifacts were recovered from this site. Not Significant.
CA-SDI-14,177	This site on the SPA Plan area was tested and evaluated previously for the Village One West SPA Project. It was determined that the site is not significant.

**TABLE 5.4-2**  
**ARCHAEOLOGICAL SITE EVALUATIONS AND TEST RESULTS**  
**(continued)**

Site Number	Site Description
CA-SDI-16,679	The analysis of the cultural materials recovered from CA-SDI-16,679 revealed a sparse cultural deposit at the site extending to a maximum depth of 20 centimeters. The testing demonstrated that the site consists of sparse artifact and ecofact scatter and a shallow subsurface deposit that contains only a light scatter of marine shell and 12 artifacts. Based on the sparse nature of the deposit and the limited variety and quantity of material recovered, this site exhibits no additional research potential. Not Significant.
CA-SDI-16,680	The testing of this site determined that the site consists of a sparse surface artifact and ecofact scatter and a shallow subsurface deposit that contains only a light scatter of marine shell and four artifacts. Based on the sparse nature of the deposit and the limited variety and quantity of material recovered from the site, the site exhibits no additional research potential. Not Significant.
CA-SDI-16,681	This small prehistoric camp consisted of a sparse scattering of lithic tools and marine shell. The testing of the site resulted in the recovery of nine surface artifacts and nine subsurface deposits. The subsurface artifacts were recovered from a shallow localized area and the site was considered as lacking any important subsurface deposits. Not Significant.
Village Three	
CA-SDI-12,291a	The testing of Site CA-SDI-12,291a demonstrated that the portion of the site within the project area consists of a scatter of surface artifacts and relatively shallow, localized subsurface deposits. Not Significant.
CA-SDI-12,293	The analysis of the cultural materials recovered from CA-SDI-12,293 revealed a moderate surface scatter and a localized, shallow cultural deposit within the project boundaries. Not Significant.
CA-SDI-14,203	The majority of the surface of CA-SDI-14,203 was obscured by dense vegetation at the time of the testing program. The testing demonstrated that the site consists primarily of a sparse scatter of lithic artifacts on the surface of the site. Subsurface testing at the site identified two shallow and sparse subsurface cultural deposits. Not Significant.
CA-SDI-12,291b	The recovery from both surface and subsurface contexts of this site included 1,249 artifacts including lithic tools, lithic production waste, ground stone, and ecofacts including shell and animal bone. The western portion of this site is within Otay Land Company's ownership and totals approximately 3,321 square meters. <b>Significant.</b>

**TABLE 5.4-2**  
**ARCHAEOLOGICAL SITE EVALUATIONS AND TEST RESULTS**  
**(continued)**

Site Number	Site Description
CA-SDI-11,968	The recovery from CA-SDI-11,968 included 68 lithic artifacts. The analysis of the cultural materials recovered from this site revealed a moderate surface scatter and a localized, shallow cultural deposit. This site exhibits sparse cultural artifacts, with little research potential for the prehistory of the region. <i>Not Significant.</i>
CA-SDI-12,290	The recovery from this site included 149 artifacts. The analysis of the cultural materials recovered from CA-SDI-12,290 revealed a sparse scatter of lithic artifacts on the surface of the site, and a sparse, shallow, localized subsurface cultural deposit. This site exhibits sparse cultural artifacts, with little research potential for the prehistory of the region. <i>Not Significant.</i>
CA-SDI-12,292	The recovery from CA-SDI-12,292 included 56 artifacts. The analysis of the cultural materials recovered from this site revealed a sparse scatter of lithic artifacts on the surface and a shallow, sparse, localized subsurface deposit. The tested portion of this site exhibits sparse cultural artifacts, with little research potential for the prehistory of the region. <i>Not Significant.</i>
CA-SDI-16,437	The testing of CA-SDI-16,437 demonstrated that the site consists of a sparse scatter of lithic artifacts on the surface; no subsurface cultural deposit was identified. The tested portion of this site exhibits sparse cultural artifacts, with little research potential for the prehistory of the region. <i>Not Significant.</i>
CA-SDI-14,211	The recovery from CA-SDI-14,211 included 16 artifacts. The analysis of the cultural materials recovered from this site revealed a sparse scatter of lithic artifacts on the surface of the site; no subsurface cultural deposit was identified. The tested portion of this site exhibits sparse cultural artifacts, with little research potential for the prehistory of the region. <i>Not Significant.</i>

collection, processing, and storage. Typical artifacts include small arrow points, mortars and pestles, and ceramics. Unlike earlier occupations, the dead were cremated in this time period.

The prehistoric sites recorded within the proposed SPA Plan area contained ground and flaked stone materials and limited amounts of shell. As a result of the most recent investigations (BFS and Associates 2004b), only one prehistoric site is considered significant. That site, SDI-12,291b, was described as consisting of a lithic scatter situated along a gently sloping south-facing hillside overlooking the Otay River Valley immediately east of a large drainage in the east side of the SPA Plan area. Artifacts at the site include flaked and ground stone tools.

#### Human Remains

No human remains were found during site investigations, nor are they expected within the SPA Plan area.

#### **5.4.2 Thresholds of Significance**

According to Appendix G of the CEQA Guidelines, impacts to cultural resources would be significant if the proposed project would:

Threshold 1: Cause a substantial adverse change in the significance of a historical or archaeological resource as defined in CEQA Guidelines Section 15064.5. Including resources that are eligible for the California Register of Historic Resources and the National Register of Historic Places; and resources that are locally designated as historically significant; or the City of Chula Vista finds the resource historically significant based on substantial evidence.

Criteria for determining a resource is “historically significant” typically includes: (1) resources that are associated with an event or person of recognized significance; (2) resources that can provide information that is of demonstrable public interest and is useful in addressing scientifically consequential and reasonable research questions; (3) resources that have a special or particular quality such as the oldest, best example, largest, or last surviving example of its kind; and (4) resources that are least 100 years old and possess substantial stratigraphic integrity; and/or involve important research questions that historical research has shown can be answered only with archaeological methods.

Threshold 2: Disturb any human remains, including those interred outside of formal cemeteries.

### 5.4.3 Impacts

#### Threshold 1: Historic or Archaeological Resources

There were 16 prehistoric, archaeological sites identified within the SPA Plan area. Eight prehistoric sites are reported within the boundaries of Village Two, and eight prehistoric sites within the Village Three portion of the SPA Plan area. An inventory of the artifacts recovered from these prehistoric sites is provided in Table 5.4-3.

There was one historic site (11,384H) identified within the SPA Plan area. The historic site, located on the Village Two project area, consists of the remains of the Otay Ranch Farm Complex. Consideration of the effects of the proposed SPA Plan on this complex is addressed in Appendix I of the February 2004(a) report for cultural resources at the Otay Ranch Village Two SPA (see Appendix C-1 to this EIR). In summary, the proposed SPA Plan would require demolition of the existing farm complex as part of grading. The reconnaissance survey determined that the remaining portions of the farm complex are not significant; however, the site may contain subsurface deposits in the form of buried trash pits or privies in which cultural material was deposited in the historic past. The inventory of existing ruins and standing structures did not locate any intact historically significant structures. Appendix I of the February 2004(a) report for cultural resources at the Otay Ranch Village Two SPA concluded that no historically significant remaining components were visible during site testing. However, the proposed project could result in significant archaeological impacts because the site may contain masked subsurface deposits that may be encountered during grading and excavation activities for the proposed project. Therefore, archaeological monitoring would be required for initial brushing, grubbing, grading, and demolition of the cement features around the Farm Complex.

All 16 prehistoric sites will be impacted as a result of the proposed SPA Plan development. As a result of the testing of these prehistoric sites, only one site, SDI-12,291B, was determined to be a significant historic resource. The remaining 15 sites were determined to not be significant historic resources; however, grading and excavation activities associated with the proposed project could result in significant archaeological impacts to unknown subsurface deposits.

The testing program demonstrated that Site SDI-12,291b consists of a dense scatter of surface artifacts and a relatively deep, localized subsurface cultural deposit with multiple artifact types, shell, and bone. Based on the artifacts recovered, the site appears to represent a prehistoric habitation area where lithic resource procurement, lithic tool production and maintenance, and resource procurement and processing occurred. The archaeological testing program concluded that:

**TABLE 5.4-3  
ARTIFACTS BY SITE**

Site (CA-SDI-)	Flakes	Cores	Manos	Metates	Flaked Stone Tools	Debitage
11,968						
Surface	38	2	0	0	19	6
Subsurface	2	0	0	0	0	1
12,282						
Surface	0	0	0	0	0	0
Subsurface	0	0	0	0	0	0
12,283						
Surface	0	1	1	0	0	0
Subsurface	0	0	0	0	0	0
12,289						
Surface	1	6	1	0	1	2
Subsurface	0	0	0	0	0	0
12,290						
Surface	0	7	0	0	49	93
Subsurface	0	0	0	0	0	2
12,291a						
Surface	68	5	0	0	27	95
Subsurface	7	0	0	0	0	1
12,291b						
Surface	966	3	9	0	180	91
Subsurface	2211	3	7	0	63	242
12,292						
Surface	37	2	0	0	12	2
Subsurface	0	0	0	0	1	0
12,293						
Surface	489	54	6	2	495	111
Subsurface	16	0	0	0	0	3
13,226						
Surface	6	1	0	1	0	1
Subsurface	1	0	0	0	1	0
14,203						
Surface	26	6	1	1	33	9
Subsurface	0	0	0	0	0	0
14,211						
Surface	14	0	0	0	1	1
Subsurface	0	0	0	0	0	0
16,437						
Surface	6	0	0	0	10	1
Subsurface	0	0	0	0	0	0
16,679						
Surface	3	0	0	1	6	0
Subsurface	2	0	0	0	0	0

**TABLE 5.4-3  
ARTIFACTS BY SITE  
(continued)**

Site (CA-SDI-)	Flakes	Cores	Manos	Metates	Flaked Stone Tools	Debitage
16,680						
Surface	1	0	0	1	2	0
Subsurface	0	0	0	0	0	0
16,681						
Surface	5	0	1	0	3	0
Subsurface	7	0	0	0	0	2

\*Site CA-SDI-14,177 within the SPA Plan area is not included in this table because it was tested and evaluated previously for the Village One West SPA Project. It was determined that the site is not significant.

Based on the information derived from the testing program, Site SDI-12,291b is considered significant according to the criteria listed in CEQA, Guidelines Section 15064.5, and the guidelines set forth by the City of Chula Vista. The site exhibits significant, intact cultural deposits containing an abundant and diverse concentration of lithic artifact, shell and faunal remains. The research potential of this site for the interpretation of Archaic and possible early Late Prehistoric cultures in the region is high (BFS and Associates 2004(b) 6.4-4).

SDI-12,291 will be impacted by implementation of the proposed SPA Plan during grading and construction activities. As a result, significant impacts to this site will occur.

#### Threshold 2: Human Remains

Implementation of the proposed SPA Plan would not disturb any human remains, including those interred outside of formal cemeteries. There are no known or expected human remains within the boundary of the SPA Plan.

#### **5.4.4 Level of Significance Prior to Mitigation**

There were 16 prehistoric sites identified within the SPA Plan area. As a result of the testing of these sites, only one site, SDI-12,291B, was determined to be a significant historic resource. Impacts to SDI-12,291b would be considered significant. The remaining 15 sites were determined not to be significant historic resources, however, grading and excavation activities associated with the proposed project could result in significant archaeological impacts to unknown subsurface deposits.

There was one historic site (CA-SDI-11,384H) identified within the SPA Plan area. The historic site, located on the Village Two project area, consists of the remains of the Otay Ranch Farm Complex. Appendix I, of the February 2004(a) report for cultural resources at the Otay Ranch Village Two SPA, concluded that no historically significant remaining components were visible during site testing. However, the proposed project could result in significant archaeological impacts because the site may contain masked subsurface deposits that may be encountered during grading and excavation activities for the proposed project.

Implementation of the proposed SPA Plan and the Composite TM for Village Two and the park within a portion of Village Four would not disturb any human remains, including those interred outside of formal cemeteries. There are no known or expected human remains on the SPA property.

### 5.4.5 Mitigation Measures

#### Historic Resources

Preservation is the preferred means of avoiding impacts to archaeological site SDI-12,291b. This approach would involve redesign of the project to avoid impacts to Site SD-12,291b. In the event that preservation on-site is infeasible, the following measures outline a procedure for ensuring that adverse impacts are avoided for the proposed SPA Plan.

5.4-1 In the event that in place preservation is infeasible, the following data recovery program will mitigate adverse impacts to SDI-12,291b. These tasks need to be completed prior to the issuance of grading permits for the portion of Village Three on which the site is located.

- a) Prior to the issuance of grading permits, a Registered Professional Archaeologist (RPA) shall prepare a research design for the data recovery of Site SDI-12,291b to the satisfaction of the Environmental Review Coordinator. This research design shall identify specific research questions to be addressed through the data recovery process, the data collection and analyses needed to address those questions, and the means and location of curation of recovered materials. This research design shall be prepared prior to the initiation of the field investigation to the satisfaction of the Environmental Review Coordinator of the City of Chula Vista.
- b) Based on the approved research design, an excavation program shall be implemented that will result in a reliable sample of the site. It is anticipated that between two and four percent of the surface area of the mapped resource would be excavated, and that excavation would be completed by hand excavated one-by-one meter units, unless the questions developed for the research design require a modified sampling strategy. All materials should be passed through a one-eighth-inch mesh screen, with all recovered materials catalogued and analyzed. If datable materials, faunal or floral remains, pollen, or other cultural significant materials are found, appropriate special analysis shall be completed.
- c) A detailed report of findings shall be completed and the results made available to the public and scientific community. Curation of recovered materials shall be accomplished to the satisfaction of the Environmental Review Coordinator of the City of Chula Vista. Curation of collections from the project will be curated in a facility approved in advance by the City.

5.4-2 A qualified archaeological monitor shall be on-site during initial grading of CA-SDI-11,384H ~~the site~~. If historic archaeological material is encountered during grading, all grading in the vicinity as determined and defined by the archaeologist shall stop and

its importance shall be evaluated, and suitable mitigation measures shall be developed and implemented, if necessary. Cultural material collected shall be permanently curated at an appropriate repository. Curation of collections from the project will be curated in a facility approved in advance by the City.

#### Human Remains

No impacts were identified and no mitigation is required.

#### **5.4.6 Level of Significance After Mitigation**

With implementation of the recommended mitigation measures, impacts to cultural resources will be reduced to below a level of significance.

## 5.5 Geology and Soils

Section 3.5, Geology and Soils, of the Otay Ranch GDP Program EIR addressed the general geotechnical setting, potential impacts, and mitigation measures for the entire Otay Ranch. The document concluded that implementation of the Otay Ranch GDP would result in significant environmental impacts on geology, and, more refined site-specific geotechnical reports would be required prior to issuance of grading permits for individual projects. Preliminary Geotechnical Investigations for Villages Two and Three were prepared by GEOCON, Inc. (August 18, 2003 and September 3, 2003; Appendixes D-1 and D-2 [GEOCON 2003a and 2003b]). A preliminary geotechnical investigation for the Parcel A portion of Village Three was prepared by Pacific Soils Engineering, Inc., (October 24, 2003; Appendix D-3). An analysis of the community park site in Village Four was prepared by GEOCON, Inc. (May 5, 2004; Appendix D-4). The reports are summarized in this section and are attached to this EIR in Appendix D-1 through D-4.

### 5.5.1 Existing Conditions

#### Geologic Setting

The SPA Plan area consists of approximately 1,187 acres of essentially undeveloped land. The SPA Plan area is bounded to the north by Olympic Parkway, the east by La Media Road, the west by the Otay Landfill, and to the south by the Otay Valley. Drainage on-site flows both north and south, with a central east-west ridge providing the highest elevations. Elevations on-site vary from approximately 140 feet above MSL at the southwestern boundary to 530 feet above MSL at the northeastern boundary. Topographically, the SPA Plan area consists of rolling hills in its central portion and steep walled canyons and ridges in its northern and southern portions. The SPA Plan area consists primarily of active and fallow agricultural fields. The SPA Plan area supports 16 vegetation and land cover types, including native vegetation and grasses.

#### Seismicity

A review of geologic literature indicates that there are no known active or potentially active faults in the SPA Plan area. The closest known active fault is the Rose Canyon Fault, located approximately 10 miles northwest of the site. A potentially active fault, the La Nacion Fault, is located approximately one-half mile west of the SPA Plan area.

Sixteen known and active faults were identified within 62 miles (100 kilometers) of the SPA Plan area. Earthquakes that might occur on the Rose Canyon Fault or other faults within the southern California and northern Baja California area have the potential to generate significant ground motion in the SPA Plan area. The results of the seismicity analyses indicated that the Rose Canyon Fault is the dominant source of potential

ground motion at the site. A maximum credible magnitude of 7.2 is postulated for the Rose Canyon Fault and is considered to be representative of the potential for seismic ground shaking within the SPA Plan area. The estimated maximum ground acceleration expected at the site was calculated to be approximately 0.28 gravity ( $g$ ) based on the Sadigh et al. (1997) acceleration-attenuation relation. Earthquake events and site accelerations for the faults that present the greatest potential seismic impact at the site are presented in Table 5.5-1.

**TABLE 5.5-1  
DETERMINISTIC SITE PARAMETERS FOR SELECTED ACTIVE FAULTS**

Fault Name	Distance From Site (miles)	Maximum Credible Magnitude	Maximum Credible Site Accelerations ( $g$ )
Rose Canyon	11	7.2	0.28
Coronado Bank-Agua Blanca	19	7.4	0.20
Elsinore-Julian	41	7.1	0.05
Elsinore-Coyote Mountain	45	7.1	0.05
Earthquake Valley	43	6.8	0.04
Newport-Inglewood (Offshore)	44	6.5	0.02

SOURCE: Geocon, Inc. 2004.

$g$  = gravity

#### Soils/Geologic Formations

Figures 5.5-1, 5.5-2, and 5.5-3 show the geologic maps for Village Two, Village Three, and a portion of Village Four, respectively.

#### *Otay Formation (To)*

The Tertiary-aged (possibly Oligocene) Otay Formation is present throughout Villages Two, Three, and Four. Where exposed, the formation consists of silty, fine- to medium-grained sandstones and siltstones, with interbeds of highly expansive bentonitic claystone. The sandier portions exhibit “very low” to “low” expansion potential as defined by the Uniform Building Code (UBC) Table No. 18-I-B, and relatively high shear strength. The silt and clay portions exhibit “medium” to “very high” expansion potential. Bentonitic claystone, common in this formation, was encountered during the Villages Two, Three, Four reconnaissance explorations.

The bentonitic claystone beds consist of very expansive clays, which typically exhibit poor shear strength. Down-hole observations within several borings on Villages Two and Three indicate the presence of remolded clay seams along gently dipping bedding planes within the bentonitic claystone. Although several interbeds of bentonitic claystone may exist within the Otay Formation, only one predominant layer was encountered during the exploratory excavations for Villages Two, Three, and Four. This layer was observed throughout the entire Village Two site, throughout the northeastern portion of





FIGURE 5.5-2  
Geology Map for Village Three



Village Three, and in the southern portion of Village Four. This layer typically consisted of an approximately two- to seven-foot-thick bed. The top of the bentonite bed varied from approximately 358 feet above MSL in the western portion of Village Two, 420 feet above MSL in the east, approximately 380 feet above MSL in Village Three, and approximately 438 to 444 feet above MSL in Village Four. The bentonite layers are generally the controlling factor for the base of the landslide debris by providing a weak and previously sheared layer to initiate the sliding. Where present, the bentonitic claystone will require special consideration with respect to placement as fill, undercutting of pad and street subgrade, and buttress slope stability.

#### *San Diego Formation (Tsd)*

The Tertiary-aged (Pliocene) San Diego Formation typically consists of massively bedded, well-sorted, fine-grained sandstones with some scattered cobble and gravel lenses. In addition, oversize material may be generated during grading because of matrix cementation. Cohesionless, friable sand lenses also can occur and may require remedial grading measures if encountered in proposed cut slopes or at finish pad grade. In general, the sediments of the San Diego Formation exhibit adequate shear strength and “very low” expansion characteristics in either an undisturbed or properly compacted condition; the clayey portions of this unit will have “low” to “medium” expansion characteristics.

#### *Terrace Deposits (Qt)*

Quaternary-age Terrace Deposits unconformably overlie the Otay Formation above an elevation of approximately 500 feet above MSL in the central ridge area of Village Two, in the majority of the southern portion of Village Three, and in the northeastern portion of Village Four. Sediments generally associated with this formation consist of subangular to rounded cobbles with gravel-sand mixtures and locally cemented zones. The granular soils of the Terrace Deposits typically exhibit adequate shear strength and “low” expansive potential in either an undisturbed or properly compacted condition. Excavation in the Terrace Deposits may be difficult in the more strongly cemented areas, and excavation in this deposit will likely generate oversized material that will require special handling.

#### *Landslide Debris (Qls)*

Landslide debris was encountered or suspected in 10 areas during the reconnaissance investigation at Village Two, and in two areas at Village Three. The Village Two investigation located two areas of landslide debris on north-facing slopes above Olympic Parkway; the remaining eight areas are located in eastward- or westward-facing slopes. The landslide debris at Village Three occurs along the northern slopes adjacent to the landfill, and along a west-facing slope in the east-central portion of the site. The

landslide debris encountered varies from 10 to 69 feet thick. The base of the slide-masses are typically coincident with a relatively uniform bed of bentonitic claystone that extends beneath the entire Village Two site and the northeastern portion of Village Three. The landslide debris encountered in the east-central portion of Village Three is composed of materials from the lower Otay Formation and is likely seated along the contact between the upper sandstone beds and underlying bentonitic claystone. The slides generally consist of a loose, upper portion, typically 10 to 15 feet thick, a loose graben zone of undetermined thickness, and a medium to dense core zone. Depending on specific landslide geometry, slide debris with areas of proposed development will require partial to complete removal and compaction. If grading is planned within or adjacent to the landslide areas, additional investigations and analysis will be required.

#### *Alluvium (Qal)*

Alluvial soils are stream deposited materials found in the major canyon bottoms and generally vary in depth with the size of the canyon. The alluvial materials observed consist of silty sand and sandy clay which typically possess a “low” to “high” expansion potential. The maximum thickness of alluvium encountered ranged from approximately 3 to 20 feet, depending on the location. Due to the relatively unconsolidated nature of the alluvial deposits, complete removal and compaction will be necessary in areas to receive fill or structures.

#### *Topsoil (unmapped)*

Topsoil covers the entire site and varies from one to four feet thick, with an average thickness of approximately three feet. The topsoil is characterized as soft to stiff, dry to damp, dark brown, sandy clays to clayey sands derived from underlying formations. The clayey portion of the topsoil typically possesses a “high” expansion potential. Complete removal and compaction of the topsoil will be necessary in areas to receive fill or structures.

#### *Colluvium (unmapped)*

Colluvial soils were encountered during the reconnaissance survey of Village Three and Village Four. These soils are surficial deposits generally found on the slopes along Wolf Canyon in the eastern portion of the property. The colluvial materials encountered consist of clayey, fine to coarse sand with gravel and cobbles, which typically possess a “medium” to “high” expansion potential. The maximum thickness encountered was approximately 5 feet. Due to the relatively unconsolidated nature of the colluvial deposits, removal and compaction will be necessary in areas to receive fill or structures.

*Sweetwater Formation (Esw)*

Eocene-age Sweetwater Formation was encountered on the Parcel A portion of Village Three. This formation consists predominantly of siltstones, claystones, and sandstones. A significant percentage of the claystone is expansive in nature. Lesser amounts of gritstone subunits were also observed on the southern portion of Village Four. Weathered Sweetwater Formation, where it outcrops on slope faces on the southern portion of Village Three, is unsuitable for support of structures or receiving fill.

*Previously-Placed Fill (Qpf<sub>1</sub> and Qpf<sub>2</sub>)*

Compacted fill soils associated with previous grading operations are present along the northern project boundary in Village Two. The fill soils were placed during the grading of Olympic Parkway and construction of buttress fills on the south side of the roadway.

*Undocumented Fill Soil (Qudf)*

The reconnaissance survey of Village Two encountered undocumented fill soils consisting of silts, silty sands, and clayey sands that were derived from ranching activities, trenching, and backfilling operations during the installation of the existing waterline, and as a result of ongoing importation of soil to the central ridge area of the site and to the daylight fill east of the High School site. Undocumented fill soils were also encountered during the reconnaissance survey of the southern portion of Village Three. The undocumented fill soils consist of silty gravelly sands and are present in the form of end dump piles and berms located in the southern portion of the Village Three site. These fill soils were likely placed over compressible topsoil and colluvial material. In their present condition, the undocumented fill soils and underlying topsoil, colluvium, or alluvium are not suitable for support of additional fill or structures, and removal and compaction will be necessary. Maximum undocumented fill thickness along with the underlying surficial soils are anticipated to range between 5 and 30 feet.

*Kelp By-Product (Qk)*

Kelp by-product consisting of organic silt was stockpiled during ranching activities within Village Two of the SPA Plan area. Due to its organic nature, the kelp by-product is not considered suitable for use as fill. Therefore, the kelp by-product should be exported from the site. The thickness of the kelp by-product is anticipated to range between 5 and 15 feet.

Groundwater

Groundwater was observed at depths varying from 42 to 63 feet at Village Two, and in the upper five feet of areas in Village Three. Groundwater was not encountered in any

of the exploratory excavations at the proposed community park site within Village Four. Each geologic unit observed on-site has permeability characteristics that might be susceptible to water seepage under certain conditions. During the rainy season, perched water conditions are likely to develop within the drainage areas and may require special consideration to minimize construction difficulties. Deeper excavations for alluvial removals may encounter groundwater or seepage conditions. It is not uncommon for groundwater or seepage conditions to develop where none previously existed. Groundwater elevations are dependent on seasonal precipitation, irrigation, and land use, and may vary as a result. Proper surface drainage of irrigation and rainwater will be important to future performance of the proposed project.

#### Liquefaction

Liquefaction typically occurs when a site is located in a zone with seismic activity, on-site soils are cohesionless, groundwater is encountered within 50 feet of the surface, and soil densities are less than about 70 percent. If all four of the above-mentioned criteria are met, a seismic event could result in a buildup of pore water pressure from the earthquake-generated ground accelerations. Due to the dense nature of the formational materials present on-site and the absence of a permanent groundwater table in the development areas, the potential for liquefaction is considered low.

#### Ground Rupture

As previously noted, evidence of active faulting (the precipitator of ground rupture) was not observed on the SPA Plan site.

#### Landslides and Lateral Spreads

Investigation of the Villages Two and Three sites revealed evidence of ancient landslides. Grading of the site might expose bedrock materials susceptible to instability through creation of steeper slopes. Identification of potentially unstable slopes would require additional exploration. Investigation of the Village Four site revealed no evidence of landslides or landslide deposits on-site.

#### Compressible and Expansive Soils

Loose compressible soils, including topsoil, colluvium, alluvium, and residual soils are found over much of the SPA Plan site. Highly expansive soils, including zones of bentonite, may be encountered in the Otay Formation.

### Tsunamis, Seiches, and Earthquake-Induced Flooding

The elevation of the project site, as well as its distance from the coast, precludes damage by tsunamis (seismically induced waves) or seiches (standing waves). Earthquake-induced flooding of Otay Reservoirs is not likely to affect the SPA Plan site given its elevation above the high waterline of the reservoirs.

### Collapse

Collapse is a term used for collapsible soils. Collapsible soils are located in arid desert environments with very sandy, young, and dry alluvial soils that are left in place and become saturated due to irrigation. These types of soils are not present on the SPA Plan site.

### Subsidence

Subsidence occurs when a large-scale fluid withdrawal is performed causing surface settlement. This is common within large farming communities where groundwater is pumped from great depths over long periods of time. The same conditions can occur when oil is withdrawn. Neither of these conditions will occur on the SPA Plan site.

## **5.5.2 Thresholds of Significance**

Based on the thresholds identified in Appendix G of the CEQA Guidelines, the proposed project would result in a significant impact to geology and soils if it would:

Threshold 1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

- (1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault,
- (2) Strong seismic ground shaking,
- (3) Seismic-related ground failure, including liquefaction, or
- (4) Landslides;

Threshold 2: Result in substantial soil erosion or the loss of topsoil;

- Threshold 3: Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- Threshold 4: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating a substantial risk to life or property; and
- Threshold 5: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for disposal of wastewater.

### 5.3 Impacts

Threshold 1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death.

There are no active faults underlying the SPA Plan project site. The nearest known fault is the Rose Canyon Fault, located approximately 10 miles northwest of the site. The La Nacion fault zone is potentially active, which means it has not offset geologic formations younger than 11,000 years old. Although the La Nacion Fault does present a risk to development of the SPA Plan, as it is potentially active, the most significant probable seismic event with the potential to affect Villages Two, Three, and Four would be a 7.2 maximum credible magnitude earthquake centered on the Rose Canyon Fault, resulting in an estimated peak ground acceleration of 0.28 *g*. The SPA Plan area, as with all of southern California, could be subject to severe ground shaking as a result of a major earthquake occurring along this fault or other regionally significant faults. Buildings within the SPA Plan area would be constructed in accordance with the requirements of the governing jurisdictions, building codes, and standard practices of the Association of Structural Engineers of California. Exposure to seismic impacts within the SPA Plan area would be no greater than other parts of southern California, and impacts are not considered significant.

Threshold 2, 4, and 5: Result in substantial soil erosion or the loss of topsoil; be located on expansive soil; or have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for disposal of wastewater.

Development of the SPA Plan would result in a multi-use planned community with associated landscaping and circulation roads. Grading activities, which remove the existing vegetative cover, would expose soils to runoff and erosion. The soils contained in the SPA Plan area have severe erosion susceptibility, resulting in a potentially significant erosion impact. Construction on liquefiable soils within drainage courses could result in injuries or loss of property during ground shaking of sufficient magnitude

and duration. Expansive soils within pavement, foundation, or slab subgrade could heave when wetted, resulting in cracking or failure of these development improvements. Development on compressible soils could potentially settle under increased load and damage structures, roads, and property.

Surficial soils (undocumented fill, landslide debris, alluvium, colluvium, and topsoil) are not considered suitable for the support of fill or structural loads in their present condition. No additional soil or geologic conditions were encountered or identified as part of the site-specific geotechnical investigation that would preclude the development within Villages Two, Three, and a portion of Village Four as proposed, provided the recommendations contained in all the Geotechnical Investigation Reports (see Appendixes D-1 through D-4 of this EIR) are followed.

An existing 40-inch steel cylinder waterline crosses the SPA Plan area at an elevation of approximately 388.3 feet. The waterline, which belongs to the City of San Diego, runs from the northeast at Olympic Parkway to Wolf Canyon, through the proposed community park site at the southeast portion of the SPA Plan site (see Figure 3-10). The steel waterline is currently active and is anticipated to remain in use during and after site development. The current conceptual design would require mass grading above portions of the waterline's tunnel, including excavation of formational soils and the placement of fill soils. A potentially significant impact could result from the grading above portions of the waterline.

However, as discussed in Section 3, Project Description, the relocation of the existing waterline is being considered as part of the SPA Plan project. If it were relocated, the waterline would be realigned from Olympic Parkway through the Village Two Core to La Media Road, where it would be located within the La Media Road right-of-way and connect with the existing pipeline south of the proposed community park site in Village Four. This relocation would eliminate the potentially significant impact that would result from grading above portions of the waterline as discussed above.

Threshold 5: Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

#### *Liquefaction*

The alluvial and colluvial deposits underlying the SPA Plan site could undergo liquefaction if saturated soils are subjected to ground shaking of sufficient magnitude and duration. Compliance with the requirements of the governing jurisdictions, the UBC, and standard practices of the Association of Structural Engineers of California would reduce the potential impact resulting from liquefaction to below a level of significance.

*Landslides and Lateral Spreads*

As the SPA Plan site contains ancient landslides, unstable conditions may result from grading in areas with cut or underlying fill slopes. Slope faces associated with clay beds may also become unstable due to an increased potential for seepage caused by migration of perched groundwater. Unstable slope conditions are considered a potentially significant impact during the construction period.

*Tsunamis, Seiches, and Earthquake-Induced Flooding*

Tsunamis, seiches, and earthquake-induced flooding are not expected to occur on the project site given its distance from the coast and its elevation above the Otay Reservoirs.

*Subsidence and Collapse*

The risk due to subsidence and collapse affecting development of the SPA Plan is negligible.

**5.5.4 Summary of Significance Prior to Mitigation**

Significant impacts to geology and soils could result from project development on compressible and expansive soils. Additionally, the current conceptual design would require mass grading above portions of the tunnel that contains the San Diego waterline, including excavation of formational soils and the placement of fill soils. A potentially significant impact could result from the grading above portions of the existing City of San Diego waterline. Implementation of project-specific design mitigation measures, as described below, would reduce or avoid significant impacts. Impacts resulting from the grading above portions of the waterline would be eliminated if the waterline were relocated.

Implementation of project-specific design mitigation measures would be required to reduce or avoid significant impacts resulting from compressible and expansive soils. Potential impacts resulting from geologic hazards would be reduced below a level of significance through project design measures, including compliance with the requirements of the governing jurisdictions, building codes (e.g., Title 24 of the California Code of Regulations, and the UBC), and standard practices of the Association of Structural Engineers of California.

### 5.5.5 Mitigation Measures

The following mitigation measures have been identified for the proposed SPA Plan and the Composite TM to reduce construction-related impacts associated with compressible and expansive soils, and settlement at the project site.

5.5-1 Prior to the issuance of the grading permit, the applicant(s) shall verify that the applicable recommendations of the preliminary geotechnical investigations for Villages Two and Three prepared by Geocon (August 18, 2003 and September 3, 2003, respectively) and the preliminary geotechnical investigation for the Parcel A portion of Village Three, prepared by Pacific Soils Engineering, Inc., (October 24, 2003) have been incorporated into the project design and construction documents to the satisfaction of the City Engineer. Recommendations include, but are not limited to:

- a) During construction liquefiable soils within the colluvium/alluvium shall be removed and replaced with compacted fill.
- b) During construction highly expansive soils shall be kept below finish grade. Where excavations expose highly expansive materials at finish grade, these materials shall be excavated a minimum of four feet below finish grade. Where excavations expose very highly expansive material at finish grade, these materials shall be excavated a minimum of five feet below finish grade. The excavations shall be replaced with a compacted fill soil that has a low to moderate expansion potential.
- c) During construction, the developer shall remove loose, compressible soils and replace as compacted fill in areas that will be subjected to new fill or structural loads.
- d) During grading the developer shall construct earthen buttresses on unstable slopes with drains installed, as warranted, at the rear of the buttresses to control groundwater.
- e) Grading of building pads shall be designed so that foundations bear entirely on a relatively uniform depth of compacted fill. This may be accomplished by overexcavating the cut portion of the building pad.

5.5-2 If the existing City of San Diego waterline is not relocated, the following mitigation measure shall be required to reduce impacts associated with grading above portions of the existing waterline.

Prior to the issuance of the grading permit, the applicant(s) shall consult with a pipeline specialist to evaluate the structural integrity of the existing City of San Diego waterline pipe and tunnel and the effect of the fill loads. A deformation analysis shall be performed once final grades have been determined.

- 5.5-3 Prior to the issuance of the grading permit, the applicant(s) shall verify that the design of any structures would comply with the requirements of the Uniform Building Code and standard practices of the Association of Structural Engineers of California.

#### **5.5.6 Summary of Significance After Mitigation**

The mitigation measures listed above would reduce significant impacts to geology and soils from development of the SPA Plan and the Composite TM. The potential for liquefaction to occur at the site would be reduced to less than significant levels once the colluvium and alluvium deposits are removed and replaced with compacted fill. The potential for settlement and differential movement associated with compressible and expansive soils, respectively, would be reduced to below a level of significance upon removal and replacement with compacted fill soils.

## 5.6 Paleontology

Section 3.6, Paleontological Resources, of the Otay Ranch GDP Program EIR evaluates the known and unknown paleontological resources, potential impacts, caused by implementation of the Otay Ranch GDP, and mitigation measures proposed to reduce potential impacts to fossil remains or prehistoric plant and animal life. The Otay Ranch GDP Program EIR concluded that implementation of the Otay Ranch GDP would result in a significant environmental effect on paleontological resources. The Otay Ranch GDP Findings required that certain portions of the Otay Valley Parcel of Otay Ranch be set aside for paleontological reserves. However, no paleontological reserves were designated in the SPA Plan area. In addition, the Otay Ranch RMP compiles the resource-related studies, plans, and programs required for paleontological resources.

### 5.6.1 Existing Conditions

Paleontological resources are fossil remains of prehistoric plant and animal life. Fossils, which are found in the geologic deposits where they were originally buried, provide a portion of the scientific record for the geologic and biota history of the region in which they are found. Fossils may be exposed in drainage cuts or where the bedrock surfaces.

Significant paleontological resources have been encountered in properties adjacent to the proposed SPA Plan area. Discovery and recovery of significant paleontological resources occurred with development of the Otay Ranch SPA One Villages One and Five. The following is a summary of the paleontological recovery completed by Dr. Thomas A. Deméré between 1998 and 1999, for Villages One and Five:

Grading for Village One - Phase 1B of the Otay Ranch GDP area produced significant fossil remains from both the San Diego Formation and the Otay Formation. A cut was made through an ancient sea cliff of the San Diego Formation, exposing both beach and non-marine deposits of this formation. The non-marine deposits produced the first all-terrestrial mammal assemblage known from the San Diego Formation. This assemblage includes rabbit (represented by a skull and numerous isolated teeth), cat (represented by a jaw and isolated limb bones), and horse (represented by a partial skull and isolated limb bones). Grading in the Otay Formation resulted in the discovery and recovery of bones and teeth of terrestrial mammals including oreodonts (extinct hoofed mammals) and canids (dogs).

Grading for Village One - Phase 2B of the Otay Ranch GDP area also produced fossil marine invertebrates and vertebrates from the San Diego Formation. This rock unit is approximately two to four million years old and was deposited in a large marine embayment during the Pliocene epoch. Particularly significant fossil specimens recovered on this site include partial skulls and jaws of a new small species of baleen whale, a partial skeleton (without a skull) of a medium-sized species of baleen whale,

ribs and vertebrae of a giant dugong sirenian (*Hydrodamalis cuestae*), and a nearly complete skeleton of puma-sized cat (*Felis rexroadensis*). Other significant discoveries on this site include a moderately diverse assemblage of invertebrate fossils consisting of shells, molds, and casts of marine clams, scallops, snails, crabs, sand dollars, estuarine clams, oysters, and snails.

Grading for Village Five produced fossil remains from the Otay Formation. This rock unit is approximately 28 to 30 millions years old and was deposited in a broad coastal river floodplain. Noteworthy fossils recovered on this site include a limb bone of a short-faced dog (*Mesocyon*), a partial skeleton of a small fox-like dog (*Hesperocyon*), partial skulls and jaws of a small oreodont (*Sespia*), jaws of a small chevrotain (hoofed mammal), and egg cases of an unidentified insect.

Since they are buried, paleontological resources are often not seen until earthwork begins. The locations of fossils are predicted based on the geology of the area and known productivity of the rock formations. No fossil remains have been identified within the SPA Plan area, and no GDP-designated paleontological preservation areas occur within the SPA Plan boundaries.

As discussed in Section 5.5, Geology and Soils, the SPA Plan area is underlain by the Otay Formation with accumulations of colluvial and alluvial deposits in the drainage course bottoms, the San Diego Formation, the Sweetwater Formation, and the Terrace Deposits. The following discussion describes the potential for fossil remains in each of these formations:

#### Otay Formation (To)

The Otay Formation is primarily a non-marine sedimentary rock unit of late Oligocene age. Typical exposures consist of gray-white, medium-grained, tuffaceous sandstone. Other exposures include claystones, bentonites, gritstones, and cobble to boulder fanglomerates to the east of Rock Mountain. A variety of well-preserved terrestrial vertebrates remains were salvaged from the Otay Formation within the EastLake community development. These fossil resources have provided significant scientific information about the climatic, geomorphologic, and biologic conditions at the time of deposition. The upper sandstone portion is considered to possess a high paleontological resource sensitivity.

#### San Diego Formation (Tsd)

Typical exposures of the San Diego formation, which thins from west to east, consist of yellowish gray, fine-grained, friable sandstone. The San Diego Formation, as exposed north of Telegraph Canyon, is well known for its rich fossiliferous beds and extremely important fossil remains of a variety of marine vertebrates and invertebrates. Rare remains of terrestrial mammals have been recovered from the deposits as have fossilized trees and

leaves. This formation is defined as highly sensitive because the rocks primarily produce vertebrate fossil remains or have the potential to produce such remains.

### Sweetwater Formation

The Sweetwater Formation is a nonmarine rock unit of late Eocene age (approximately 40-43 million years old (myo)). The Sweetwater Formation in the study area consists primarily of reddish-brown massive mudstones. In the Otay River valley, these mudstones become sandy and take on a greenish mottled color. The Sweetwater Formation mudstones were most likely deposited in a river channel setting. Some exposures of the formation may represent ancient soils. The best exposures are along the north side of the Otay River valley at the mouth of Wolf Canyon. The Sweetwater Formation can be considered to have a high paleontological sensitivity.

### Terrace Deposits

Deposits of coarse-grained gravelly sandstones, pebble and cobble conglomerates, and claystones have been mapped in the Otay River valley as unnamed river Terrace Deposits. The exact age of these deposits is presently uncertain, but they are clearly related to late Pleistocene climatic events. Elevated river Terrace Deposits are well exposed along both the northern and southern margins of the Otay River valley. A moderate sensitivity is assigned to Terrace Deposits because important vertebrate remains have been collected from at least one site north of the SPA Plan area near Bonita. Therefore, significant sites may be encountered within Terrace Deposits.

## **5.6.2 Thresholds of Significance**

According to Appendix G of the CEQA Guidelines, impacts to paleontological resources would be significant if the proposed project would:

Threshold 1: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Significant paleontological impacts would also occur pursuant to the Otay Ranch GDP Program EIR if the proposed action does not comply with the applicable mitigation measures established by the Otay Ranch GDP Program EIR. The mitigation measures established in the Otay Ranch GDP Program EIR include the requirement for a qualified paleontologist to monitor construction, recover and salvage any fossils discovered during grading, and prepare a summary report once monitoring is complete. These mitigation measures are incorporated into this section below.

### 5.6.3 Impact Analysis

Threshold 1: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Grading for the proposed SPA Plan project would not impact any known paleontological resources; proposed construction, however, may impact fossils potentially buried in the underlying formations. The occurrence of fossils within the covered bedrock cannot be evaluated prior to exposure. Areas of the Otay Formation with accumulations of colluvial and alluvial deposits in the drainage course bottoms, the San Diego Formation, the Sweetwater Formation, and Terrace Deposits may be exposed during grading and construction activities. The proposed grading of the Otay Formation sandstone, the San Diego Formation, and the Sweetwater Formation would move material with high sensitivity for paleontological resources. Grading within the Terrace Deposits would move material with moderate potential for paleontological resources. Exposure of these formations would likely result in the unearthing of fossil remains, which potentially could damage the fossils if they are not recovered and salvaged. Destruction of the paleontological resources from these formations would be a direct, long-term, potentially significant impact.

### 5.6.4 Level of Significance Prior to Mitigation

Grading for the proposed SPA Plan and the Composite TM for Village Two and the park within a portion of Village Four would not impact any known paleontological resources; proposed construction, however, may impact fossils potentially buried in the underlying formations. The occurrence of fossils within the covered bedrock cannot be evaluated prior to exposure. Areas of the Otay Formation with accumulations of colluvial and alluvial deposits in the drainage course bottoms, the San Diego Formation, the Sweetwater Formation, and Terrace Deposits may be exposed during grading and construction activities. The proposed grading of the Otay Formation sandstone, the San Diego Formation, and the Sweetwater Formation would move material with high sensitivity for paleontological resources. Exposure of these formations would likely result in the unearthing of fossil remains, which could damage the fossils if they were not recovered and salvaged. Destruction of the paleontological resources from these formations would be a direct, long-term, potentially significant impact.

### 5.6.5 Mitigation Measures

In accordance with the Otay Ranch GDP Program EIR, the following mitigation measure is required to implement of the proposed SPA Plan and the Composite TM:

- 5.6-1 Prior to approval of the grading permit, the applicant(s) shall incorporate into grading plans to the satisfaction of the City of Chula Vista's Engineer and Environmental Review Coordinator, the following:

- a) Prior to issuance of any grading permits, the applicant(s) shall confirm to the City of Chula Vista that a qualified paleontologist has been retained to carry out the following mitigation program. The paleontologist shall attend pregrade meetings to consult with grading and excavation contractors. (A qualified paleontologist is defined as an individual with a M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.)
- b) A paleontological monitor shall be on-site at all times during the original cutting of previously undisturbed sediments of highly sensitive geologic formations (i.e., Otay, Sweetwater, and San Diego Formations) to inspect cuts for contained fossils. The paleontological monitor shall work under the direction of a qualified paleontologist. The monitor shall be on-site on at least a half-time basis during the original cuts in deposits with a moderate resource sensitivity (i.e., Terrace Deposits). (A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials.)

In the event that fossils are discovered in unknown sensitive formations, it may be necessary to increase the per-day field monitoring time. Conversely, if fossils are not discovered, the monitoring may be reduced.

- c) When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In instances where recovery requires an extended salvage time, the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner. Where deemed appropriate by the paleontologist (or paleontological monitor), a screen-washing operation for small fossil remains shall be set up.
- d) Prepared fossils, along with copies of all pertinent field notes, photographs, and maps, shall be deposited (with the applicant(s) permission) in a scientific institution with paleontological collections. A final summary report shall be completed that outlines the results of the mitigation program. This report shall include discussion of the methods used, stratigraphy exposed, fossils collected, and significance of recovered fossils.

#### **5.6.6 Level of Significance After Mitigation**

Implementation of the above mitigation measure would reduce the impacts of the proposed SPA Plan and Composite TM to paleontological resources to below a level of significance.

## **5.7 Agriculture**

Section 3.7, Agricultural Resources, of the Otay Ranch GDP Program EIR analyzed the existing conditions, potential impacts, and mitigation measures related to agricultural resources for Otay Ranch. Implementation of the Otay Ranch GDP would result in significant cumulative effects on agricultural resources. The Otay Ranch GDP Program EIR includes a mitigation measure that requires the preparation of an agricultural plan as a condition of approval for future SPA Plans. However, even with this mitigation the permanent loss of agricultural land was determined to be a significant and unmitigable effect of the Otay Ranch GDP. The following discussion focuses on the project specific impacts to agricultural resources that would result with the development of the proposed SPA Plan and Composite TM.

### **5.7.1 Existing Conditions**

Historically, the SPA Plan area has been used for dry farming, as well as cattle and sheep grazing. Crop production has been limited to hay and grains due to limited water availability. Cultivation of wheat and barley continue as active uses on-site; however, cattle grazing is no longer occurring on the property. The Agricultural Management Map for Otay River, Jamul-Proctor Valley, and San Ysidro Mountains (Baldwin Vista 1989) delineates intensities of allowed agricultural use within Otay Ranch. According to this map, cultivation and cattle grazing activities are allowed on the SPA Plan property. There is no land current subject to the Williamson Act on the SPA Plan area property.

Land area historically used for agricultural production in the region has decreased with the conversion of farmland into urban uses. Although the proposed project site contains farmland of local importance, the high cost of importing water has become prohibitive for many agricultural activities.

#### **Soil Suitability for Agriculture**

The United States Department of Agriculture, Soil Conservation Service (SCS) publishes the Important Farmlands Inventory, which is used by the County in determining the location and significance of farmland countywide. The inventory designates separate agricultural categories based on the physical and chemical characteristics of the soil. These classifications (described below) were adapted for California agriculture by the California Department of Food and Agriculture in 1981. The California Department of Conservation established the Farmland Mapping and Monitoring Program (FMMP) in 1982, to carry on the Important Farmland mapping efforts initiated by SCS.

### *Prime Farmland*

Prime Farmland has the most favorable combination of physical and chemical features, enabling it to sustain long-term production of agricultural crops. Land with this designation possesses the soil quality, growing season, and moisture supply needed to produce sustained high yields. In order to qualify for this classification, the land must have produced irrigated crops at some point during the two update cycles prior to SCS mapping. The proposed SPA Plan area contains no land that has been designated Prime Farmland.

### *Farmland of Statewide Importance*

Farmland of Statewide Importance is similar to Prime Farmland; however, it possesses minor shortcomings, such as greater slopes and/or less ability to store moisture. In order to qualify for this classification, the land must have produced irrigated crops at some point during the two update cycles prior to SCS mapping. The proposed SPA Plan area contains no land that has been designated as Farmland of Statewide Importance.

### *Unique Farmland*

Unique Farmland is defined as farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date. The proposed SPA Plan area contains no land that has been designated Unique Farmland.

### *Farmland of Local Importance*

Farmland of Local Importance is important to the local agricultural economy, as determined by the County Board of Supervisors and a local advisory committee. The County defines Farmland of Local Importance as land with the same characteristics as Prime Farmland and Farmland of Statewide Importance. Approximately 858.8 acres of the proposed SPA Plan area are designated as Farmland of Local Importance.

### *Grazing Land*

Grazing Land is land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres. Approximately 321.7 acres of the proposed SPA Plan area are designated as Grazing Land.

*Urban and Built-Up Land*

This classification consists of land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes. Currently, there is no land designated as Urban and Built-Up Land in the SPA Plan area.

*Other Land*

Other Land consists of land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines; borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land that is greater than 40 acres and surrounded on all sides by urban development is mapped as Other Land. There are approximately 18.91 acres of land designated as Other Land in the SPA Plan area.

**5.7.2 Thresholds of Significance**

According to the CEQA Guidelines, Appendix G, impacts to agricultural resources would be significant if the proposed project:

- Threshold 1: Converts Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to nonagricultural use; and/or involves other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to nonagricultural use; or
- Threshold 2: Conflicts with existing zoning for agricultural use or a Williamson Act contract.

**5.7.3 Impacts**

Threshold 1: Converts Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use; and/or involves other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to nonagricultural use

The proposed SPA Plan would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use, as shown on the maps prepared pursuant to the FMMP of the California Resources Agency. Implementation of the proposed SPA Plan

would, however, convert approximately 858.8 acres of Farmland of Local Importance and 321.72 acres of Grazing Land to urban uses resulting in a countywide incremental loss of agricultural land.

The loss of agricultural land within the county and land suitable for the potential production of coastal-dependent crops would result in a significant impact. However, the proposed SPA Plan property has not been used for these crops because of the lack of a reliable and affordable source of water. Nevertheless, the proposed project will contribute to an incremental loss of grazing land, which would result in a significant impact on the environment.

Once fully developed, the proposed SPA Plan would eliminate all agricultural activity that occurs on-site; however, portions of the project site may continue to be used for grazing and/or barley production while adjacent uses are developed. Additionally, continuing agricultural activities on surrounding property in the vicinity of the SPA Plan could adversely affect SPA Plan uses because of noise, odor, rodents, and chemical applications. The incompatibility of land uses was identified as a short-term impact in the Otay Ranch GDP Program EIR, and the preparation of an Agricultural Plan was identified as mitigation to reduce the impact to below a level of significance.

An Agricultural Plan has been prepared as part of the SPA Plan in accordance with the mitigation identified in the Otay Ranch GDP Program EIR. This plan is intended to allow for interim agricultural activity and to prevent potential for a land use impacts between developed land and ongoing agricultural activities by providing separation between urban uses and adjacent agricultural uses. The Agriculture Plan includes a requirement for notification of adjacent property owners of pesticide use and other potentially harmful activities, as well as physical barriers, if warranted.

Threshold 2: Conflicts with existing zoning for agricultural use or a Williamson Act contract

The proposed SPA Plan will not affect Williamson Act contract lands, or result in changes that will lead to the conversion of other off-site agricultural lands.

#### **5.7.4 Summary of Significance Prior to Mitigation**

Development of the SPA Plan and the Composite TM would result in a significant impact to agricultural resources, due to the loss of 858.8 acres of Farmland of Local Importance and the conversion of 321.72 acres of Grazing Land to urban uses. The loss of this acreage would result in a significant unavoidable impact due to the incremental and irreversible loss or impairment of Farmland of Local Importance and Grazing Land. This was previously addressed in the Otay Ranch GDP Program EIR and was determined to be significant and not fully mitigated. At that time, a statement of overriding considerations was adopted for

this impact. Furthermore, noise, odors, insects, rodents, and chemicals associated with agricultural operations would create indirect, short-term, potentially significant impacts between the agricultural uses and urban uses.

#### **5.7.5 Mitigation Measures**

The following mitigation measure has been identified for the SPA Plan and the Composite TM to reduce the potentially significant, short-term impacts caused by adjacency of ongoing agricultural uses and urban uses:

5.7-1 The Agricultural Plan included in the SPA Plan shall be implemented as development proceeds in the proposed SPA Plan area. The following measures shall be implemented by the developer(s) to the satisfaction of the City of Chula Vista's Director of Planning and Building:

- a) A 200-foot buffer between developed property and ongoing agriculture operations shall be maintained. The use of pesticides shall comply with federal, state, and local regulations;
- b) Vegetation shall be used to shield adjacent urban development (within 400 feet) from agriculture activities where pesticides are to be applied;
- c) Notification shall be given to adjacent property owners of potential pesticide application through newspaper advertisements; and
- d) Fencing shall be installed, where necessary, to ensure the safety of the SPA Plan area residents.

#### **5.7.6 Summary of Significance After Mitigation**

Implementation of the Agricultural Plan would reduce short-term significant impacts between urban uses and agricultural operations to below a level of significance. However, the incremental and cumulative loss of agricultural lands, which was considered a significant impact in the Otay Ranch GDP Program EIR, remains significant, and no mitigation measures are available to reduce this impact to below a level of significance. This incremental loss remains significant and unmitigated. Approval of the proposed SPA Plan project will, therefore, require the adoption of a statement of overriding considerations.

## **5.8 Housing and Population**

The Otay Ranch GDP Program EIR analyzed the potential for implementation of the Otay Ranch GDP to result in population and housing in the context of growth inducement. The Otay Ranch GDP Program EIR addressed the Otay Ranch development's growth-inducing effect on population, housing, and employment opportunities, and the impact it would have on public facilities and utilities. Mitigation introduced for this impact in the Otay Ranch GDP Program EIR involves the provision of adequate facilities, which would accommodate the growth provided. The analysis and discussion of population and housing issues from the Otay Ranch GDP Program EIR is hereby incorporated by reference.

The following discussion summarizes existing conditions related to population and housing for the SPA Plan area. Population and housing are discussed in a city-wide context; therefore, the following description of existing conditions applies to the entire SPA Plan area.

### **5.8.1 Existing Conditions**

#### **Housing and Population**

The total number of housing units in the city, as of January 1, 2005, was 73,305 (San Diego Association of Governments (SANDAG) 2005). Between 2000 and 2005, approximately 13,810 dwelling units, an increase of 18.8 percent, were added to the housing stock in the city. A total of 23,483 dwelling units were approved under the adopted Otay Ranch GDP, as analyzed in the Otay Ranch GDP Program EIR.

The total population of the city, as of January 1, 2005, was 217,543 (SANDAG 2005). Chula Vista grew by approximately 20.2 percent, or 43,987 persons, from 2000 to 2005. Buildout of the entire Otay Ranch GDP will result in an additional estimated population of 68,027 persons. The Otay Ranch GDP based this population estimate on a population generation factor of 2.88 persons per dwelling unit.

SANDAG has projected that from 2000 to 2030, the city's population will increase by 60 percent. It is also projected that civilian employment will increase by 48 percent within the same time frame, and housing units will increase from 2000 to 2030, by 47 percent (SANDAG 2005).

#### **Plans and Policies**

The City's Housing Element contains the following objectives, which are applicable to the proposed SPA Plan:

- Achievement of a balanced residential community through the integration of low- and moderate-income housing throughout the City and the adequate dispersal of such housing to preclude establishment of specific low-income enclaves; and
- The Affordable Housing Policy shall require a minimum of 10 percent of each housing development to be affordable to low- and moderate-income households, with at least one-half of those units (5 percent of project total units) being designated for low-income households.

The Housing Element also includes Affordable Housing Program Implementation Guidelines that offer flexibility in meeting affordable housing goals by considering alternatives to actual developer built-in production. These alternatives include land set-asides, off-site projects, and in-lieu contributions.

The proposed SPA Plan area is designated in the Otay Ranch GDP as an Urban Village, planned for transit-oriented development. The Otay Ranch GDP planned for the SPA Plan area with corresponding services and infrastructure to support the community. Additionally, the Otay Ranch GDP established a five-year objective that requires each village to proportionately assist the City to meet or exceed Otay Ranch's share of the five-year regional allocation as provided by SANDAG and codified in the City's Housing Element. The Otay Ranch GDP requires that prior to or concurrent with the approval of a SPA Plan, a housing plan shall be approved that addresses the type and location of housing to be provided pursuant to the regional share allocation.

In addition, SANDAG has adopted a series of plans and policies to address regional growth within the county. One of the projects adopted by SANDAG is the Regional Transportation Plan, which includes SANDAG's Growth Management Plan. The Growth Management Plan incorporates population, housing, and transportation forecasts. Particularly, the forecasts have identified specific projections for the city. The Growth Management Plan stresses maintaining a prosperous economy while providing an adequate and equitable transportation system, preserving open space and habitat, increasing the rate of home ownership, and reforming the state-local tax system to assist and sustain all of the above. SANDAG encourages compliance with a transit design that promotes pedestrian activity and interconnected public transportation through buses and trolleys.

The City of Chula Vista's Growth Management Ordinance contains 11 quality-of-life standards. These standards—which address traffic, police and fire services, park facilities, schools, libraries, sewers and storm drainage, air quality, water availability, and fiscal health—are evaluated at the time any new development project is proposed to make sure that the project will comply with the standards.

### 5.8.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, impacts to housing and population would be significant if the proposed project:

Threshold 1: Induces substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure); or

Threshold 2: Displaces substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere.

### 5.8.3 Impacts

Threshold 1: Induces substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

The proposed project has a projected number of housing units of 2,786 homes. The project does not extend roads or other infrastructure to unserved areas, apart from the project area itself. The Otay Ranch GDP allocates 2,510 homes to this area of Otay Ranch. This proposed project, therefore, represents an increase in housing over the Otay Ranch GDP of 267 units.

Using the generation rate of 3.036 used in the SPA Plan, the population for the proposed 2,786 homes would be 8,458 people. The population expected from the Otay Ranch GDP, using the same generation rate, would be 7,621 people, for an increase in the projected population of the proposed SPA Plan of 837 people. SANDAG has forecasted that the city will increase by approximately 70,776 people in 2010. This forecast is based on the 1989 General Plan, which considers the potential for approximately 6,000 people at the proposed project site. While the proposed SPA Plan project represents an approximately 11.9 percent of the total population increase forecast for the city (8,458 is 11.9 percent of 70,776), it is only an increase of 0.01 percent over the adopted forecast condition (837 is 0.01 percent of 70,776).

Because the proposed SPA Plan would result in an increase in population of 0.01 percent over the Otay Ranch GDP, it is not considered substantial, and therefore, does not represent substantial population growth or a significant direct impact on the environment. Currently, services are not provided to this site, however, they are planned for in this location with development. Because the proposed SPA Plan does not propose the extension of services than what was already planned for, it does not represent a significant indirect growth impact.

Threshold 2: Displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere.

There currently are no residents or existing housing on the proposed project site. As such, the SPA Plan project will not displace substantial numbers of existing housing or people necessitating the construction of replacement housing elsewhere.

The SPA Plan includes an Affordable Housing Plan. Under this plan, the proposed project would provide 10 percent of the total residential units as affordable units. This constitutes 278 affordable units, half of which are designated as low-income housing and half as moderate-income housing. The proposed 10 percent affordable housing is consistent with the objectives of the City's Housing Element and the Otay Ranch GDP requirements.

As discussed above in Section 5.8.1, Existing Conditions, SANDAG has adopted the Regional Transportation Plan which addresses regional growth within the county and includes SANDAG's Growth Management Plan. The Growth Management Plan promotes increased land use intensities in those areas that have the best transit access, as well as in the region's traditional community and city centers. In addition, SANDAG encourages local jurisdictions to include more mixed uses (office-residential-retail) near transit, and to include residential uses in or near large employment areas, particularly those that are not well-served by transit. The proposed SPA Plan implements the goals of the Growth Management Plan by establishing a pedestrian and transit-oriented village with an intense urban core to reduce reliance on the automobile and promote walking and the use of bicycles, buses, and regional transit.

#### **5.8.4 Level of Significance Prior to Mitigation**

The Otay Ranch GDP planned for the development of the SPA Plan area as well as corresponding services and infrastructure to support the community. The proposed SPA Plan would only result in an increase in population of 0.01 percent over the adopted Otay Ranch GDP. This increase would not result in a substantial change, therefore, it does not represent substantial population growth or a significant direct impact on the environment. The proposed SPA Plan would not displace substantial numbers of existing housing or people necessitating the construction of replacement housing elsewhere. Therefore, no significant impacts on the environment would result.

#### **5.8.5 Mitigation Measures**

Because no significant housing or population impacts were identified for the proposed SPA Plan or the Composite TM, no mitigation measures are required.

### **5.8.6 Level of Significance After Mitigation**

No significant housing and population impacts were identified for the proposed SPA Plan or the Composite TM.

## **5.9 Water Resources and Water Quality**

The Otay Ranch GDP Program EIR analyzed the existing conditions, concluded that implementation of the GDP would result in significant environmental effects on water resources and water quality, and provided mitigation measures to reduce these impacts to below a level of significance. The following discussion includes a more detailed analysis of SPA-level impacts based on the Master Drainage Study for Otay Ranch SPA Villages 2, 3, and 4 (Hunsaker and Associates, July 14, 2005) and the Water Quality Technical Report for Otay Ranch Villages 2, 3, and 4 (Hunsaker and Associates, October 28, 2005) and are included as part of this EIR (Appendixes E-1 and E-2). Groundwater conditions were evaluated in the geotechnical reconnaissance and are discussed below (see Appendixes D-1, D-2, and D-3).

### **5.9.1 Existing Conditions**

#### **Surface Water and Hydrological Setting**

The project area is located in the southwestern portion of the San Diego Basin. The San Diego Basin has been divided into 11 hydrographic units and 54 hydrographic subunits, which are based primarily on surface water drainage basins (RWQCB 1975). The proposed SPA Plan area is located within the Otay Hydrographic Subunit of the Otay Hydrographic Unit.

Surface water in the Otay Hydrographic Subunit downstream from Otay Lakes is ephemeral (temporary) and generally found in man-made ponds. According to the Otay Ranch GDP Program EIR, the RWQCB rates the surface water in the subunit as having beneficial uses for agriculture, non-contact recreational sport, wildlife, rare and endangered species, and potential beneficial uses for industry.

The landscape of the project area is predominantly rolling hills with arroyos draining to canyons that flow west and south away from the Otay Reservoir basin. The natural drainage basin for the SPA Plan vicinity is a combination of three subbasins that drain directly into Poggi Canyon to the north, Wolf Canyon to the south of Village Two, and from the Otay Valley Road watershed which drains into unnamed tributaries of the Otay River. Drainage from the northern portion of the Village Two area of the SPA Plan converges into Poggi Canyon, while the southern portion of the Village Two and the northern portion of Village Four property drain to Wolf Canyon Creek. The Village Three portion of the SPA Plan drains to unnamed tributaries of the Otay River. Ultimately all discharges drain into the Otay River approximately 765 feet from the southernmost point of the SPA Plan property. Figure 5.9-1 shows the existing drainage conditions of the SPA Plan area.

Map Source: Hunsaker and Associates, Inc., 2005

### LEGEND

- WATERSHED BOUNDARY
- - - SUBAREA BOUNDARY
- FLOWLINE
- POGGI CANYON WATERSHED
- WOLF CANYON WATERSHED
- OTAY RIVER WATERSHED
- CITY OF CHULA VISTA BOUNDARY
- SPA PLAN BOUNDARY

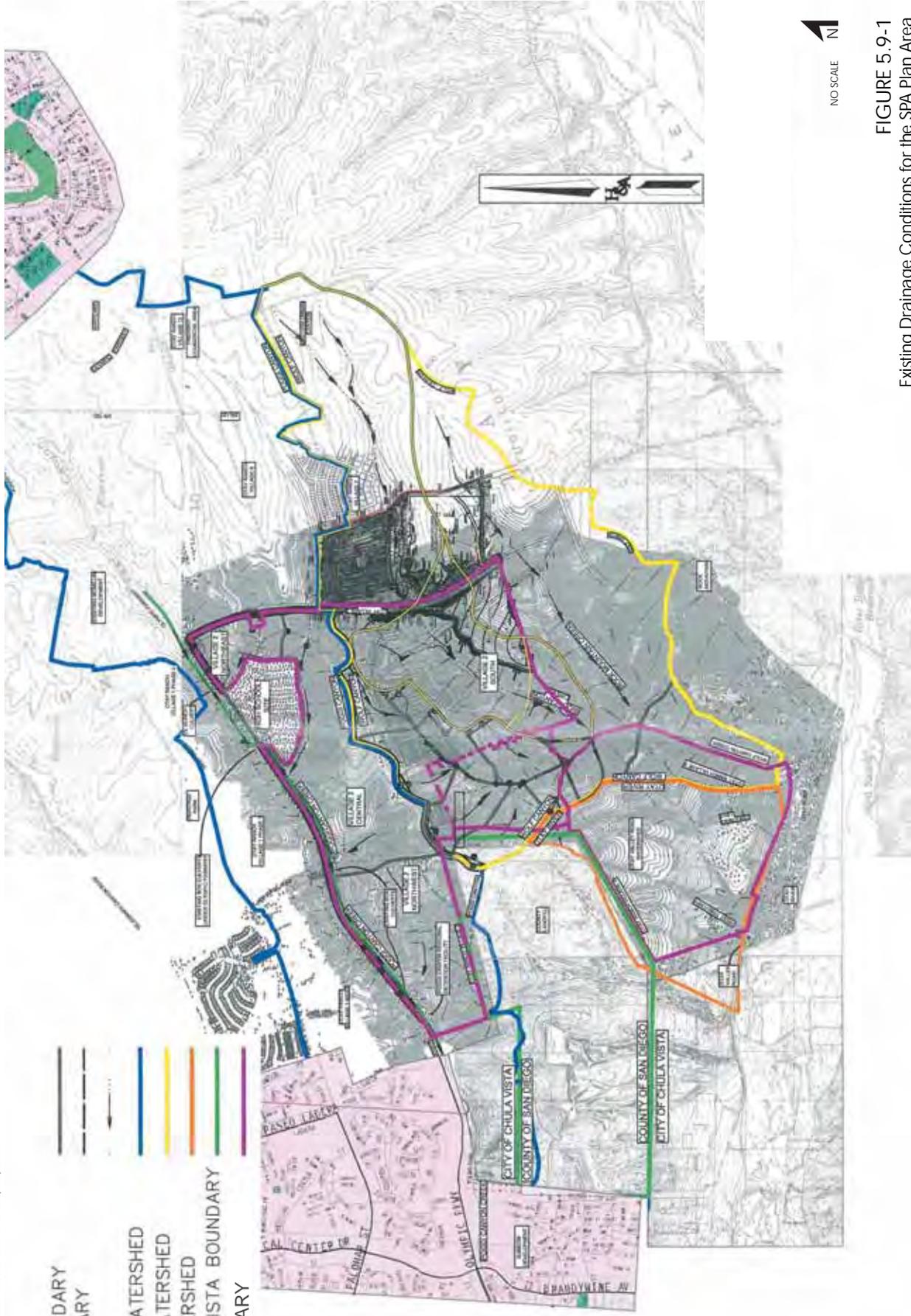


FIGURE 5.9-1  
Existing Drainage Conditions for the SPA Plan Area

### *Poggi Canyon*

The constructed Poggi Canyon Creek channel runs along the north side of Olympic Parkway and then crosses under Olympic Parkway at the southern boundary of Village One, near the northwest corner of the existing high school, where it runs along the northern boundary of Village Two (see Figure 5.9-1). Combined runoff, from existing development to the north and east, flows in a westerly direction via the constructed channel on the north side of Olympic Parkway through Otay Ranch Village One. Flows from the northeastern portion of Village Two (south of Olympic Parkway) are conveyed to this channel via a 48-inch RCP. (see Figure 5.9-1). Runoff from the existing high school site confluences with runoff in Poggi Canyon Creek at the downstream headwall south of Olympic Parkway. Between the high school site and Heritage Road, this runoff is combined with runoff from the undeveloped Village Two site from the south and conveyed via an existing trapezoidal channel.

The combined runoff from Village One and the undeveloped Village Two flows under the proposed entrance road (Street D) and into the existing Poggi Canyon Regional Detention Facility. This detention basin is located on the west side of Village Two West adjacent to Olympic Parkway (see Figure 5.9-1). The Poggi Canyon Creek contains several drop structures and energy dissipater devices along its path, which were designed to keep volumes under control and reduce erosion. The existing detention facility was designed to mitigate the 100-year developed condition peak flow rate in Poggi Canyon below the pre-developed 100-year peak flow. Per the October 14, 1999 Master Drainage Study for Poggi Canyon Creek, the pre-developed 100-year flow at the detention basin location was determined to be roughly 1,300 cubic feet per second (cfs). Thus, the basin must mitigate developed condition peak flowrates to 1,300 cfs or less.

### *Wolf Canyon*

The Wolf Canyon watershed is characterized by rolling hills and heavily grazed land. The Wolf Canyon area east of the proposed extension of La Media (south of Birch Parkway) will consist of the Otay Ranch Village Seven development, which is currently under construction, and the proposed Eastern Urban Center.

Wolf Canyon's main drainage course forms the southern and eastern boundary of Village Two and the northern boundary for the Village Four park site. A large tributary confluences with Wolf Canyon Creek near the downstream limit of Village Two. A significant portion of the undeveloped Village Two property drains to this tributary while the remainder drains directly to Wolf Canyon Creek. Following the confluence, the creek flows in a southerly direction just east of the Village Three property where it discharges runoff to the Otay River south of the project site.

### *Otay Valley Road Watershed*

Runoff from the Village Three property drains to one of the two unnamed tributaries of the Otay River. Both of these tributaries are located west of the confluence of Wolf Canyon and the Otay River. There is no development within this watershed area.

### Groundwater Hydrogeology

Groundwater occurs in all sedimentary units and the various surficial deposits present on Otay Ranch. Regional groundwater flow is generally from east to west while the direction of local groundwater flow is controlled by the orientation of the drainage basins and topography. The quantity and quality of groundwater varies according to the permeability of the geologic formation and local topography. Permeability rates within the Otay Valley parcel are greatest in the Otay River valley. Groundwater recharge occurs in upland areas with springs, which is most common in the mountainous regions.

Groundwater conditions were observed in the SPA Plan area to be variable. Groundwater seepage was observed on the Village Two portion of the SPA Plan in some exploratory borings at depths varying from 42 to 63 feet. There was no groundwater seepage or springs observed on the Village Three portion of the SPA Plan area, however there is a possibility of water seepage under certain conditions. Shallow, perched groundwater may be encountered particularly in the drainage courses. Changes in rainfall or site drainage could produce other areas of locally perched groundwater within the soils underlying the site.

### Groundwater Quality

The Otay Hydrographic Unit contains groundwater that is rated generally poor to very poor due to high levels of total dissolved solids. According to the Otay Ranch GDP Program EIR, the groundwater in the project area contains sodium-calcium chloride, and samples from both Poggi Canyon to the north and Otay Valley to the south exceed federal secondary drinking water standards. This situation is caused, in part, from the higher salt concentrations in imported water used for irrigation. Water containing dissolved salts entrapped at the time the sedimentary rocks were deposited also contributes to the groundwater composition and quality.

### **5.9.2 Thresholds of Significance**

Based on Appendix G of the CEQA guidelines, impacts to hydrology and water quality would be significant if the proposed project:

Threshold 1: Substantially alters the existing drainage pattern of the site or area, in a manner which would result in substantial erosion or siltation or substantially increases the rate or amount of surface runoff in a manner which would

result in flooding or which would exceed the capacity of existing or planned storm water drainage systems or provides substantial additional sources of polluted runoff or otherwise substantially degrades water quality;

- Threshold 2: Violates any water quality standards or waste discharge requirements, including City of Chula Vista Engineering Standards for storm water flows and volumes;
- Threshold 3: Substantially depletes groundwater or interferes substantially with groundwater recharge;
- Threshold 4: Alters an existing 100-year floodplain or places structures within a 100-year flood hazard area which would impede or redirect flood flows; and
- Threshold 5: Exposes people or structures to a significant risk of loss, injury, or death involving flooding, and/or exposes people or structures to inundation by seiche, tsunami, or mudflow.

### 5.9.3 Impacts

Threshold 1: Substantially alter the existing drainage pattern of the site or area, in a manner which would result in substantial erosion or siltation or substantially increases the rate or amount of surface runoff in a manner which would result in flooding or which would exceed the capacity of existing or planned storm water drainage systems or provides substantial additional sources of polluted runoff or otherwise substantially degrades water quality

The overall drainage on-site, which divides between Poggi Canyon and Wolf Canyon, would vary slightly as compared to existing conditions. Figure 5.9-2 shows the proposed drainage plan under the developed condition of the SPA Plan and surrounding area. Runoff from the developed portion of Village Two would be directed toward either Poggi or Wolf Canyon Creeks via internal storm drain systems. Runoff to Poggi Canyon would be routed through the existing Poggi Canyon Regional Detention Facility. After slight modification to the detention basin (raising of the berm), the 100-year developed peak flows for the Poggi Canyon Detention Basin would be 1,115 cfs with development of the proposed project. This is less than the pre-developed condition of 1,320 cfs for 100-year peak flows for the Poggi Canyon Detention Basin. Therefore, the Poggi Canyon Regional Detention Facility would attenuate the 100-year developed peak flow.

The majority of runoff to Wolf Canyon would be routed through a proposed detention basin located in an unnamed tributary just upstream of its confluence with Wolf Canyon Creek and just south of the proposed development in Village Two. This basin would primarily act as a detention facility but would also provide secondary water quality treatment in the bottom two



feet of the basin. The construction of the proposed detention basin would require prior approval from the Regional Water Quality Control Board and shall be accessible to maintenance equipment.

All runoff from the industrial park in Village Three would be routed via storm drain to the intersection of Heritage Road and Main Street (referred to in the Master Drainage Study as Otay Valley Road). From that point, the storm drain would extend along Main Street to a proposed detention basin, which would be located just north of Main Street. The water quality treatment would take place in a separate chamber to prevent mixing of flow. A diversion structure would direct the 85<sup>th</sup> percentile flow to the water quality basin while allowing all flow in excess of this amount to proceed to the detention facility. Outflows from this basin would discharge directly to the Otay River south of Main Street. Table 5.9-1 summarizes the 100-year pre- and post-development flow results for the detention facilities within the proposed project.

**TABLE 5.9-1  
SUMMARY OF PRE- VS. POST-DEVELOPMENT FLOW**

Location	Pre-Development Drainage Area (acres)	Existing Condition 100- Year Peak Flow (cfs)	Developed Drainage Area (acres)	Routed Outflow	Freeboard
Poggi Canyon Detention Basin Outflow*	2,070	1,320	2,093 (+23)	1,115 (-205)	1.5
Wolf Canyon (from Village 2 site only) at detention site†	227	330	247 (+20)	187 (-143)	2.01
Otay River (Village 3 site only)‡	324	823	379 (+55)	375 (-448)	3.99

\*Pre-development Poggi Canyon data taken from "Master Drainage Study for Poggi Canyon Creek," dated October 1999; 30-acre diversion from grading subsequent to 1999 study preparation.

†Composite Wolf Canyon analysis to be provided at final engineering phase; 41-acre diversion to unnamed tributary from other portion of existing Wolf Canyon watershed (diversion is internal and not from out of the basin).

‡Diversion from Wolf Canyon watershed.

As discussed above, the detention facilities in Poggi Canyon, Wolf Canyon, and the Otay Valley Road watershed are projected to maintain the 100-year peak flow rates below the pre-developed 100-year peak flow rates at the watershed outlet locations. Thus, the project will control the rate of on-site, post-development peak storm water runoff discharges.

Threshold 2: Violates any water quality standards or waste discharge requirements, including City of Chula Vista Engineering Standards for storm water flows and volumes

In the short term, site preparation and grading, including clearing, trenching, and other earthwork, will generate sediment that could affect water quality. To reduce the impacts to water quality, construction activities will have to comply with all applicable regulations established by the U.S. Environmental Protection Agency as set forth in the NPDES permit requirements for urban runoff and storm water discharge. Compliance with NPDES includes meeting the requirements of the General Permit for Stormwater Discharges Associated with Construction Activity (General Construction Permit). In order to be covered under the General Construction Permit, a Notice of Intent must be filed with the RWQCB. Compliance with the permit requires that a storm water pollution prevention plan be prepared and implemented for the project. Best management practices (BMPs), design, treatment, and monitoring for storm water quality must be addressed with respect to municipal and construction permits. The project is also subject to the requirements of RWQCB NPDES Permit No. CA 0108758, which consists of wastewater discharge requirements for storm water and urban runoff, including BMPs for storm water pollution control and the Municipal Water Storm Water Permit (Municipal Permit) adopted by the RWQCB on February 21, 2001 (RWQCB Order No. 2001-01, NPDES No. CAS0108758). The proposed project is within the priority category of “home subdivisions of 100 housing units or more” established by the Municipal Permit. The Municipal Permit requires new developments in this priority development category to treat, infiltrate, or filter an amount of runoff from the development site based on numeric sizing criteria described in the permit.

The Municipal Permit requires the development and implementation of a program addressing urban runoff pollution issues in development planning for public and private projects. The City of Chula Vista developed the Development and Redevelopment Projects Storm Water Management Standards Requirements Manual (Manual) in November 26, 2002 to address these urban runoff pollution issues. The Manual provides information to applicants for development, redevelopment, and public projects processed through the City on how to comply with permanent and construction storm water requirements. The Manual guides project applicants through the selection, design, and incorporation of storm water BMPs into their projects. The Manual includes the Standard Urban Stormwater Mitigation Plan (SUSMP), which was developed by the City of Chula Vista to address post-construction urban runoff pollution from new development and redevelopment projects meeting the “priority project” classifications. The goal of the SUSMP is to develop and implement policies to ensure to the maximum extent practicable that development does not increase pollutant loads from a project site and considers urban runoff flow rates and velocities. This goal may be achieved through site-specific controls and/or drainage area-based or shared structural treatment controls. The City of Chula Vista developed the SUSMP to identify appropriate BMPs for certain designated project types to achieve this goal. Under the SUSMP, the City of Chula Vista will approve the SUSMP project plan(s) as part of the development plan approval process for discretionary projects, and prior to issuing

permits for ministerial projects. The proposed SPA Plan project is classified as a Priority Project and are subject to the City's Storm Water BMP requirements and the City's Storm Water Management Manual and the SUSMP.

The potential for urban pollutants accumulating in surface runoff would increase with development of the SPA Plan, particularly from streets and parking lots associated with commercial uses, schools, and CPFs. Accumulated hydrocarbons such as fuels, solvents, oils, and grease originate from leaking automobile fluids and atmospheric deposition of airborne pollutants on the pavement would be collected in runoff flowing over these areas. Previous agricultural activities on the SPA Plan project site (i.e., non-irrigated barley productions and cattle grazing, as discussed in Section 5.7, Agricultural Resources) have used herbicides and pesticides, and runoff from the site may contain these pollutants. These activities may also affect sediment transport at the project site. Since runoff from the site is not currently treated, water treatments that would occur as mitigation for the proposed development of the site in accordance with the SPA Plan may offer improvements over existing water quality conditions. The greatest concentration of urban-derived pollutants would be expected to occur during the early stages (typically the first 0.5 inch) of a rainfall or runoff event. This "first flush" contains the highest concentration of contaminants that are washed from roadways, roofs, curbs, and parking lots. Uncontrolled discharge of pollutants long term with "first flush" events would have a direct potentially significant impact.

In order to terminate coverage under the General Construction Permit, a Notice of Termination must be submitted and a Post-Construction Storm Water Management Plan must be prepared for the RWQCB. The Post-Construction Storm Water Management Plan requires that permanent BMPs be established to prevent the discharge of sediment and other pollutants in storm water runoff from the completed project. Appropriate non-structural and structural BMPs, such as homeowner education, homeowner covenants, conditions, restrictions, street sweeping, off-line treatment units, stenciled inlets, landscaping, grass-lined swales, in-line storm water treatment units(s), vegetation-lined channels, and detention (for erosion prevention) will be included in the proposed project's development. Typical post-development BMPs to treat water quality are concerned with nuisance water and first flush events. The BMPs for the project will be sized to handle the volume of runoff produced from a 85<sup>th</sup> percentile 24-hour rainfall event, or if flow based BMPs are used, they would be designed to handle the maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour, as is required by the Municipal Permit for San Diego (San Diego RWQCB, Order No. 2001-01, NPDES No. CAS018758).

Prior to downstream discharge, the 85<sup>th</sup> percentile runoff will be treated in a Vortechs separation system, which will remove a high percentage of trash, debris, and sediment conveyed in the storm water. Following primary treatment in the Vortechs unit, the first one-third of the 85<sup>th</sup> percentile flow will be treated in a StormFilter treatment unit. This secondary treatment BMP will provide additional treatment for nutrients, heavy metals, and other

colloidal pollutants. Flows in excess of the 85<sup>th</sup> percentile flow will bypass the treatment system and proceed downstream.

Alternative BMPs including extended detention basins, infiltration basins, wet ponds, media filter, grassy swales and drainage inserts were evaluated by Hunsaker & Associates. However, due to space constraints, soil conditions, cost, groundwater contamination, vector issues, and treatment efficiency, the combination of Vortech and StormFilter treatment units were deemed to be the most effective and feasible for the proposed development. In addition, using the Vortech and StormFilter treatment units reduce the lifetime of the cartridges inside the StormFilter units, since the Vortech unit will filter trash and debris. However, if the space constraints within the proposed development were to be resolved, grassy swales could be used for secondary treatment in lieu of the StormFilter units.

The proposed project would direct runoff to three detention facilities located in Poggi Canyon, Wolf Canyon, and Otay Valley Road. In all three cases, the detention facilities reduce the developed design peak flows to below the pre-development levels and provide water quality treatment. The Otay River basin would provide primary treatment of the 85<sup>th</sup> percentile flow. Areas draining to the Wolf Canyon and Poggi Canyon basins would receive primary treatment in the proposed Vortech units, while the detention basins would provide secondary treatment. Temporary desilting basins are included in the plans to control runoff during construction. These temporary basins will be maintained as long as required prior to site development.

Tentative Maps are not being proposed for the Village Three portion of the SPA Plan area. Therefore, additional drainage studies for Village Three would be required at the tentative map phase to confirm that the proposed on-site storm drain systems fully mitigate drainage impacts and meet the City's standards and requirements. Both the future land development construction drawings and associated reports will be required to include details, notes, and discussions relative to the required or recommended BMPs. With these controls included as part of the project, water quality impacts are not considered significant. A drainage study is required as part of mitigation to ensure that these measures are adequately completed.

Threshold 3: Substantially depletes groundwater or interferes substantially with groundwater recharge

Groundwater was observed at depths varying from 42 to 63 feet at Village Two, and in the upper five feet of areas in Village Three. The proposed development of the SPA Plan would increase the amount of impermeable surfaces, which would result in increased runoff and reduced on-site water percolation. The effects of reduced percolation would be limited to the SPA Plan property because locally the groundwater is perched and flows laterally rather than into a regional groundwater table. While grading at the proposed SPA Plan site would result in shifts in the direction of groundwater flow on the micro-scale, the overall flow of groundwater would not change as a result of the project. The Otay River valley is the

principal aquifer within the Otay Valley parcel and would ultimately receive the additional runoff to replenish groundwater in addition to the existing basin discharge. Therefore, no significant impacts to groundwater quantity are anticipated.

Although the increased exposure to urban pollutants could affect the quality of water recharging groundwater, filtering would occur during percolation. Furthermore, the SPA Plan area has not been identified as a source of significant groundwater recharge. In addition, the existing groundwater is already rated as poor quality throughout the drainage basin with limitations on current uses. Therefore, no significant impacts to groundwater quality are anticipated.

Threshold 4: Alters an existing 100-year floodplain or places structures within a 100-year flood hazard area which would impede or redirect flood flows;

The proposed SPA Plan would not alter an existing 100-year floodplain or place structures within a 100-year flood hazard area, therefore, no impacts would occur.

Threshold 5: Exposes people or structures to a significant risk of loss, injury, or death involving flooding, and/or exposes people or structures to inundation by seiche, tsunami, or mudflow.

As discussed in Section 5.5, Geology and Soils, tsunamis, seiches, and earthquake-induced flooding are not expected to occur on the project site given its distance inland and elevation above the Otay Reservoirs.

#### **5.9.4 Summary of Significance Prior to Mitigation**

The proposed SPA Plan and Composite Tentative Map for Village Two and the park within a portion of Village Four would convert an existing undeveloped site to an urban landscape with multiple land uses. In doing so, impermeable surfaces would be introduced to the project site, as well as new pollutant sources, such as automobiles and household products. Impermeable surfaces would decrease the amount of infiltration occurring at the project site and would lead to increased runoff rates and the potential for pollutants to be introduced to water sources. Therefore, the proposed SPA Plan and Composite Tentative Map for Village Two and the park within a portion of Village Four has the potential to contribute to significant water quality impacts. Drainage at the site would be altered to direct stormwater runoff into the municipal storm drain system.

#### **5.9.5 Mitigation Measures**

The following mitigation measures identified for the proposed SPA Plan and Composite TM would reduce potentially significant impacts to below a level of significance.

- 5.9-1 Prior to issuance of each grading permit, a detailed drainage system design study shall be prepared to the satisfaction of the City Engineer and shall include but not be limited to:
- a) Peak runoff at each inlet, outlet, interceptor, concentration, or confluence point, both predevelopment and postdevelopment conditions;
  - b) The integration of the proposed system with the existing and proposed downstream drainage facilities to effectively control flows within the entire system; and
  - c) Maps showing existing and postdevelopment conditions for existing topography and proposed grading plans incorporating a drainage system design with main lines and detention/desilting facilities pursuant to Section 3-202.1 of the Chula Vista Subdivision Manual; and on-site detention/desilting facilities shall be incorporated in the design for the various phases of construction and postconstruction.
- 5.9-2 Prior to the issuance of the first grading permit, the applicant(s) shall submit a SWPPP including assignment of maintenance responsibilities for review and approval by the City Engineer and the Director of Public Works. The SWPPP shall be consistent and fully comply with the requirements of the Clean Water Act and all requirements set forth in the General Construction Permit; the City of Chula Vista Storm Water Management and Discharge Control Ordinance (Storm Water Management Ordinance), the City of Chula Vista Standard Urban Stormwater Management Plan (SUSMP), and the City of Chula Vista Development and Redevelopment Projects Storm Water Management Standards Requirements Manual (Storm Water Management Manual). BMPs identified in the SWPPP shall include but shall not be limited to the following:
- a) Temporary erosion control measures designed in accordance with the City of Chula Vista Grading Ordinance shall be employed for disturbed areas and shown on the grading plans.
  - b) No disturbed surfaces shall be left without erosion control measures in place during the winter and spring months.
  - c) Sediment will be retained on-site by a system of sediment basins, traps, or other appropriate measures, and shown on the grading plans.
  - d) Silt and oil and other contaminants will be prevented from entering the storm drain system or removed from the system, by a means acceptable to the City Engineer. Storm drain inlets shall be labeled "No Dumping–Drains to Ocean."

- e) All parking lots shall be designed to allow storm water runoff to be directed to vegetative filter strips or oil-water separators to control sediment, oil, and other contaminants.
- f) Permanent energy dissipaters will be included for drainage outlets.
- g) A combination of on-site structural and non-structural BMPs for the treatment of urban pollutants in compliance with the Municipal Permit.

5.9-3 Prior to the issuance of all subsequent permits and approvals associated with the project including but not limited to improvement plan approvals, construction permits, site plan approvals, design review approvals, conditional use permits, grading permits, the applicant of such permits, and/or approvals shall comply with the Clean Water Act, the Municipal permit, the General Construction Permit, and the Storm Water Management Ordinance and submit a SWPPP prior to the issuance of such permits and/or approvals in compliance with the City's Storm Water Management Manual and the SUSMP.

#### **5.9.6 Summary of Significance After Mitigation**

Implementation of the above mitigation measures would reduce impacts to surface water hydrology and water quality below a level of significance. No impacts to groundwater quality or quantity are anticipated.

## **5.10 Traffic, Circulation, and Access**

The Otay Ranch GDP Program EIR Findings, adopted by the City of Chula Vista on October 28, 1993, found that implementation of the Otay Ranch GDP would result in significant cumulative impacts on transportation, circulation, and access. Mitigation measures were adopted in the Otay Ranch GDP Program EIR and require projects to construct appropriate improvements and contribute their proportionate share towards construction of regional facilities.

Linscott, Law & Greenspan Engineers (LLG) has prepared an analysis of transportation/traffic impacts (Appendix F), dated November 2005, resulting from buildout of the proposed project. This section summarizes the traffic analysis. Please refer to Appendix F for more detailed technical information. Appendices to the LLG traffic report are available at the City of Chula Vista Planning and Building Department.

### **5.10.1 Existing Conditions**

#### **Regulatory Requirements**

##### *City of Chula Vista*

The City of Chula Vista Growth Management Threshold Standards include short-term (study horizon year is zero to four years) traffic standards to ensure that a safe and efficient street system is maintained within the city. The City's Threshold Standard is to maintain level of service (LOS) C or better on all signalized arterial segments, except that LOS D may occur but may not exceed a total of two hours per day, nor may LOS E/F occur for more than one hour per day. LOS C must be maintained for all other future scenarios.

Street system operating conditions are typically described in terms of level of service, which is used to describe prevailing conditions and their effect on traffic. Level of service is a qualitative measure of the effect of such factors as travel speed, travel time, interruptions, freedom to maneuver, safety, driving comfort, and convenience. LOS is expressed as a letter designation from A to F, with A representing the best operating conditions and F the worst. LOS A through C represent free-flowing traffic, conditions with little or no delay. LOS D represents limited congestion and some delay; however, the duration of periods of delay is generally acceptable to most people.

The City's street system standards are as follows:

- Expressways should be 104 feet wide in 128 feet of right-of-way (R/W), providing six through lanes, a 16-foot-wide raised median/left-turn lane, and emergency parking or bike lanes;

- Prime arterials should be 104 feet wide in 128 feet of R/W providing six lanes, a 16-foot-wide median/left-turn lane and emergency parking or bike lanes;
- Six-lane Majors should be 104 feet wide in 128 feet of R/W providing six through lanes and a 16-foot-wide raised median/left-turn lane;
- Four-lane Majors should be 80 feet wide in 104 feet of R/W, providing four through lanes, and a 16-foot-wide median/left-turn lane separating the two directions of traffic flow;
- A Class 1 Collector should be 74 feet wide in 94 feet of R/W, providing four lanes;
- A Class 2 Collector should be 52 feet wide in 72 feet of R/W, providing two through lanes and curbside parking with a continuous two-way left lane; and
- A Class 3 Collector should be 40 feet wide in 60 feet of R/W with two through lanes and curbside parking.

#### *State of California*

The Congestion Management Program (CMP) was adopted on November 22, 1991 by the San Diego Association of Governments (SANDAG) and is intended to directly link land use, transportation, and air quality through LOS performance. Local agencies are required by statute to conform to the CMP.

The CMP requires an Enhanced CEQA Review of all large projects that are expected to generate more than 2,400 average daily traffic (ADT) or more than 200 peak hour trips. Since the project is calculated to generate over 2,400 ADT and over 200 peak hour trips, this level of review is required of the proposed project.

The CMP is further discussed below in the CMP Compliance section.

#### Existing Circulation System Intersections

The project area currently consists of fallow agricultural land. The project area is bound by Olympic Parkway to the north, La Media Road to the east, and Main Street to the south. Regional access is provided by Interstate 805 (I-805), which is located approximately four miles west of the project site. Based on the distribution of project traffic as determined by the Select Zone Assignment and the requirements of the CMP, the study area described below was established. All signalized intersections, freeway interchanges, and arterial segments within this area were analyzed. Figure 5.10-1 shows the existing and proposed roadways and intersections in the study area. Following are brief descriptions of the existing streets in the project area.

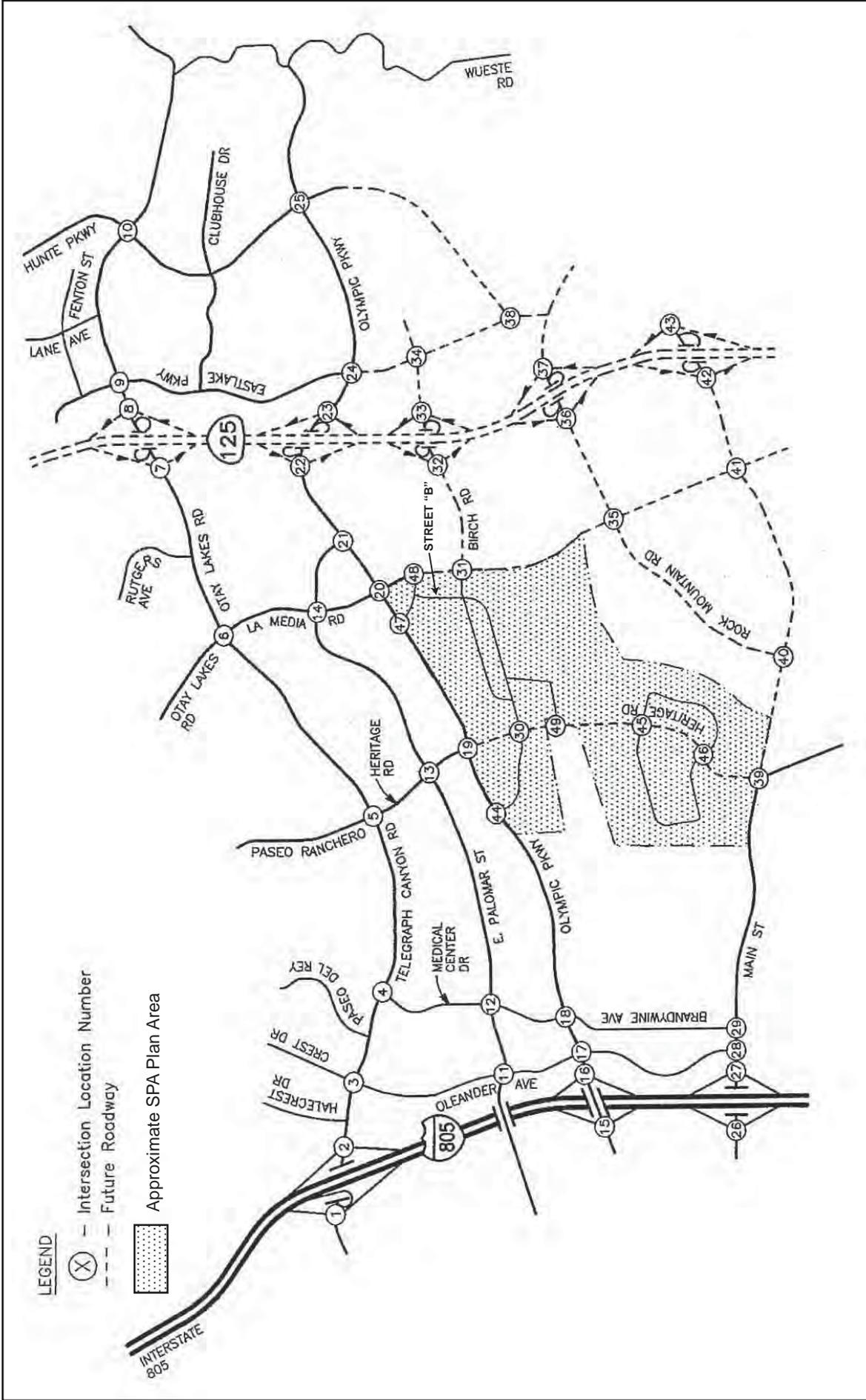


FIGURE 5.10-1  
Existing and Proposed Roadways

**I-805** is a north-south freeway, which originates in South County and terminates at its connection with the I-5 freeway. Local interchanges in the project vicinity are at Olympic Parkway, Telegraph Canyon Road, and East H Street. I-805 is generally an eight-lane freeway between I-805 and State Route 54 (SR-54) with auxiliary lanes present between some interchanges.

**Telegraph Canyon Road/Otay Lakes Road** provides east-west access through the northern portions of the study area. Telegraph Canyon Road/Otay Lakes Road is classified as a six-lane Major west of Paseo del Rey, and as a six-lane Prime Arterial east of Paseo del Rey in the City of Chula Vista Circulation Plan. It is currently generally a six-lane facility, which transitions into a Class I Collector to the east of Hunte Parkway.

Bike lanes exist on both sides of the road and bus stops are located intermittently along Telegraph Canyon Road/Otay Lakes Road. On-street parking is prohibited. The posted speed limit is 40 miles per hour (mph) from I-805 to Crest Drive/Oleander Avenue, 45 mph from Crest Drive/Oleander Avenue to Old Telegraph Canyon Road, and 50 mph from Old Telegraph Canyon Road to Hunte Parkway.

**Palomar Street** is classified as a Four-Lane Major Street in the City of Chula Vista Circulation Plan. It is currently a four-lane divided road. On-street parking is prohibited. The posted speed limit is 35 mph and bike lanes are provided.

**Olympic Parkway** is classified as a six-lane Prime Arterial from I-805 to Hunte Parkway, and as a four-lane Major east of Hunte Parkway in the City of Chula Vista Circulation Plan. On-street parking is prohibited. The posted speed limit is 45 mph. Bike lanes are provided. The section of Olympic Parkway from La Media Road to Hunte Parkway was recently completed and is open to traffic. A raised median is provided along Olympic Parkway.

**Oleander Avenue** is classified as a Class II Collector in the City of Chula Vista Circulation Plan. Currently, Oleander is a two-lane undivided roadway with two lanes of travel. Bike lanes are not provided. Curbside parking is permitted. The posted speed limit is 25 mph.

**Medical Center Drive** is classified as a Class I Collector in the City of Chula Vista Circulation Plan and currently provides four lanes of travel. Bike lanes exist on both sides of the street and curbside parking is prohibited. The posted speed limit is 25 mph. Medical Center Drive becomes Brandywine Avenue south of E. Palomar Street.

**Brandywine Avenue** is classified as a Class I Collector in the City of Chula Vista Circulation Plan and currently provides four lanes of travel narrowing to two lanes with a two-way turn lane, just north of Main Street. Bike lanes exist on both sides of the street and

curbside parking is generally prohibited except in the two-lane section of Brandywine Avenue. The posted speed limit is 25 mph.

**Paseo Ranchero** is classified as a Class I Collector in the City of Chula Vista Circulation Plan and becomes Heritage Road south of Telegraph Canyon Road. Paseo Ranchero is currently an undivided roadway with four lanes of travel and a center two-way turn lane. Bike lanes exist today on both sides of the road and curbside parking is prohibited. The posted speed limit is 40 mph.

**Heritage Road** is classified as a six-lane Prime Arterial in the City of Chula Vista Circulation Plan. Heritage Road currently ends at Olympic Parkway and is a six-lane Prime Arterial. Bike lanes exist today on both sides of the road; therefore, curbside parking is prohibited. The posted speed limit is 40 mph.

**La Media Road** is classified as a six-lane Prime Arterial in the City of Chula Vista Circulation Plan. Currently, La Media Road terminates at Santa Venetia, and serves a newly opened high school and fire station. Six lanes of travel with a raised median are currently provided. Bike lanes exist today on both sides of the road; therefore, curbside parking is prohibited. The posted speed limit is 40 mph.

**Eastlake Parkway** is classified as a four-lane Major street in the City of Chula Vista Circulation Plan, between north of Otay Lakes Road to South of SDG&E easement and as a six-lane Major road south of the SDG&E easement in EastLake Greens. Currently, it provides four lanes (two lanes in each direction). The new section of Eastlake Parkway from south of Clubhouse Drive to Olympic Parkway has six lanes of travel. Eastlake Parkway currently terminates at Olympic Parkway. Bike lanes exist on either side of the road and curbside parking is prohibited.

**Hunte Parkway** is classified as a four-lane Major Arterial from Otay Lakes Road to Olympic Parkway in the City of Chula Vista Circulation Plan. It currently extends south of Otay Lakes Road to Olympic Parkway as a four-lane Major street arterial with a posted speed limit of 45 mph. Bike lanes exist on either side of the road and curbside parking is prohibited. This facility connects to Olympic Parkway to the south. Construction of Hunte Parkway as a six-lane Prime Arterial from Olympic Parkway to Eastlake Parkway is proposed.

### Existing Operations

#### *Peak Hour Intersection Operations*

A total of 29 intersections within the study area were evaluated for traffic impacts. These intersections are shown in Figure 5.10-1. Table 5.10-1 summarizes the existing AM and PM

**TABLE 5.10-1  
EXISTING PEAK HOUR INTERSECTION OPERATIONS**

Intersection	Peak Hour	Delay	LOS
1. Telegraph Canyon Road/I-805 SB Ramps	AM	27.9	C
	<b>PM</b>	<b>68.0</b>	<b>E</b>
2. Telegraph Canyon Road/I-805 NB Ramps	AM	32.2	C
	PM	24.5	C
3. Telegraph Canyon Road/Oleander Avenue	AM	15.8	B
	PM	20.0	B
4. Telegraph Canyon Road/Medical Center Drive	AM	15.4	B
	PM	18.2	B
5. Telegraph Canyon Road/Paseo Ranchero/ Heritage Road	AM	25.5	C
	PM	25.7	C
6. Telegraph Canyon Road/Otay Lakes Road/ La Media Road	AM	35.9	D
	PM	36.9	D
9. Otay Lakes Road/Eastlake Parkway	AM	32.5	D
	PM	30.9	D
10. Otay Lakes Road/Hunte Parkway	AM	33.8	C
	PM	33.1	C
11. Palomar Street/Oleander Avenue	AM	10.2	B
	PM	9.8	A
12. Palomar Street/Brandywine Avenue	AM	33.1	C
	PM	37.5	D
13. Palomar Street/Heritage Road	AM	32.9	C
	PM	32.7	C
14. Palomar Street/La Media Road	AM	39.0	C
	PM	37.8	D
15. Olympic Parkway/I-805 SB Ramps	AM	29.9	C
	PM	<b>66.3</b>	<b>E</b>
16. Olympic Parkway/I-805 NB Ramps	AM	<b>71.0</b>	<b>E</b>
	PM	45.5	D
17. Olympic Parkway/Oleander Avenue	AM	26.7	C
	PM	22.7	C
18. Olympic Parkway/Brandywine Avenue	AM	38.3	D
	PM	36.1	D
19. Olympic Parkway/Heritage Road	AM	25.2	C
	PM	33.9	C
20. Olympic Parkway/La Media Road	AM	29.3	C
	PM	27.8	C
21. Olympic Parkway/Palomar Street	AM	23.7	C
	PM	20.2	C
24. Olympic Parkway/Eastlake Parkway	AM	26.3	C
	PM	25.3	C

**TABLE 5.10-1**  
**EXISTING PEAK HOUR INTERSECTION OPERATIONS**  
**(continued)**

Intersection	Peak Hour	Delay	LOS
25. Olympic Parkway/Hunte Parkway	AM	33.7	C
	PM	29.9	C
26. Main Street/I-805 SB Ramps	AM	24.6	C
	PM	30.2	C
27. Main Street/I-805 NB Ramps	AM	21.4	C
	PM	23.4	C
28. Main Street/Oleander Avenue	AM	9.8	A
	PM	7.1	A
29. Main Street/Brandywine Avenue	AM	30.3	C
	PM	32.6	C

NOTE: Shading and Bold indicates LOS E operations.  
SB = southbound; NB = northbound.

peak hour signalized intersection operations by intersection. All signalized intersections are calculated to currently operate at acceptable LOS D or better conditions except the following I-805 freeway ramps:

- Telegraph Canyon Road/I-805 southbound ramps: LOS E in the PM peak hour;
- Olympic Parkway/I-805 southbound ramps: LOS E in the PM peak hour; and
- Olympic Parkway/I-805 northbound ramps: LOS E in the AM peak hour.

There are planned and fully funded projects at each of the locations listed above to add capacity to these three intersections. A capacity enhancement on westbound Telegraph Canyon Road approaching I-805 is planned for completion in 2005 and will add a westbound thru lane on Telegraph Canyon Road generally between the shopping center driveway and the I-805 northbound ramps. This improvement will improve the LOS at the Telegraph Canyon Road/I-805 southbound ramps to LOS D in the PM peak hour.

A joint City/Caltrans project at the I-805/Olympic Parkway interchange will improve both ramps and will add dual turn lanes westbound at the southbound ramps and eastbound at the northbound ramps. LOS D is calculated at both ramps in both the AM and PM peak hours, with this improvement scheduled for completion in 2005.

#### *Street Segment Operations*

Table 5.10-2 summarizes the street segment operations under existing conditions. These street segments are shown in Figure 5.10-2. As shown on this table, all key street segments are calculated to operate at LOS C or better under existing conditions except the following:

- Telegraph Canyon Road
  - I-805 to Oleander Avenue: LOS F
  - Oleander Avenue to Medical Center Drive: LOS E
  - Paseo Ranchero to Otay Lakes Road: LOS D

#### *Freeway Operations*

Table 5.10-3 summarizes the existing freeway mainline operations on I-805. All study area freeway mainline segments are calculated to currently operate at LOS D or better in both northbound and southbound directions in the AM and PM peak hours except the section of southbound I-805 between Telegraph Canyon Road and East H Street, which is calculated to operate at LOS E in the PM peak hour.

**TABLE 5.10-2  
EXISTING SEGMENT OPERATIONS**

Segment	Existing Roadway Classification	LOS C Capacity	Volume	LOS
<b>Telegraph Canyon Road</b>				
I-805 to Oleander Ave.	7-Ln Major Arterial	58,300	<b>64,100</b>	<b>F</b>
Oleander Ave. to Medical Center Dr.	6-Ln Prime Arterial	50,000	<b>60,000</b>	<b>E</b>
Medical Center Dr. to Paseo Ranchero/Heritage Rd.	6-Ln Prime Arterial	50,000	46,900	C
Paseo Ranchero/Heritage Rd. to Otay Lakes Rd.	6-Ln Prime Arterial	50,000	<b>50,500</b>	<b>D</b>
<b>Otay Lakes Road</b>				
North of Paseo Ranchero	4-Ln Major Arterial	30,000	21,200	A
La Media Rd. to Eastlake Pkwy.	6-Ln Prime Arterial	50,000	42,000	B
Eastlake Pkwy. to Lane Ave.	6-Ln Prime Arterial	50,000	17,200	A
<b>E. Palomar Street</b>				
I-805 to Oleander Ave.	4-Ln Major Arterial	30,000	7,000	A
Oleander Ave. to Medical Center Dr.	4-Ln Major Arterial	30,000	4,500	A
Medical Center Dr. to Heritage Rd.	4-Ln Major Arterial	30,000	11,200	A
Heritage Rd. to Olympic Pkwy.	Class I Collector	22,000	14,100	A
<b>Olympic Parkway</b>				
I-805 to Oleander Ave.	6-Ln Prime Arterial	50,000	38,900	C
Oleander Ave. to Medical Center Dr.	6-Ln Prime Arterial	50,000	32,700	A
Medical Center Dr. to Heritage Rd.	6-Ln Prime Arterial	50,000	25,400	A
Heritage Rd. to La Media Rd.	6-Ln Prime Arterial	50,000	20,500	A
La Media Rd. to E. Palomar St.	6-Ln Prime Arterial	50,000	11,500	A
E. Palomar St. to Eastlake Pkwy.	6-Ln Prime Arterial	50,000	9,500	A
Eastlake Pkwy. to Hunte Pkwy.	6-Ln Prime Arterial	50,000	8,500	A
<b>Main Street</b>				
I-805 SB Ramps to I-805 NB Ramps	4-Ln Major	30,000	26,300	B
I-805 NB Ramps to Oleander Ave.	6-Ln Prime Arterial	50,000	36,200	A
Oleander Ave. to Brandywine Ave.	6-Ln Prime Arterial	50,000	28,400	A
Brandywine Ave. to Maxwell Rd.	6-Ln Prime Arterial	50,000	17,200	A
<b>Oleander Avenue</b>				
Telegraph Canyon Rd. to E. Palomar St.	Class II Collector	12,000	5,600	A
E. Palomar St. to Olympic Pkwy.	Class II Collector	12,000	3,800	A
Olympic Pkwy. to Main St.	Class II Collector	12,000	2,700	A
<b>Medical Center Drive</b>				
Telegraph Canyon Rd. to E. Palomar St.	Class I Collector	22,000	13,080	A
<b>Brandywine Avenue</b>				
E. Palomar St. to Olympic Pkwy.	Class I Collector	22,000	8,200	A
Olympic Pkwy. to Main St.	Class I Collector	22,000	6,800	A
<b>Paseo Ranchero</b>				
North of Telegraph Canyon Rd.	Class I Collector	22,000	8,200	A
<b>Paseo Ranchero/Heritage Road</b>				
Telegraph Canyon Rd. to E. Palomar St.	6-Ln Prime Arterial	50,000	15,600	A
E. Palomar St. to Olympic Pkwy.	6-Ln Prime Arterial	50,000	11,300	A
<b>La Media Road</b>				
Telegraph Canyon Rd. to E. Palomar St.	6-Ln Prime Arterial	50,000	13,400	A
E. Palomar St. to Olympic Pkwy.	6-Ln Prime Arterial	50,000	8,200	A
<b>Eastlake Parkway</b>				
Fenton St. to Otay Lakes Rd.	4-Ln Major	30,000	8,400	A
Otay Lakes Rd. to Olympic Pkwy.	6-Ln Prime Arterial	50,000	20,700	A
<b>Hunte Parkway</b>				
Otay Lakes Rd. to Clubhouse Dr.	4-Ln Major	30,000	8,400	A
Clubhouse Dr. to Olympic Pkwy.	4-Ln Major	30,000	5,400	A

NOTE: Shading and Bold indicates LOS D, E or LOS F operations.



NOTES:

1. Approximately 15% of Telegraph Canyon Road traffic was reallocated to East "H" Street & Olympic Pkwy. See section 3.4 SANDAG Modeling for detailed description.
2. Approximately 25% of Otay Lakes Road traffic was reallocated to East "H" Street & Olympic Pkwy. See section 3.4 SANDAG Modeling for detailed description.

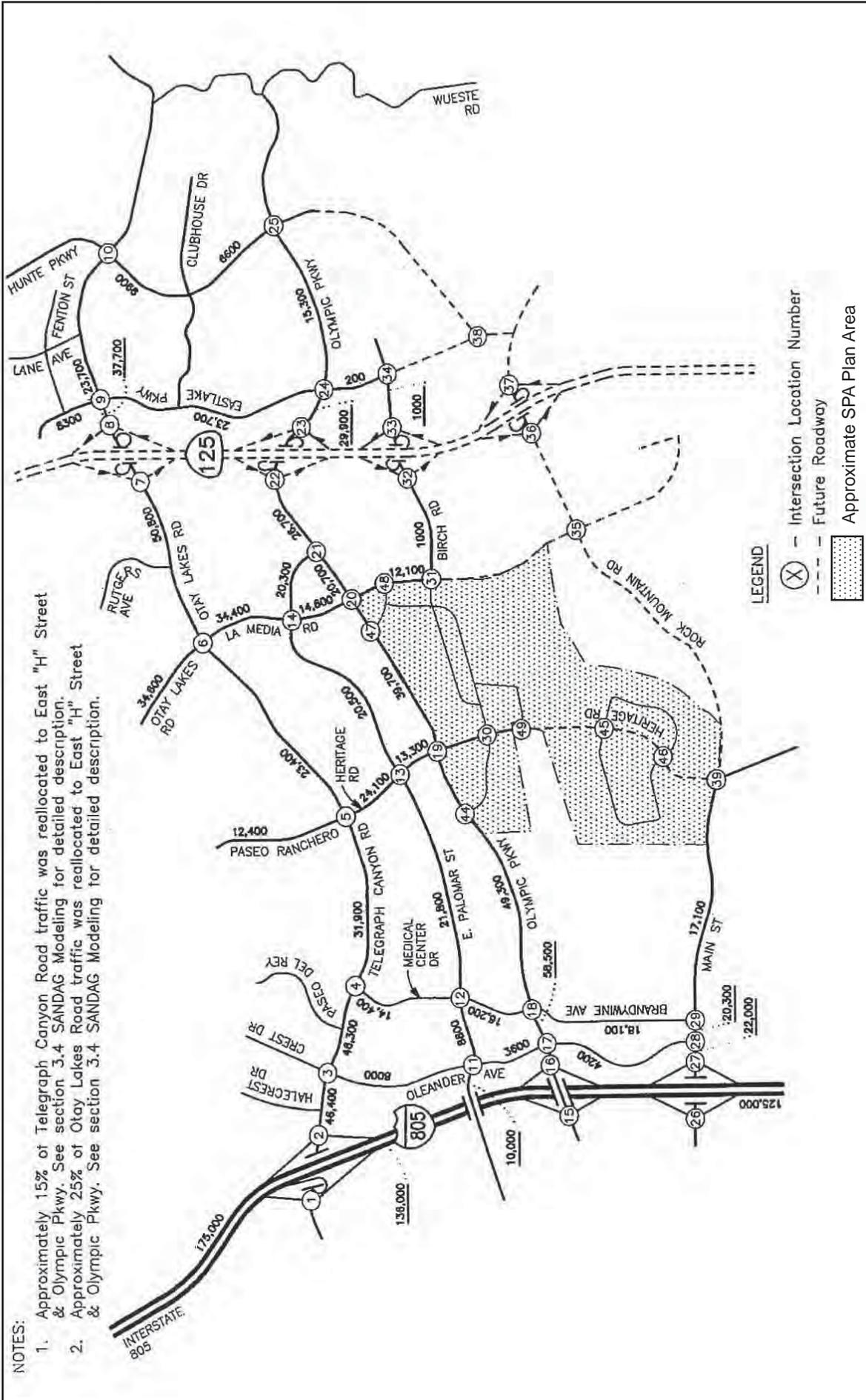


FIGURE 5.10-3  
Year 2005 ADT

### 5.10.2 Thresholds of Significance

The City of Chula Vista has developed traffic standards, which were used by LLG to evaluate the proposed project. The traffic impacts would result in a significant transportation/traffic impact if they would exceed the following thresholds for intersections, street segments, and freeways thresholds. The following criteria are from “Guidelines for Traffic Impact Studies” (February 13, 2001):

#### Threshold 1: Short-Term (Study Horizon Year 0 to 4)

##### 1. Intersections

- a. Project specific impact if both the following criteria are met:
  - i. Level of service is LOS E or LOS F
  - ii. Project trips comprise 5% or more of entering volume.
- b. Cumulative impact if only #1 is met.

##### 2. Street Lines/Segments

If the ADT methodology indicates LOS C or better, the impact is not significant. If the ADT methodology indicates LOS D, E, or F, the Growth Management Oversight Committee (GMOC) criteria should be used, which includes the following:

- a. Project specific impact if all the following criteria are met:
  - i. Level of service is LOS D for more than 2 hours or LOS E/F
  - ii. Project trips comprise 5% or more of segment volume
  - iii. Project adds greater than 800 ADT to segment
- b. Cumulative Impact if only No. 1 is met

##### 3. Freeways

- a. Project specific impact if both the following criteria are met:
  - i. Freeway segment LOS is LOS E or LOS F

- ii. Project comprises 5% or more of the total forecasted ADT on that freeway segment.
- b. Cumulative impact if only No. 1 is met.

Threshold 2: Long-Term (Study Horizon Year 5 and later)

1. Intersections

- a. Project specific impact if both the following criteria area met:
  - i. Level of service is LOS E or LOS F
  - ii. Project trips comprise 5% or more of entering volume.
- b. Cumulative impact if only No. 1 is met.

2. Street Lines/Segments

Use the planning analysis using the volume-to-capacity ratio methodology only. The GMOC analysis methodology is not applicable beyond a four-year horizon.

- a. Project specific impact if all three of the following criteria are met:
  - i. Level of service is LOS D for more than 2 hours or LOS E/F
  - ii. Project trips comprise 5% or more of segment volume
  - iii. Project adds greater than 800 ADT to segment.
- b. Cumulative Impact if only No. 1 is met. However, if the intersections along a LOS D or LOS E segment all operate at LOS D or better, the segment impact is not considered significant since intersection analysis is more indicative of actual roadway system operations than street segment analysis. If segment Level of Service is LOS F, impact is significant regardless of intersection LOS.
- c. Notwithstanding the foregoing, if the impact identified in paragraph a. above occurs at study horizon year 10 or later, and is off-site and not adjacent to the project, the impact is considered cumulative. Study year 10 may be that typical

SANDAG model year which is between 8 and 13 years in the future. In this case of a traffic study being performed in the period of 2000 to 2002, because the typical model will only evaluate traffic at years divisible by 5 (i.e., 2005, 2010, 2015, and 2020) study horizon year 10 would correspond to the SANDAG model for year 2010 and would be 8 years in the future. If the model year is less than 7 years in the future, study horizon year 10 would be 13 years in the future.

- d. In the event a direct identified project-specific impact in paragraph a. above occurs at study horizon year 5 or earlier and the impact is off-site and not adjacent to this project, but the property immediately adjacent to the identified project-specific impact is also proposed to be developed in approximately the same time frame, an additional analysis may be required to determine whether or not the identified project specific impact would still occur if the development of the adjacent property does not take place. If the additional analysis concludes that the identified project-specific impact is no longer a direct impact, then the impact shall be considered cumulative.

### 3. Freeways

- a. Project specific impact if both the following criteria are met:
  - i. Freeway segment LOS is LOS E or LOS F
  - ii. Project comprises 5% or more of the total forecasted ADT on that freeway segment.
- b. Cumulative impact if only No. 1 is met.

#### **5.10.3 Impacts**

##### Threshold 1: Short-term (Study Horizon Year 0 to 4)

The proposed project land uses were finalized in the later stages of the preparation of the technical study prepared by LLG. The project applicant originally proposed 3,262 dwelling units, which included residential uses within the 1,000-foot buffer adjacent to the Otay Landfill. This proposal was analyzed along with two other project-level alternatives for the SPA Plan area. Both of the alternatives analyzed included approximately 2,695 dwelling units but considered different uses within the landfill buffer. The results of the traffic study conducted by Linscott Law & Greenspan indicated that the alternative which generated the

most traffic was analyzed as the worst case scenario. The worst case traffic impact scenario included 2,695 dwelling units (994 single-family units and 1,701 multi-family units); 20.7 acres of commercial uses, 15.1 acres of Neighborhood park, a 70.0-acre Community park, 3.9 acres of Community Purpose Facility uses, a 10.2 acre elementary school, and 84.6 acres of industrial land uses. Within the Village Three portion of the project, 171.0 acres of industrial land use and 7.5 acres of Community Purpose Facility uses were proposed. Table 5.10-4 summarizes the trip generation analyzed for the worst-case project. As shown on Table 5.10-4, the worst-case project is calculated to generate a total of 73,546 daily trips, 7,528 trips (4,655 inbound and 2,873 outbound trips) in the AM peak hour and 8,836 trips (3,962 inbound and 4,874 outbound trips) in the PM peak hour.

Subsequent to this, the proposed project was revised. The final land uses for the proposed project within Village Two includes 2,786 residential units (986 single-family, 1,740 multi-family, and 60 multi-use multifamily units), 11.9 acres of commercial uses, 15.4 acres of Neighborhood Park, 44.2 acres of Community park, 6.1 acres of Community Purpose Facility uses, a 10.3-acre elementary school site, and 87.9 acres of industrial land uses. Within the Village Three portion of the project, 176.6 acres of industrial land use and 10.2 acres of Community Purpose Facility uses are proposed. While the revised project includes a greater number of residential units, it proposes less industrial uses, which generate a greater amount of traffic than residential uses. Table 5.10-5 summarizes the trip generation for the revised proposed project. As seen on this table, the proposed project is calculated to generate a total of 67,901 daily trips, 7,308 trips (4,544 inbound and 2,764 outbound trips) in the AM peak hour and 8,327 trips (3,693 inbound and 4,634 outbound trips) in the PM peak hour.

Table 5.10-6 summarizes the difference in trip generation between the worst-case project and the proposed project. As seen in this table, overall, the worst-case project generates more trips than the proposed project. The worst-case project generates 5,645 trips, or five percent more ADT; 220 or three percent more AM peak hour trips; and 510 or six percent more PM peak hour trips than the proposed project.

The results of the traffic study conducted by LLG indicated that the originally proposed project generated the most traffic, and therefore was analyzed as the worst case scenario. Based on this data, the worst-case project was specifically analyzed in this report because it represents the worst-case scenario. Therefore, impacts associated with the analyzed (worst-case) project would also apply to the proposed project.

**TABLE 5.10-4  
TRIP GENERATION  
ANALYZED (WORST CASE) PROJECT**

Land Use	Quantity	Daily Trip Ends (ADT)			AM Peak Hour			PM Peak Hour					
		Rate	Volume	% of ADT	In:Out Split	In	Out	Volume	In:Out Split	In	Out	Volume	Total
Village Two Residential													
Single Family	994 DU	10 /DU	9,940	8%	3:7	239	556	795	10%	7:3	696	298	994
Multi Family	1,701 DU	8 /DU	13,608	8%	2:8	218	871	1,089	10%	7:3	953	408	1,361
Subtotal Residential			23,548			457	1,427	1,884			1,649	706	2,355
Non-Residential													
Commercial	20.7 Acres	700 /Acre	14,490	4%	6:4	348	232	580	10%	5:5	725	724	1,449
Neighborhood Park	15.1 Acres	5 /Acre	76	4%	5:5	2	2	4	8%	5:5	3	3	6
Community Park	70 Acres	50 /Acre	3,500	13%	5:5	228	227	455	9%	5:5	158	157	315
Community Purpose Facility	3.9 Acres	30 /Acre	117	5%	6:4	4	2	6	8%	5:5	5	4	9
School	10.2 Acres	90 /Acre	918	32%	6:4	176	118	294	9%	4:6	33	50	83
Industrial	84.6 Acres	120 /Acre	10,152	14%	8:2	1,137	284	1,421	15%	3:7	457	1,066	1,523
Subtotal Non-Residential			29,253			1,895	865	2,760			1,381	2,004	3,385
<b>Subtotal Village Two</b>			<b>52,801</b>			<b>2,352</b>	<b>2,872</b>	<b>5,224</b>			<b>3,030</b>	<b>2,710</b>	<b>5,740</b>
Village Three Industrial													
Community Purpose Facility	171.0 Acres	120 /Acre	20,520	14%	8:2	2,298	575	2,873	15%	3:7	923	2,155	3,078
Subtotal Village Three	7.5 Acres	30 /Acre	225	4%	5:5	5	5	10	8%	5:5	9	9	18
<b>TOTAL</b>			<b>73,546</b>			<b>4,655</b>	<b>3,452</b>	<b>8,107</b>			<b>3,962</b>	<b>4,874</b>	<b>8,836</b>

SOURCE: Generation rates obtained from the SANDAG Brief Guide (April 2002).

NOTE: Trip-ends are one-way traffic movements, either entering or leaving.

**TABLE 5.10-5  
TRIP GENERATION  
PROPOSED PROJECT**

Land Use	Quantity	Daily Trip Ends (ADT)			AM Peak Hour			PM Peak Hour						
		Rate	Volume	% of ADT	In	Out	Split	In	Out	Split				
											Total	% of ADT	In	Out
Village Two														
Single-Family	986 DU	10 /DU	9,860	8%	237	552	3:7	237	690	7:3	296	986		
Multi-Family	1,740 DU	8 /DU	13,920	8%	233	891	2:8	233	974	7:3	418	1,392		
Mixed-use Multi-family	60 DU	8 /DU	480	8%	8	30	2:8	8	34	7:3	14	48		
Commercial	11.9 Acres	700 /Acre	8,330	4%	200	133	6:4	200	417	5:5	416	833		
Neighborhood Park	15.4 Acres	5 /Acre	77	4%	2	2	5:5	2	3	5:5	3	6		
Community Park	44.2 Acres	50 /Acre	2,210	13%	144	143	5:5	144	99	5:5	100	199		
Community Purpose Facility	6.1 Acres	30 /Acre	183	5%	5	4	6:4	5	7	5:5	8	15		
School	10.3 Acres	90 /Acre	927	32%	178	119	6:4	178	33	4:6	50	83		
Industrial	87.9 Acres	120 /Acre	10,548	14%	1,181	296	8:2	1,181	476	3:7	1,106	1,582		
Subtotal Village Two			46,535		2,177	2,170		2,177	2,734		2,411	5,145		
Village Three														
Industrial	175.5 Acres	120 /Acre	21,060	14%	2,359	589	8:2	2,359	948	3:7	2,211	3,159		
Community Purpose Facility	10.2 Acres	30 /Acre	306	4%	7	5	5:5	7	12	5:5	12	24		
Subtotal Village Three			21,366		2,366	594		2,366	960		2,223	3,183		
<b>TOTAL</b>			67,901		4,544	2,764		4,544	3,693		4,634	8,327		

SOURCE: Generation rates obtained from the SANDAG Brief Guide (April 2002).

NOTE: Trip-ends are one-way traffic movements, either entering or leaving.

**TABLE 5.10-6  
COMPARISON OF PROPOSED PROJECT AND ANALYZED (WORST CASE) PROJECT TRIP GENERATION**

Land Use	Residential Units		Industrial Acreage	Daily Trip Ends (ADT)	AM Peak Hour		PM Peak Hour		
	Single-Family	Multi-Family			In	Out	In	Out	
Proposed Project	986 DU	1,800 DU	263.4 acres	67,901	4,544	2,764	3,696	4,634	8,327
Analyzed (Worst Case) Project	994 DU	1,701 DU	255.6 acres	73,546	4,655	2,873	3,962	4,874	8,836
<u>Analyzed (Worst Case) Project (-) Proposed Project</u>									
Amount	8 DU	(99) DU	(7.8) acres	5,645	111	109	269	241	510
Percentages	1%	-6%	-3%	8%	-3%	3%	3%	6%	6%

### *Project Access*

Two access driveways along Olympic Parkway, two along La Media Road and four access driveways along Heritage Road, are proposed for the proposed project. All project access intersections are calculated to operate at LOS D or better conditions with the assumed intersection geometry. Each access driveway is briefly described below.

- **Street “D”/Olympic Parkway** - is a T intersection and provides access to the western portion of Village Two.
- **Santa Venetia/Olympic Parkway** – is a T intersection and provides access to the northeast portion of Village Two.
- **Santa Venetia/La Media Road** – is a four-leg intersection providing access to Village Six to the east and Village Two to the west.
- **Street “C”/La Media Road/Birch Road** – is a four-leg intersection providing access to Village Two from the east. The fourth leg (west leg) of this intersection is Birch Road.
- **Street “D”/Heritage Road** – is a four-leg intersection providing access to Village Two. The eastern leg of this intersection forms the main access to Village Two proper.
- **Street “F”/Heritage Road** – is a T intersection providing secondary access to Village Two proper.
- **Street “J”/Heritage Road North** – is a four-leg intersection providing access to the industrial land uses in Village Three to the north.
- **Street “J”/Heritage Road South** – is a four-leg intersection providing access to the industrial land uses in Village Three to the south.

### *Project Trip Generation*

As mentioned previously, the land use data used to model trip generation corresponds to the land uses for the analyzed (worst-case) project. The trip generation discussed below shows that the analyzed (worst-case) project generates more ADT and AM/PM peak hour traffic than the proposed project.

Table 5.10-4 summarizes the trip generation analyzed for the analyzed (worst-case) project. As shown on Table 5.10-4, the analyzed (worst-case) project is calculated to generate a

total of 73,546 daily trips, 7,528 trips (4,655 inbound and 2,873 outbound trips) in the AM peak hour and 8,836 trips (3,962 inbound and 4,874 outbound trips) in the PM peak hour. Table 5.10-6 summarizes the difference in trip generation between the analyzed (worst-case) project and the proposed project. As seen in this table, overall, the analyzed (worst-case) project generates more trips than the proposed project. The analyzed (worst-case) project generates 5,645 trips, or 5 percent more ADT; 220 or three percent more AM peak hour trips; and 510 or six percent more PM peak hour trips than the proposed project. Therefore, the traffic impacts associated with the analyzed (worst-case) project would also apply to the proposed project.

### *Internal Trips*

The project proposes mixed land uses including residential, retail, education, and industrial uses. Not all trips are external since some of the school and retail trips remain with Villages Two and Three and, therefore, the total daily and peak hour trips generated by the proposed land uses were reduced by 30 percent (15 percent residential trips plus corresponding number of school and retail trips).

As shown on Table 5.10-7, the analyzed project is calculated to add an additional 64,382 ADT (6,562 in the AM peak hour and 7,927 in the PM peak hour).

### *Existing Conditions Plus Project*

For this condition, it is assumed that the total project is completed with only the existing roadway network to serve it. However, since the project access is planned mainly on future roadways, the following assumptions are made:

- Heritage Road is built between Olympic Parkway and Street "J" North and corresponding internal roads are built to provide access to the project
- La Media Road is built between Olympic Parkway and Birch Road and corresponding internal roads are built to provide access to the project

As shown on Tables 5.10-8 and 5.10-9, several intersections and segments are calculated to operate at LOS E and F for the existing conditions plus project scenario. However, this is not a reasonable scenario because the project will be conditioned to have a limited number of units that can be built before Heritage Road is built, and because a project of this magnitude will take many years to buildout.

### *Peak Hour Intersection*

As shown on Table 5.10-8, all of the existing intersections are calculated to continue to operate at LOS D or better except the following:

**TABLE 5.10-7  
INTERNAL TRIPS  
PROPOSED PROJECT**

Land Use	Total Trips		% of Trips Which Are Internal	Internal Trips		External Trips				
	Daily	AM		Daily	AM	Daily	AM			
	PM	PM		PM	PM	PM	PM			
<b>Residential</b>										
Single Family	9,940	795	994	15%	1,491	119	149	8,449	676	845
Multi Family	<u>13,608</u>	<u>1,089</u>	<u>1,361</u>	15%	<u>2,041</u>	<u>163</u>	<u>204</u>	<u>11,567</u>	<u>926</u>	<u>1,157</u>
Subtotal Residential	23,548	1,884	2,355		3,532	283	353	20,016	1,601	2,002
<b>Non-Residential</b>										
Commercial	14,490	580	1,449	15%	2,174	100	240	12,317	480	1,209
Neighborhood Park	3,500	56	112	22%	770	30	62	2,730	26	50
Community Park	76	4	6	66%	50	3	4	26	1	2
Community Purpose Facility	342	16	27	50%	171	8	14	171	8	14
School	918	294	83	40%	367	142	34	551	152	49
Industrial	30,672	4,294	4,601	0%	-	-	-	30,672	4,294	4,601
Preserve <sup>1</sup>	-	-	-		-	-	-	-	-	-
Subtotal Non-Residential	49,998	5,244	6,278		3,532	283	353	46,466	4,961	5,925
<b>TOTAL PROJECT</b>	<b>73,546</b>	<b>7,128</b>	<b>8,633</b>		<b>7,064</b>	<b>565</b>	<b>707</b>	<b>66,482</b>	<b>6,563</b>	<b>7,926</b>

**TABLE 5.10-8  
EXISTING CONDITIONS PLUS THE PROPOSED PROJECT<sup>1</sup>  
PEAK HOUR INTERSECTION OPERATIONS**

Intersection	Peak Hour	Existing		Existing + Project	
		Delay	LOS	Delay	LOS
1. Telegraph Canyon Rd./I-805 SB Ramps	AM	27.9	C	32.6	C
	PM	<b>68.0</b>	<b>E</b>	<b>&gt;100.0</b>	<b>F</b>
2. Telegraph Canyon Rd./I-805 NB Ramps	AM	32.2	C	33.3	C
	PM	24.5	C	25.4	C
3. Telegraph Canyon Rd./Oleander Ave.	AM	15.8	B	15.8	B
	PM	20.0	B	21.9	C
4. Telegraph Canyon Rd./Medical Center Dr.	AM	15.4	B	16.1	B
	PM	18.2	B	20.0	C
5. Telegraph Canyon Rd./Paseo Ranchero/Heritage Rd.	AM	25.5	C	31.6	C
	PM	25.7	C	32.6	C
6. Telegraph Canyon Rd./Otay Lakes Rd./La Media Rd.	AM	35.9	D	38.2	D
	PM	36.9	D	41.0	D
9. Otay Lakes Rd./Eastlake Pkwy.	AM	32.5	C	33.7	C
	PM	30.9	C	31.2	C
10. Otay Lakes Rd./Hunte Pkwy.	AM	33.8	C	34.2	C
	PM	33.1	C	34.7	C
11. Palomar St./Oleander Ave.	AM	10.2	B	31.9	C
	PM	9.8	A	28.4	C
12. Palomar St./Brandywine Ave.	AM	33.1	C	33.3	C
	PM	37.5	D	37.6	D
13. Palomar St./Heritage Rd.	AM	32.9	C	39.7	D
	PM	32.7	C	33.0	C
14. Palomar St./La Media Rd.	AM	39.0	C	37.7	D
	PM	37.8	D	38.9	D
15. Olympic Pkwy./I-805 SB Ramps	AM	29.9	C	<b>&gt;100.0</b>	<b>F</b>
	PM	<b>66.3</b>	<b>E</b>	<b>&gt;100.0</b>	<b>F</b>
16. Olympic Pkwy./I-805 NB Ramps	AM	<b>71.0</b>	<b>E</b>	<b>&gt;100.0</b>	<b>F</b>
	PM	45.5	D	<b>&gt;100.0</b>	<b>F</b>
17. Olympic Pkwy./Oleander Ave.	AM	26.7	C	35.8	D
	PM	22.7	C	<b>66.2</b>	<b>E</b>
18. Olympic Pkwy./Brandywine Ave.	AM	38.3	D	<b>75.7</b>	<b>F</b>
	PM	36.1	D	<b>67.8</b>	<b>E</b>
19. Olympic Pkwy./Heritage Rd.	AM	25.2	C	<b>129.0</b>	<b>F</b>
	PM	33.9	C	<b>82.1</b>	<b>F</b>
20. Olympic Pkwy./La Media Rd.	AM	29.3	C	41.0	D

**TABLE 5.10-8  
EXISTING CONDITIONS PLUS THE PROPOSED PROJECT <sup>1</sup>  
PEAK HOUR INTERSECTION OPERATIONS  
(continued)**

Intersection	Peak Hour	Existing		Existing + Project	
		Delay	LOS	Delay	LOS
	PM	27.8	C	38.7	D
21. Olympic Pkwy./Palomar St.	AM	23.7	C	27.8	C
	PM	20.2	C	23.9	C
24. Olympic Pkwy./Eastlake Pkwy.	AM	26.3	C	27.8	C
	PM	25.3	C	27.9	C
25. Olympic Pkwy./Hunte Pkwy.	AM	33.7	C	35.3	D
	PM	29.9	C	33.2	C
26. Main St./I-805 SB Ramps	AM	24.6	C	27.0	C
	PM	30.2	C	34.4	C
27. Main St./I-805 NB Ramps	AM	21.4	C	21.6	C
	PM	23.4	C	25.3	C
28. Main St./Oleander Ave.	AM	9.8	A	11.0	B
	PM	7.1	A	7.5	A
29. Main St./Brandywine Ave.	AM	30.3	C	31.0	C
	PM	32.6	C	33.1	C
30. Heritage Rd./Street "D"	AM	<sup>2</sup>	<sup>2</sup>	<b>86.0</b>	<b>F</b>
	PM	<sup>2</sup>	<sup>2</sup>	<b>&gt;100.0</b>	<b>F</b>
31. La Media Rd./Birch Rd.	AM	<sup>2</sup>	<sup>2</sup>	21.1	C
	PM	<sup>2</sup>	<sup>2</sup>	43.0	D
44. Olympic Pkwy./Street "D"	AM	<sup>2</sup>	<sup>2</sup>	4.9	A
	PM	<sup>2</sup>	<sup>2</sup>	4.4	A
45. Heritage Rd./Street "J" North	AM	<sup>2</sup>	<sup>2</sup>	45.1	D
	PM	<sup>2</sup>	<sup>2</sup>	<b>117.5</b>	<b>F</b>
44. Olympic Pkwy./Street "A"	AM	<sup>2</sup>	<sup>2</sup>	12.2	B
	PM	<sup>2</sup>	<sup>2</sup>	14.1	B

NOTE: Bold and shading indicate LOS E or LOS F operations.

<sup>1</sup>Since Assumed Project and the Proposed Project generate very similar amounts of traffic and Assumed Project slightly more peak hour traffic, Assumed Project was specifically analyzed in this report. Impacts associated with Assumed Project would also apply to the Proposed Project.

<sup>2</sup>Intersection does not exist currently.

**TABLE 5.10-9  
EXISTING CONDITIONS PLUS THE PROPOSED PROJECT<sup>1</sup>  
SEGMENT OPERATIONS**

Segment	Existing Roadway Classification	LOS C Capacity	Existing		Existing + Project	
			Volume	LOS	Volume	LOS
Telegraph Canyon Road						
1-805 to Oleander Ave.	7-Ln Major Arterial	58,300	64,100	F	65,800	E
Oleander Ave. to Medical Center Dr.	6-Ln Prime Arterial	50,000	60,000	E	61,700	E
Medical Center Dr. to Paseo Rancho/Heritage Rd.	6-Ln Prime Arterial	50,000	46,900	C	49,150	C
Paseo Rancho/Heritage Rd. to Otay Lakes Rd.	6-Ln Prime Arterial	50,000	50,500	D	52,750	D
Otay Lakes Road						
North of Telegraph Canyon Rd.	4-Ln Major Arterial	30,000	21,200	A	24,550	B
La Media Rd. to Eastlake Pkwy.	6-Ln Prime Arterial	50,000	42,000	B	42,000	B
Eastlake Pkwy. to Lane Ave.	6-Ln Prime Arterial	50,000	17,200	A	18,325	A
Palomar Street						
1-805 to Oleander Ave.	4-Ln Major Arterial	30,000	7,000	A	7,550	A
Oleander Ave. to Medical Center Dr.	4-Ln Major Arterial	30,000	4,500	A	5,050	A
Medical Center Dr. to Heritage Rd.	4-Ln Major Arterial	30,000	11,200	A	13,450	A
Heritage Rd. to Olympic Pkwy.	Class I Collector	30,000	14,100	A	15,800	A
Olympic Parkway						
1-805 to Medical Center Dr.	6-Ln Prime Arterial	50,000	38,900	C	55,300	D
Oleander Ave. to Medical Center Dr.	6-Ln Prime Arterial	50,000	32,700	A	49,650	C
Medical Center Dr. to Heritage Rd.	6-Ln Prime Arterial	50,000	25,400	A	45,160	C
Heritage Rd. to La Media Rd.	6-Ln Prime Arterial	50,000	20,500	A	21,500	A
La Media Rd. to Palomar St.	6-Ln Prime Arterial	50,000	11,500	A	17,700	A
Palomar St. to Eastlake Pkwy.	6-Ln Prime Arterial	50,000	9,500	A	14,000	A
Eastlake Pkwy. to Hunte Pkwy.	6-Ln Prime Arterial	50,000	8,500	A	9,625	A
Birch Road						
La Media Rd. to Eastlake Pkwy.	6-Ln Major Arterial	40,000	2	2	6,830	A
Oleander Avenue						
Telegraph Canyon Rd. to Palomar St.	Class II Collector	12,000	5,600	A	5,600	A
Palomar St. to Olympic Pkwy.	Class II Collector	12,000	3,800	A	3,800	A
Olympic Pkwy. to Main St.	Class II Collector	12,000	2,700	A	3,250	A
Medical Center Drive						
Telegraph Canyon Rd. to Palomar St.	Class I Collector	22,000	13,080	A	13,630	A
Brandywine Avenue						
Palomar St. to Olympic Pkwy.	Class I Collector	22,000	8,200	A	8,750	A
Olympic Pkwy. to Main St.	Class I Collector	22,000	6,800	A	9,050	A
Paseo Rancho						
North of Telegraph Canyon Rd.	Class I Collector	22,000	8,200	A	10,500	A

**TABLE 5.10-9  
EXISTING CONDITIONS PLUS THE PROPOSED PROJECT  
SEGMENT OPERATIONS  
(continued)**

Segment	Existing Roadway Classification	LOS C Capacity	Existing		Existing + Project	
			Volume	LOS	Volume	LOS
Paseo Ranchero/Heritage Road						
Telegraph Canyon Rd. to Palomar St.	6-Ln Prime Arterial	50,000	15,600	A	22,400	A
Palomar St. to Olympic Pkwy.	6-Ln Prime Arterial	50,000	11,300 <sup>2</sup>	A	22,000	A
South of Olympic Pkwy.	6-Ln Prime Arterial	50,000			39,603	B
La Media Rd.						
Telegraph Canyon Rd. to Palomar St.	6-Ln Prime Arterial	50,000	13,400	A	22,400	A
Palomar St. to Olympic Pkwy.	6-Ln Prime Arterial	50,000	8,200 <sup>2</sup>	A	20,600	A
South of Olympic Pkwy.	6-Ln Prime Arterial	50,000			9,100	A
Eastlake Parkway						
Fenton St. to Otay Lakes Rd.	4-Ln Major	30,000	8,400	A	8,950	A
Otay Lakes Rd. to Olympic Pkwy.	6-Ln Prime Arterial	50,000	20,700 <sup>2</sup>	A	22,400	A
Olympic Pkwy. to Birch Rd.	6-Ln Prime Arterial	50,000			570	A
Hunte Parkway						
Otay Lakes Rd. to Olympic Pkwy.	4-Ln Major	30,000	8,400	A	8,400	A
Olympic Pkwy. To Eastlake Pkwy.	4-Ln Major	30,000	5,400	A	5,950	A

NOTE: Bold and shading indicate LOS E or LOS F operations.

<sup>1</sup>Since the Assumed Project and the Proposed Project generate very similar amounts of traffic and Assumed Project slightly more peak hour traffic, Assumed Project was specifically analyzed in this report. Impacts associated with Assumed Project would also apply to the Proposed Project. To be widened to four through lanes in the westbound direction.

<sup>2</sup>Segment does not currently exist.

- Telegraph Canyon Road/I-805 southbound ramps (LOS F during the PM peak hour)
- Olympic Parkway/I-805 southbound ramps (LOSE F during the AM and PM peak hours)
- Olympic Parkway/I-805 northbound ramps (LOS F during the AM and PM peak hours)
- Olympic Parkway/Oleander Avenue (LOS E during the PM peak hour)
- Olympic Parkway/Brandywine Avenue (LOS F during the AM peak hour and LOS E during the PM peak hour)
- Olympic Parkway/Heritage Road (LOS F during the AM and PM peak hours)
- Heritage Road/Street "D" (LOS F during the AM and PM peak hours)
- Heritage Road/Street "J" (LOS F during the PM peak hour)

#### *Daily Segment*

As shown on Table 5.10-9, all of the existing street segments are calculated to operate at LOS C or better except the following, which are calculated to operate at LOS D or worse:

- Telegraph Canyon Road from I-805 to Oleander Avenue (LOS E)
- Telegraph Canyon Road from Oleander Avenue to Medical Center Drive (LOS E)
- Telegraph Canyon Road from Paseo Ranchero/Heritage Road to Otay Lakes Road (LOS D)
- Olympic Parkway from I-805 to Medical Center Drive (LOS D)

#### *Freeway*

Table 5.10-10 summarizes the existing conditions plus project peak hour freeway segment operations. As shown on this table, with the addition of project traffic, all freeway segments along I-805 in the project vicinity are calculated to continue to operate at LOS D or better during the AM and PM peak hours except the section of I-805 between Telegraph Canyon Road and East H Street, which is calculated to continue to operate at LOS F(0) in the PM peak hour similar to existing conditions.

**TABLE 5.10-10  
FREEWAY MAINLINE OPERATIONS  
EXISTING CONDITIONS PLUS PROJECT CONDITIONS**

Freeway Segment	Direction	# of Lanes	Hourly Capacity <sup>1</sup>	Peak Hour Both Direc. <sup>2</sup>		% D <sup>3</sup>		Peak Hour Vol (1-Dir) <sup>2</sup>		V/C <sup>4</sup>		LOS	
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Existing Conditions													
	East H St. to Telegraph Canyon Rd.	NB	10,600	17,130	18,483	0.53	0.44	9079	8133	0.856	0.767	D	C
	SB	10,600	17,130	18,483	0.47	0.56	8051	10350	0.760	0.976	C	E	
Telegraph Canyon Rd. to Olympic Pkwy.	NB	10,600	12,635	13,634	0.53	0.44	6697	5999	0.632	0.566	C	B	
	SB	10,600	12,635	13,634	0.47	0.56	5939	7635	0.560	0.720	B	C	
Olympic Pkwy. to Main St.	NB	10,600	12,550	13,542	0.53	0.44	6652	5958	0.628	0.562	C	B	
	SB	8,800	12,550	13,542	0.47	0.56	5899	7584	0.670	0.862	C	D	
Main St. to Palm Ave.	NB	10,600	12,466	13,451	0.53	0.44	6607	5918	0.623	0.558	C	B	
	SB	10,600	12,466	13,451	0.47	0.56	5859	7532	0.553	0.711	B	C	

Freeway Segment	Direction	# of Lanes	Hourly Capacity <sup>1</sup>	Peak Hour Both Direc. <sup>2</sup>		Project Volume		Peak Hour Volume (E+P)		V/C (E+P)		LOS (E+P)		V/C Delta	
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Existing + Project Conditions															
	East H St. to Telegraph Canyon Rd.	NB	10,600	9079	8133	488	875	9567	9008	0.903	0.850	D	D	0.046	0.083
	SB	10,600	8051	10350	824	710	8875	11060	0.837	1.043	D	F(0)	0.078	0.067	
Telegraph Canyon Rd. to Olympic Pkwy.	NB	10,600	6697	5999	440	788	7137	6787	0.673	0.640	C	C	0.042	0.074	
	SB	10,600	5939	7635	741	639	6680	8274	0.630	0.781	C	C	0.070	0.060	
Olympic Pkwy. to Main St.	NB	10,600	6652	5958	147	263	6799	6221	0.641	0.587	C	B	0.014	0.025	
	SB	8,800	5899	7584	247	213	6146	7797	0.698	0.886	C	D	0.028	0.024	
Main St. to Palm Ave.	NB	10,600	6607	5918	122	219	6729	6137	0.635	0.579	C	B	0.012	0.021	
	SB	10,600	5859	7532	206	177	6065	7709	0.572	0.727	B	C	0.019	0.017	

<sup>1</sup>Capacity calculated at 2200 peak hour volume per mainline lane and 1,800 per aux. lane (i.e., 4+1 = 4 Mainline + 1 Aux Lane = hourly capacity of 10,600)

<sup>2</sup>Peak Hour 2 Directional Volumes from Caltrans - Year 2002 volumes - See Appendix G.

<sup>3</sup>Direction Split (D) from Caltrans - See Appendix G.

<sup>4</sup>V/C = Peak Hour Volume/Peak Hour Capacity with LOS by ratio shown to the right =>

LOS	V/C
A	<0.41
B	0.62
C	0.8
D	0.92
E	1

### *Analysis Scenarios*

Seven analysis scenarios were evaluated in the traffic study prepared by LLG for the proposed project to analyze future traffic conditions due to project phasing. Five of the scenarios included the proposed land uses for years 2005, 2010, 2015, 2030, and buildout. All study area intersections and segments analysis were conducted for the Proposed Project land uses, the City of Chula Vista land uses outside Villages Two and Three, and the City of Chula Vista Circulation Element. Figures 5.10-3 through 5.10-7 shows the ADT forecasted for the study scenarios listed above, as determined by LLG, SANDAG, and the City of Chula Vista, with proposed land uses for all projects, including the proposed project.

At the time the traffic study was prepared, the City's 1989 General Plan was in the process of being updated but had not yet been adopted. Therefore, in addition to the five scenarios listed above, the traffic study analyzed two other scenarios to compare 2030 and buildout timeframes with the 1989 General Plan project land uses and Circulation Element. Subsequent to the preparation of the traffic study, in 2005 the General Plan was adopted and therefore, the results of the analysis for those two scenarios are not included in this EIR.

Table 5.10-11 summarizes the peak hour intersection operations for the five project phasing scenarios evaluated. Table 5.10-12 summarizes the segment operations for the five project phasing scenarios evaluated.

### *2005 (Proposed Project Land Uses, Proposed Land Uses, and Proposed Circulation Element)*

#### PEAK HOUR INTERSECTIONS

Table 5.10-11 summarizes the peak hour intersection operations. As shown on this table, all study area intersections are calculated to operate at LOS D or better for the 2005 condition.

#### DAILY SEGMENTS

Table 5.10-12 summarizes the segment operations. As shown on this table, all study area segments are calculated to operate at LOS C or better for the 2005 condition except the following, which are calculated to operate at LOS E:

- Telegraph Canyon Road from I-805 to Oleander Avenue (LOS D);
- Otay Lakes Road North of Telegraph Canyon Road (LOS E); and
- Olympic Parkway from I-805 to Medical Center Drive (LOS E).

NOTES:

1. Approximately 15% of Telegraph Canyon Road traffic was reallocated to East "H" Street & Olympic Pkwy. See section 3.4 SANDAG Modeling for detailed description.
2. Approximately 25% of Otay Lakes Road traffic was reallocated to East "H" Street & Olympic Pkwy. See section 3.4 SANDAG Modeling for detailed description.

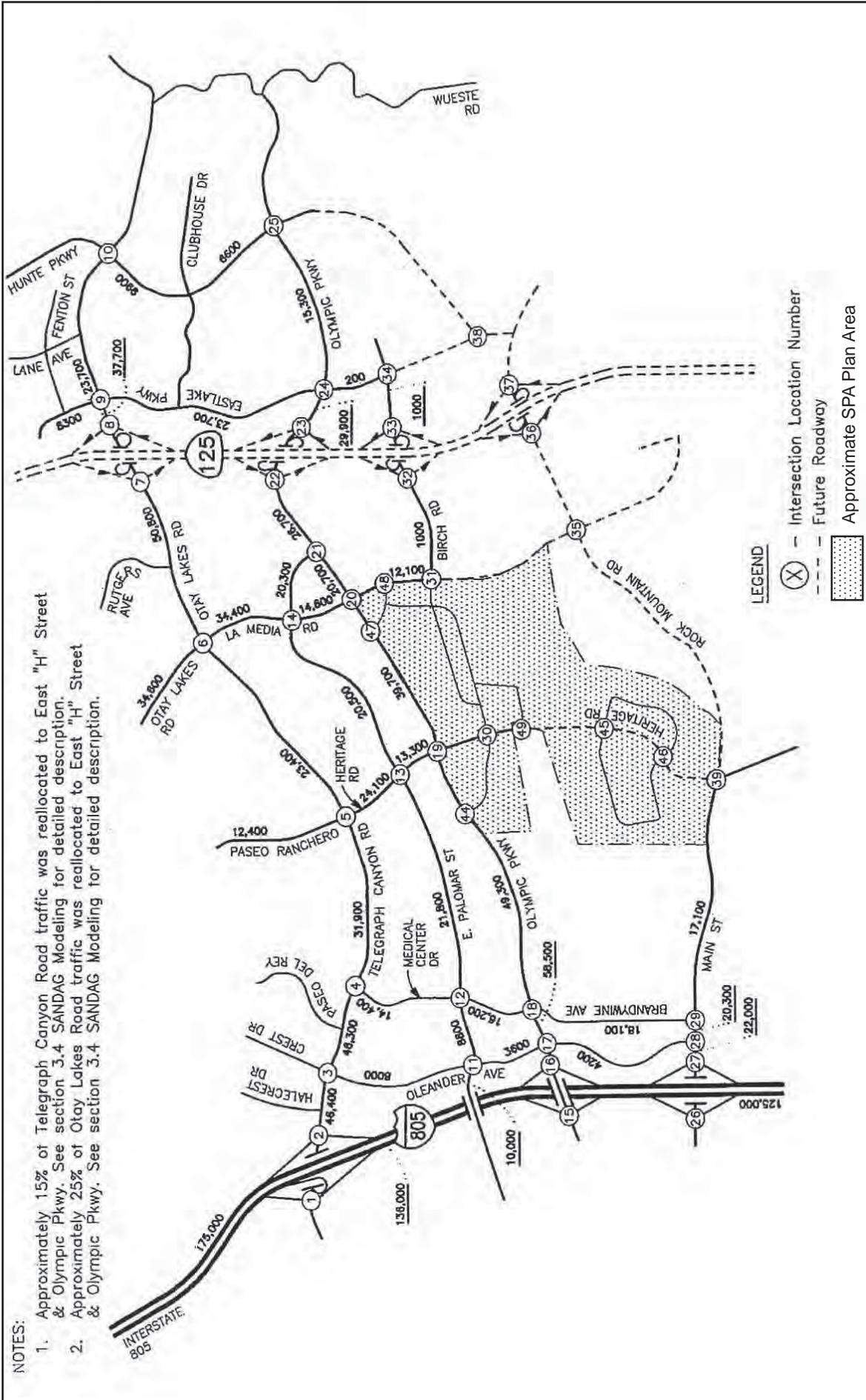


FIGURE 5.10-3  
Year 2005 ADT

NOTES:

1. Approximately 15% of Telegraph Canyon Road traffic was reallocated to East "H" Street & Olympic Pkwy. See section 3.4 SANDAG Modeling for detailed description.
2. Approximately 25% of Otay Lakes Road traffic was reallocated to East "H" Street & Olympic Pkwy. See section 3.4 SANDAG Modeling for detailed description.

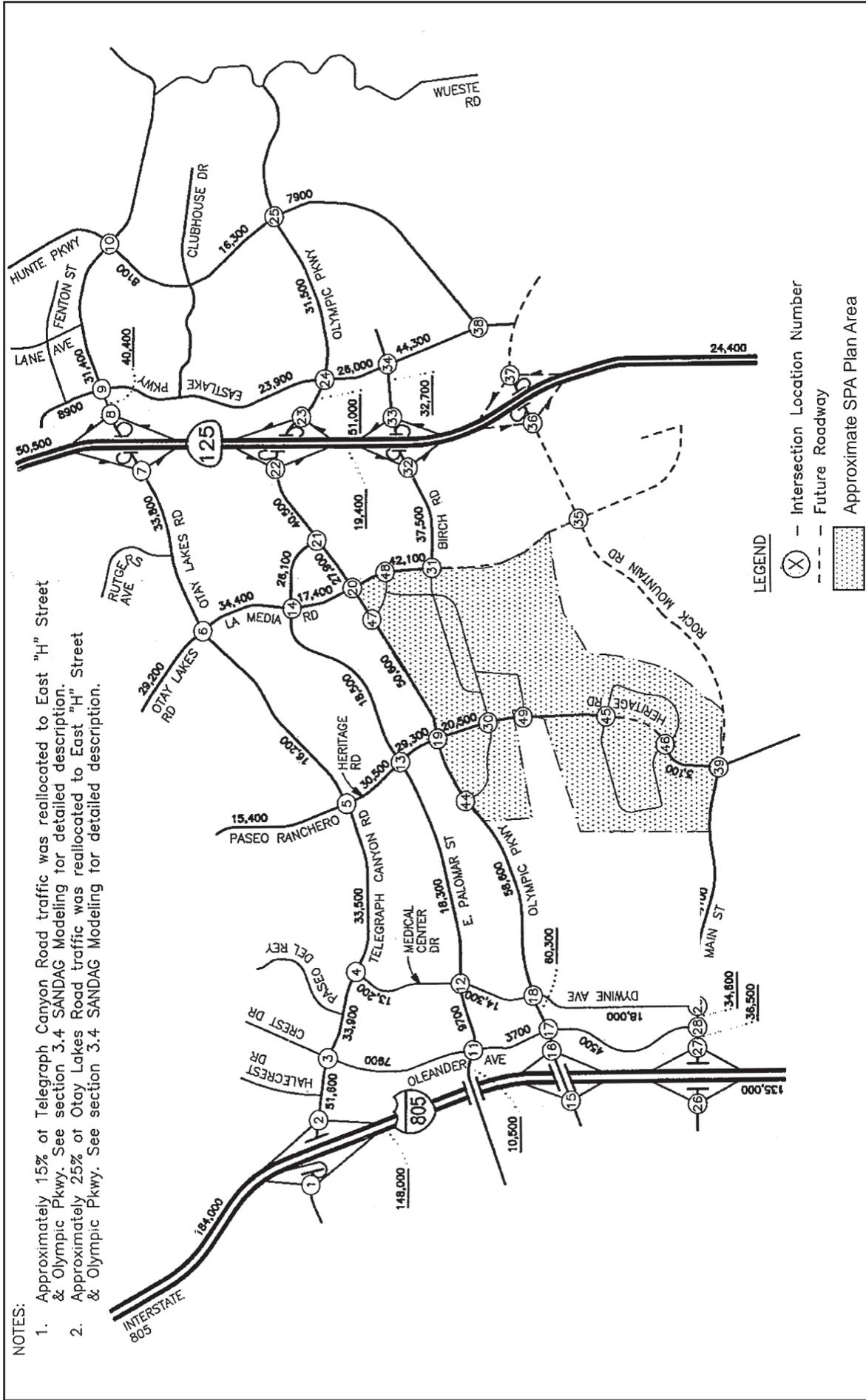


FIGURE 5.10-4  
Year 2010 ADT

NOTES:

1. Approximately 15% of Telegraph Canyon Road traffic was reallocated to East "H" Street & Olympic Pkwy. See section 3.4 SANDAG Modeling for detailed description.
2. Approximately 25% of Otay Lakes Road traffic was reallocated to East "H" Street & Olympic Pkwy. See section 3.4 SANDAG Modeling for detailed description.

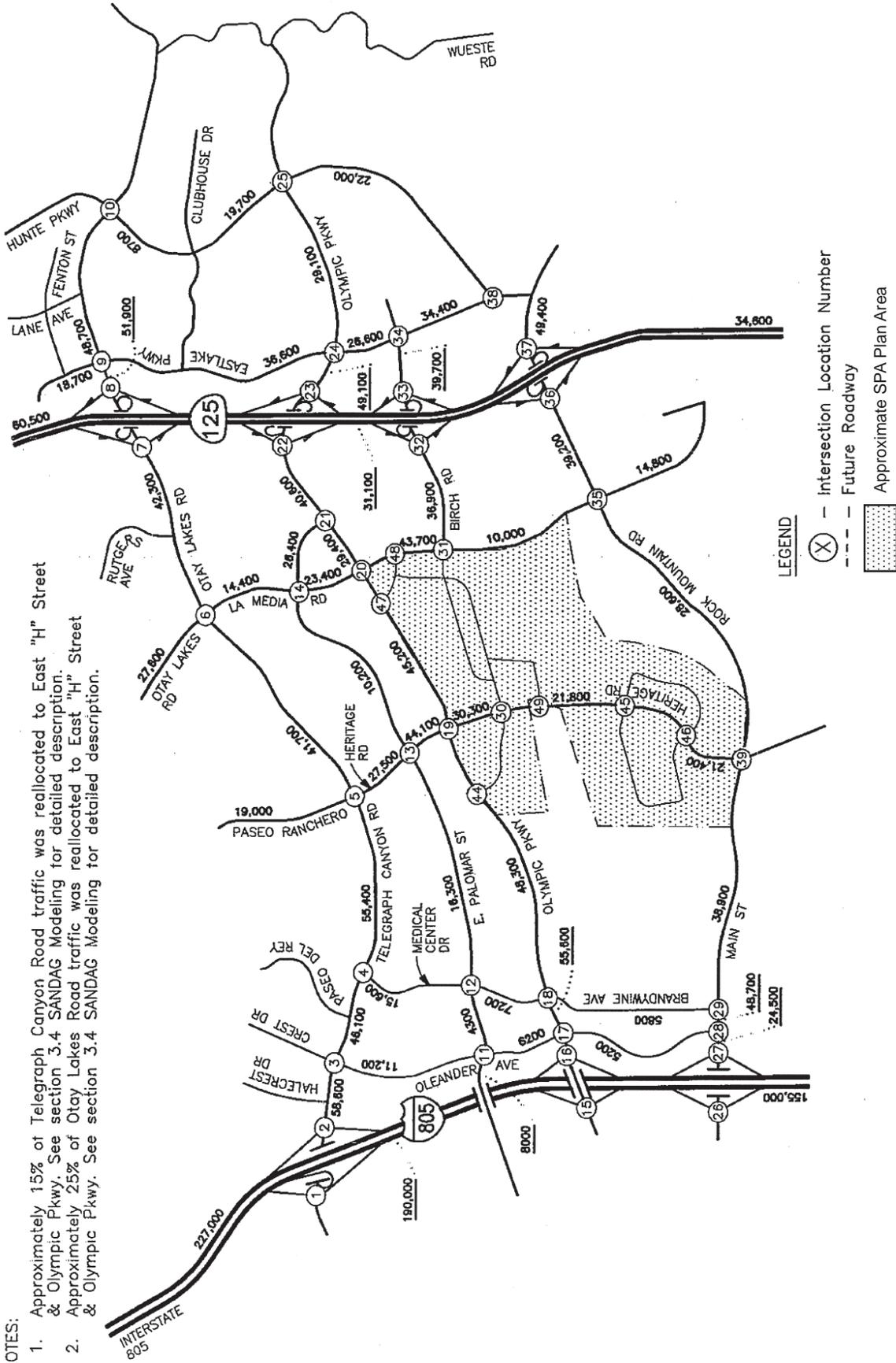


FIGURE 5.10-5  
Year 2020 ADT

NOTES:

1. Approximately 15% of Telegraph Canyon Road traffic was reallocated to East "H" Street & Olympic Pkwy. See section 3.4 SANDAG Modeling for detailed description.
2. Approximately 25% of Otoy Lakes Road traffic was reallocated to East "H" Street & Olympic Pkwy. See section 3.4 SANDAG Modeling for detailed description.

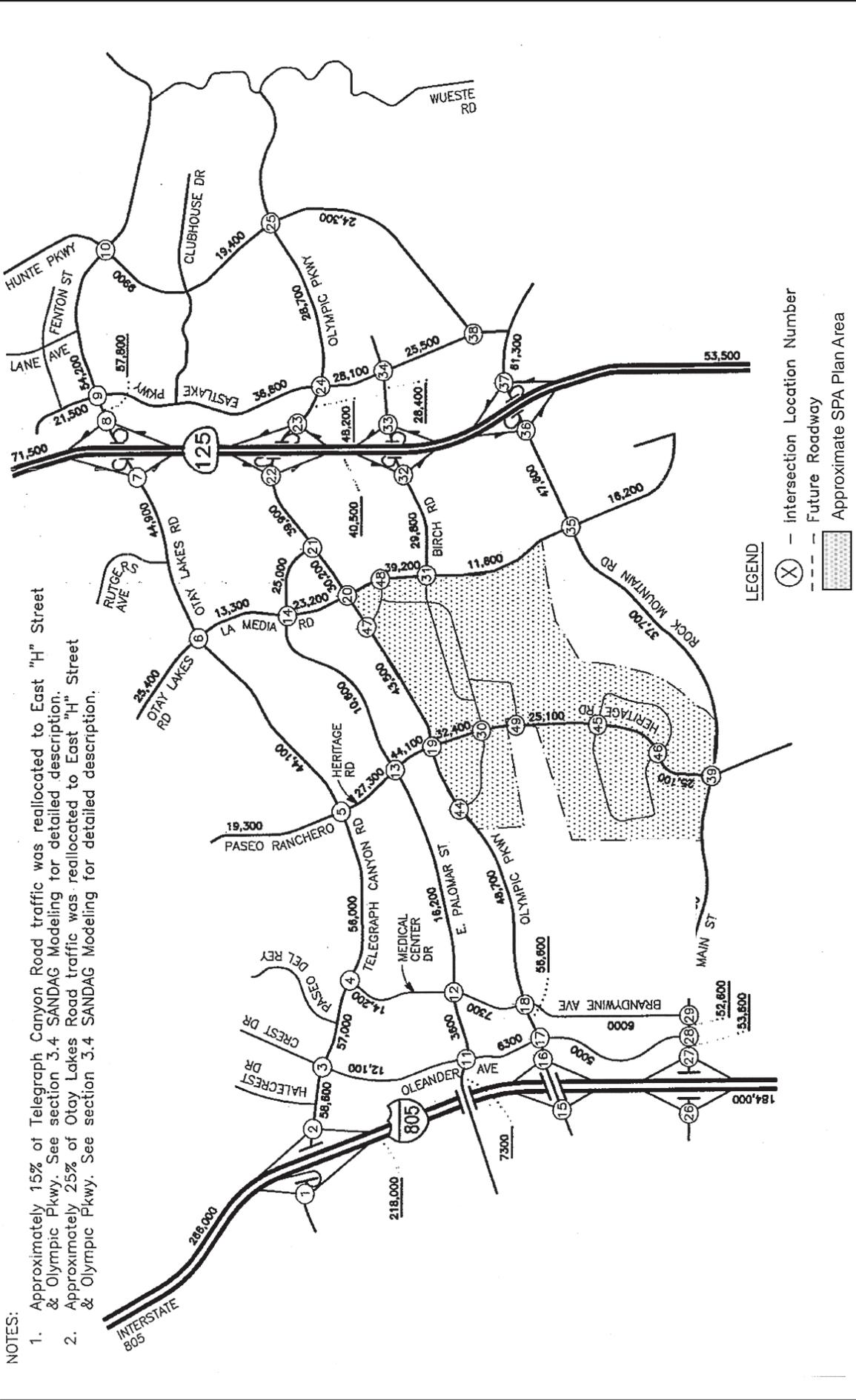


FIGURE 5.10-6  
Year 2030 ADT

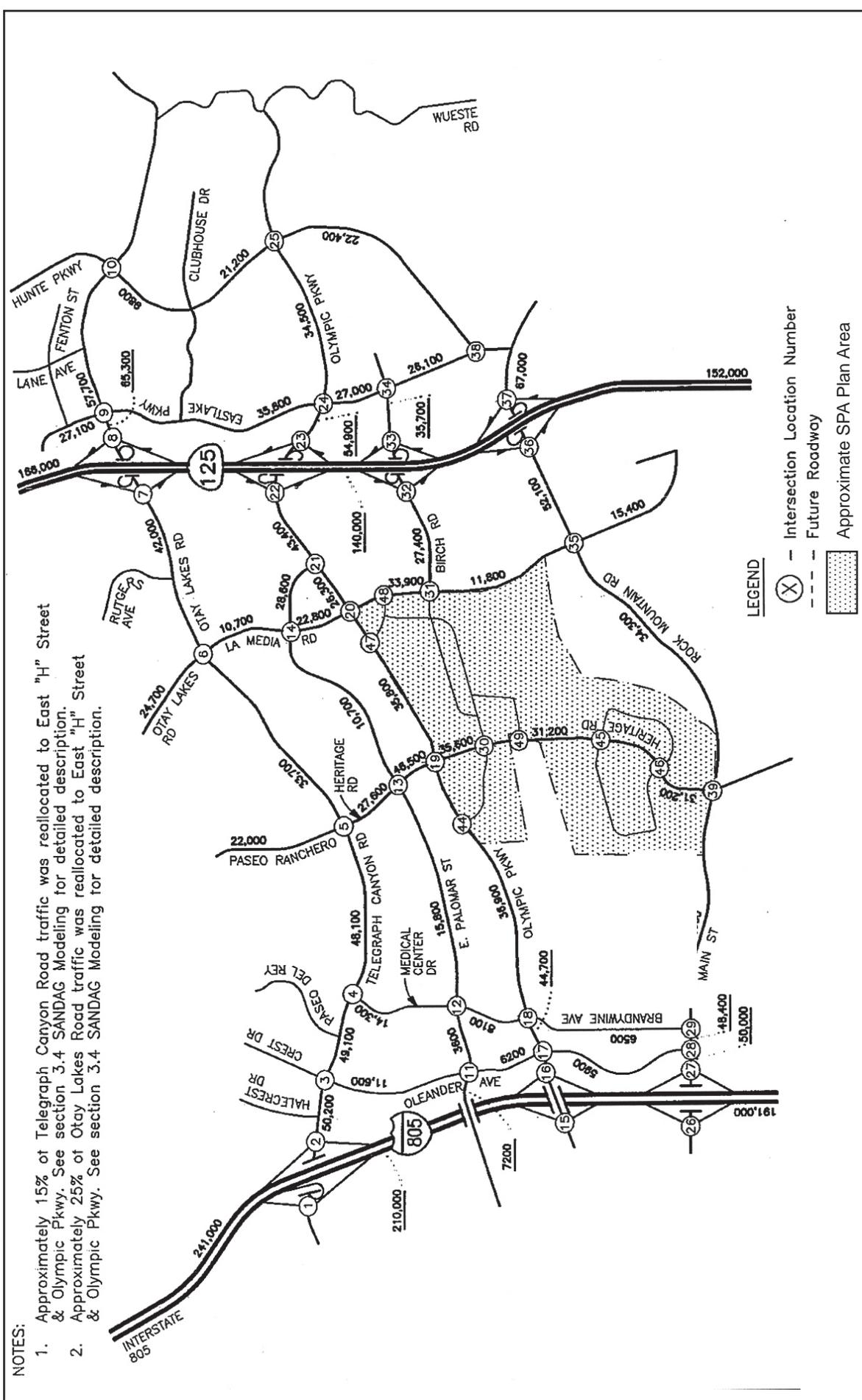


FIGURE 5.10-7  
Buildout ADT

TABLE 5.10-11  
PEAK HOUR INTERSECTION OPERATIONS

Intersection	Peak Hour	Scenario 1 (2005)		Scenario 2 (2010)		Scenario 3 (2015)		Scenario 5 (2030 Adopted Land Use)		Scenario 6 (Buildout)	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Telegraph Canyon Rd./I-805 SB Ramps	AM	26.4	C	26.2	C	28.3	C	25.3	C	26.2	C
	PM	32.4	C	38.5	D	35.3	D	34.8	C	40.8	D
2. Telegraph Canyon Rd./I-805 NB Ramps	AM	22.2	C	28.2	C	22.5	C	20.9	C	20.7	C
	PM	18.2	B	28.3	C	19.7	B	16.9	B	18.6	B
3. Telegraph Canyon Rd./Oleander Ave.	AM	21.9	C	20.9	C	20.3	C	24.8	C	26.0	C
	PM	26.3	C	25.7	C	22.6	C	26.2	C	30.8	C
4. Telegraph Canyon Rd./Medical Center Dr.	AM	18.9	B	17.3	B	16.5	B	14.2	B	16.4	B
	PM	20.1	C	19.2	B	21.1	C	16.3	B	19.1	B
5. Telegraph Canyon Rd./Paseo Ranchero/Heritage Rd.	AM	37.7	C	32.6	C	33.8	C	33.3	C	34.9	C
	PM	34.9	C	36.1	D	38.9	D	38.7	D	39.7	D
6. Telegraph Canyon Rd./Otay Lakes Rd./La Media Rd.	AM	35.9	D	31.6	C	29.6	C	29.1	C	28.1	C
	PM	38.8	D	36.1	D	33.0	C	32.2	C	31.6	C
7. Otay Lakes Rd./SR-125 SB Ramps	AM	1	1	20.8	C	23.7	C	25.6	C	31.8	C
	PM	1	1	20.6	C	22.3	C	28.7	C	48.5	D
8. Otay Lakes Rd./ SR-125 NB Ramps	AM	1	1	15.6	B	21.7	C	25.2	C	32.8	C
	PM	1	1	49.1	D	44.5	D	23.7	C	50.4	D
9. Otay Lakes Rd./Eastlake Pkwy.	AM	39.9	D	52.3	D	39.4	D	39.3	D	53.6	D
	PM	34.9	C	34.9	C	40.4	D	44.7	D	48.8	D
10. Otay Lakes Rd./Hunte Pkwy.	AM	34.4	C	36.8	D	40.3	D	40.6	D	42.1	D
	PM	27.7	C	28.0	C	28.9	C	29.1	C	30.3	C
11. Palomar St./Oleander Ave.	AM	11.4	B	12.0	B	10.0	A	28.7	C	33.1	C
	PM	12.0	B	12.9	B	9.6	A	19.4	B	21.1	C
12. Palomar St./Brandywine Ave.	AM	44.5	D	49.0	D	32.4	C	39.3	D	32.0	C
	PM	50.0	D	46.0	D	37.1	D	41.9	D	36.7	D
13. Palomar St./Heritage Rd.	AM	29.4	C	27.7	C	23.9	C	24.5	C	24.4	C
	PM	41.5	D	35.8	D	33.5	C	34.0	C	34.0	C
14. Palomar St./La Media Rd.	AM	33.9	C	32.7	C	32.4	C	30.8	C	32.7	C
	PM	48.4	D	50.3	D	40.0	D	39.1	D	39.9	D
15. Olympic Pkwy./I-805 SB Ramps	AM	28.4	C	30.5	C	45.5	D	34.5	C	29.3	C
	PM	49.8	D	53.0	D	54.6	D	44.7	D	48.6	D
16. Olympic Pkwy./I-805 NB Ramps	AM	39.1	D	45.6	D	49.9	D	40.8	D	32.4	C
	PM	27.5	C	28.5	C	30.5	C	36.8	D	27.1	C

**TABLE 5.10-11  
PEAK HOUR INTERSECTION OPERATIONS  
(continued)**

Intersection	Peak Hour	Scenario 1 (2005)		Scenario 2 (2010)		Scenario 3 (2015)		Scenario 5 (2030 Adopted Land Use)		Scenario 6 (Buildout)	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
17. Olympic Pkwy./Oleander Ave.	AM	26.9	C	28.1	C	37.1	D	28.1	C	36.8	D
	PM	22.6	C	23.9	C	29.5	C	24.0	C	30.8	C
18. Olympic Pkwy./Brandywine Ave.	AM	54.0	D	39.7	D	36.3	D	53.4	D	37.1	D
	PM	40.1	D	41.7	D	32.9	C	52.4	D	34.5	C
19. Olympic Pkwy./Heritage Rd.	AM	23.3	C	39.2	D	48.3	D	49.0	D	41.5	D
	PM	26.0	C	41.8	D	43.4	D	47.3	D	41.8	D
20. Olympic Pkwy./La Media Rd.	AM	32.2	C	41.3	D	44.8	D	41.3	D	42.6	D
	PM	34.4	C	40.9	D	45.0	D	46.8	D	41.9	D
21. Olympic Pkwy./Palomar St.	AM	28.3	C	33.8	C	33.1	C	32.8	C	36.0	D
	PM	33.8	C	42.7	D	41.9	D	40.9	D	48.2	D
22. Olympic Pkwy./SR-125 SB Ramps	AM	1	1	16.9	B	14.9	B	14.4	B	19.0	B
	PM	1	1	18.5	B	15.6	B	17.7	B	21.7	C
23. Olympic Pkwy./SR-125 NB Ramps	AM	1	1	6.6	A	5.0	A	15.7	B	14.9	B
	PM	1	1	5.2	A	8.3	A	14.0	B	12.2	B
24. Olympic Pkwy./Eastlake Pkwy.	AM	25.0	C	43.1	D	50.8	D	52.2	D	42.4	D
	PM	25.9	C	38.5	D	39.8	D	37.6	D	38.6	D
25. Olympic Pkwy./Hunte Pkwy.	AM	28.9	C	35.3	D	39.1	D	42.2	D	41.5	D
	PM	25.8	C	28.0	C	33.1	C	36.5	D	34.2	C
26. Main St./I-805 SB Ramps	AM	24.2	C	27.1	C	26.1	C	17.8	B	25.7	C
	PM	25.2	C	39.8	D	45.0	D	36.1	D	47.2	D
27. Main St./I-805 NB Ramps	AM	18.7	B	22.1	C	21.2	C	22.9	C	21.5	C
	PM	21.2	C	29.9	C	32.5	C	34.8	C	29.6	C
28. Main St./Oleander Ave.	AM	16.2	B	13.5	B	13.6	B	13.6	B	15.4	B
	PM	20.1	C	17.9	B	18.6	B	19.6	B	20.3	C
29. Main St./Brandywine Ave.	AM	37.0	D	41.9	D	28.8	C	29.4	C	29.8	C
	PM	53.0	D	51.1	D	33.7	C	33.2	C	35.5	D
30. Street "D"/Heritage Rd.	AM	1	1	14.4	B	17.6	B	16.4	B	15.7	B
	PM	1	1	10.4	B	15.5	B	15.4	B	16.7	B
31. Birch Rd./La Media Rd.	AM	1	1	32.7	C	36.0	D	36.1	D	39.6	C
	PM	1	1	35.9	D	40.7	D	44.7	D	37.1	D
32. Birch Rd./SR-125/SB Ramps	AM	1	1	14.7	B	19.4	B	17.8	B	19.6	B
	PM	1	1	9.7	A	13.6	B	14.1	B	15.6	B
33. Birch Rd./ SR-125/NB Ramps	AM	1	1	13.4	B	12.6	B	12.0	B	18.5	B
	PM	1	1	9.7	A	9.9	A	7.7	A	52.5	D

**TABLE 5.10-11  
PEAK HOUR INTERSECTION OPERATIONS  
(continued)**

Intersection	Scenario 1 (2005)		Scenario 2 (2010)		Scenario 3 (2015)		Scenario 5 (2030 Adopted Land Use)		Scenario 6 (Buildout)		
	Peak Hour	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
34. Birch Rd./Eastlake Pkwy.	AM	22.4	C	54.9	D	39.5	D	37.0	D	35.6	D
	PM	30.3	C	53.3	D	39.7	D	34.8	C	37.8	D
35. Rock Mountain Rd./La Media Rd.	AM	1	1	1	1	41.7	D	32.8	C	<b>61.2</b>	<b>E</b>
	PM	1	1	1	1	51.0	D	36.1	D	<b>90.4</b>	<b>F</b>
36. Rock Mountain Rd./SR-125 SB Ramps	AM	1	1	1	1	10.1	B	14.6	B	22.6	C
	PM	1	1	1	1	10.4	B	15.0	B	22.2	C
37. Rock Mountain Rd./SR-125 NB Ramps	AM	1	1	1	1	20.3	C	19.9	B	24.0	C
	PM	1	1	1	1	22.2	C	21.7	C	27.0	C
38. Hunte Pkwy./Eastlake Pkwy.	AM	1	1	21.2	C	30.3	C	35.7	C	30.0	C
	PM	1	1	35.2	D	37.9	D	37.3	D	32.8	C
39. Heritage Rd./Main St.	AM	1	1	29.8	C	32.7	C	30.9	C	36.4	D
	PM	1	1	30.5	C	33.6	C	32.5	C	37.8	D
40. Rock Mountain Rd./Main St.	AM	2	2	2	2	2	2	25.4	C	2	2
	PM	2	2	2	2	2	2	23.8	C	2	2
41. Main St./La Media Rd.	AM	2	2	2	2	2	2	28.8	C	2	2
	PM	2	2	2	2	2	2	28.7	C	2	2
42. Main St./SR-125 SB Ramps	AM	2	2	2	2	2	2	11.0	B	2	2
	PM	2	2	2	2	2	2	5.4	A	2	2
43. Main St./SR-125 N Ramps	AM	2	2	2	2	2	2	8.6	A	2	2
	PM	2	2	2	2	2	2	8.0	A	2	2

NOTES: Scenarios 4 and 7 of the traffic study compared 2030 and buildout timeframes with the 1989 General Plan project land uses. Subsequent to the preparation of the traffic study, in 2005 the updated General Plan was adopted and therefore, the results of the analysis for those two scenarios are not included in this EIR.

Bold and shading indicate LOS E or LOS F conditions.

<sup>1</sup>Intersection does not exist in that scenario.

<sup>2</sup>Intersection does not exist in the scenarios with proposed roadway network.

**TABLE 5.10-12  
SEGMENT OPERATIONS**

Segment	Roadway Classification	LOS C Capacity	Scenario 1 (2005)		Scenario 2 (2010)		Scenario 3 (2015)		Scenario 5 (2030 Adopted Land Use)		Scenario 6 (Buildout)	
			Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS
Telegrapha Canyon Road	7-Ln Major Street	46,700	E	51,600	D	58,100	E	52,900	E	50,200	D	
I-805 to Oleander Ave.	6-Ln Prime Arterial	50,000	C	33,900	A	46,100	E	52,100	E	49,100	C	
Oleander Ave. to Medical Center Dr.	6-Ln Prime Arterial	50,000	A	31,900	A	55,400	D	50,700	D	48,100	C	
Medical Center Dr. to Paseo Rancho/Heritage Rd.	6-Ln Prime Arterial	50,000	A	16,200	A	41,700	C	46,000	C	33,700	A	
Paseo Rancho/Heritage Rd. to Otay Lakes Rd.												
Otay Lakes Road												
North of Telegraph Canyon Rd.	4-Ln Major Street	30,000	E	29,200	C	27,600	B	25,000	B	24,700	B	
La Media Rd. to SR-125	6-Ln Prime Arterial	50,000	B	33,800	A	42,300	B	46,400	C	42,000	A	
SR-125 to Eastlake Pkwy.	7-Ln Prime Arterial	58,300	A	40,400	A	51,900	C	58,200	C	65,300	D	
Eastlake Pkwy. to Lane Ave.	6-Ln Prime Arterial	50,000	A	31,400	A	48,700	D	54,500	D	57,700	E	
Palomar Street												
I-805 to Oleander Ave.	4-Ln Major Street	30,000	A	10,500	A	8,000	A	19,900	A	7,200	A	
Oleander Ave. to Medical Center Dr.	4-Ln Major Street	30,000	A	9,700	A	4,300	A	14,900	A	3,400	A	
Medical Center Dr. to Heritage Rd.	4-Ln Major Street	30,000	A	18,300	A	16,300	A	21,100	A	15,800	A	
Heritage Rd. to La Olympic Pkwy.	Class I Collector	22,000	C	18,500	B	10,200	A	10,600	A	10,700	A	
Olympic Parkway												
I-805 to Medical Center Dr.	6-Ln Prime Arterial	50,000	E	60,300	E	55,600	E	55,200	D	44,700	C	
Medical Center Dr. to Heritage Rd.	6-Ln Prime Arterial	50,000	C	58,600	E	48,300	C	49,900	C	36,900	A	
Heritage Rd. to La Media Rd.	6-Ln Prime Arterial	50,000	B	50,600	D	45,200	B	51,000	D	35,800	A	
La Media Rd. to Palomar St.	6-Ln Prime Arterial	50,000	A	27,900	A	29,400	A	29,000	A	26,300	A	
Palomar St. to SR-125	6-Ln Prime Arterial	50,000	A	40,500	B	40,600	B	39,200	B	43,400	B	
SR-125 to Eastlake Pkwy.	6-Ln Prime Arterial	50,000	A	51,000	D	49,100	C	48,900	C	54,900	D	
Eastlake Pkwy. to Hunte Pkwy.	6-Ln Prime Arterial	50,000	A	31,500	A	29,100	A	30,500	A	34,500	A	
Birch Road												
La Media Rd. to SR-125	6-Ln Major Street	40,000	A	37,500	C	36,900	A	33,000	B	27,400	A	
SR-125 to Eastlake Pkwy.	6-Ln Prime Arterial	50,000	A	32,700	A	39,700	A	33,200	A	35,700	A	
Rock Mountain Road												
Main St. to La Media Rd.	Class I Collector	22,000	1	1	1	28,600	F	10,300	A	34,300	F	
La Media Rd. to SR-125	Class I Collector	22,000	1	1	1	39,200	F	22,100	D	52,100	F	
SR-125 to Eastlake Pkwy.	Class I Collector	22,000	1	1	1	49,400	F	40,600	F	67,000	F	
Main Street												
I-805 to Oleander Ave.	6-Ln Prime Arterial	50,000	A	36,500	A	24,500	A	43,700	B	25,000	A	
Oleander Ave. to Brandywine Ave.	6-Ln Prime Arterial	50,000	A	35,300	A	48,700	C	42,600	B	48,400	C	
Brandywine Ave. to Heritage Rd.	6-Ln Prime Arterial	50,000	A	37,200	A	38,900	B	31,500	A	40,600	B	
Heritage Rd. to Rock Mountain Rd.	6-Ln Prime Arterial	50,000	1	1	1	1	1	21,400	A	3	3	
Rock Mountain Rd. to La Media Rd.	6-Ln Prime Arterial	50,000	1	1	1	1	1	11,900	A	3	3	
La Media Rd. to SR-125 SB Ramps	6-Ln Prime Arterial	50,000	1	1	1	1	1	12,500	A	3	3	
Oleander Avenue												
Telegraph Canyon Rd. to Palomar St.	Class II Collector	12,000	A	7,900	A	11,200	C	10,000	B	11,600	C	

**TABLE 5.10-12  
SEGMENT OPERATIONS  
(continued)**

Segment	Roadway Classification	LOS C Capacity	Scenario 1 (2005)		Scenario 2 (2010)		Scenario 3 (2015)		Scenario 5 (2030 Adopted Land Use)		Scenario 6 (Buildout)	
			Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS
Palomar St. to Olympic Pkwy.	Class II Collector	12,000	3,600	A	3,700	A	6,200	A	5,500	A	6,200	A
Olympic Pkwy. to Main St.	Class II Collector	12,000	4,200	A	4,500	A	5,200	A	5,500	A	5,900	A
Medical Center Drive												
Telegraph Canyon Rd. to Palomar St.	Class I Collector	22,000	14,400	A	13,200	A	15,600	A	11,100	A	14,300	A
Brandywine Avenue												
Palomar St. to Olympic Pkwy.	Class I Collector	22,000	16,200	A	14,300	A	7,200	A	7,500	A	8,100	A
Olympic Pkwy. to Main St.	Class I Collector	22,000	18,100	B	18,000	B	5,800	A	6,600	A	6,500	A
Paseo Rancho												
North of Telegraph Canyon Rd.	Class I Collector	22,000	12,400	A	15,400	A	19,000	B	18,200	B	22,000	C
Telegraph Canyon Rd. to Palomar St.	6-Ln Prime Arterial	50,000	24,100	A	30,500	A	27,500	A	27,200	A	27,600	A
Palomar St. to Olympic Pkwy.	6-Ln Prime Arterial	50,000	13,300	A	29,300	A	44,100	C	44,500	C	46,500	C
Olympic Pkwy. to Birch Rd.	6-Ln Prime Arterial	50,000	1	1	20,500	A	30,300	A	28,900	A	35,600	A
Birch Rd. to Main St.	6-Ln Prime Arterial	50,000	1	1	1	1	21,800	A	24,500	A	31,200	A
La Media Road												
Telegraph Canyon Rd. to Palomar St.	6-Ln Prime Arterial	50,000	34,400	A	34,400	A	14,400	A	14,000	A	10,700	A
Palomar St. to Olympic Pkwy.	6-Ln Prime Arterial	50,000	14,600	A	17,400	A	23,400	A	24,300	A	22,800	A
Olympic Pkwy. to Birch Rd.	6-Ln Prime Arterial	50,000	12,100	A	42,100	B	43,700	B	45,400	C	33,900	A
Birch Rd. to Rock Mountain Rd.	6-Ln Prime Arterial	50,000	1	1	1	1	10,000	A	15,900	A	11,800	A
Rock Mountain Rd. to Main St.	6-Ln Prime Arterial	50,000	1	1	1	1	14,800	A	18,700	A	15,400	A
Eastlake Parkway												
Fenton St. to Olay Lakes Rd.	4-Ln Major Street	30,000	8,300	A	8,900	A	18,700	A	21,800	A	27,100	C
Olay Lakes Rd. to Olympic Pkwy.	6-Ln Prime Arterial	50,000	23,700	A	23,900	A	36,600	A	38,400	A	35,800	A
Olympic Pkwy. to Birch Rd.	6-Ln Prime Arterial	50,000	200	A	26,000	A	26,600	A	24,300	A	27,000	A
Birch Rd. to Rock Mountain Rd.	6-Ln Prime Arterial	50,000	1	1	44,300	C	34,400	A	26,900	A	26,100	A
Hunte Parkway												
Olay Lakes Rd. to Clubhouse Dr.	4-Ln Major Street	30,000	9,900	A	8,100	A	8,700	A	10,200	A	9,800	A
Clubhouse Dr. to Olympic Pkwy.	4-Ln Major Street	30,000	6,600	A	16,300	A	19,700	A	20,000	A	21,200	A
Olympic Pkwy. to Eastlake Pkwy.	4-Ln Major Street	30,000	1	1	7,900	A	22,000	A	22,700	B	22,400	A

NOTE:: Scenarios 4 and 7 of the traffic study compared 2030 and buildout timeframes with the 1989 General Plan project land uses. Subsequent to the preparation of the traffic study, in 2005 the updated General Plan was adopted and therefore, the results of the analysis for those two scenarios are not included in this EIR.

Bold and shading indicates LOS D, LOS E, or LOS F operations.

<sup>1</sup>Segment does not exist.

## FREEWAYS

For 2005, all segments of I-805 between East H Street and Palm Avenue are calculated to operate at LOS D or better in both directions during the AM and PM peak hours.

Threshold 2: Long-term (Study Horizon Year 5 and later)

*2010 (Proposed Project Land Uses, Proposed Land Uses, and Proposed Circulation Element)*

## PEAK HOUR INTERSECTIONS

As shown on Table 5.10-11, all study area intersections are calculated to operate at LOS D or better for the 2010 condition.

## DAILY SEGMENTS

As shown on Table 5.10-12, all study area segments are calculated to operate at LOS C or better for the 2010 condition except the following, which are calculated to operate at LOS D or worse:

- Telegraph Canyon Road from I-805 to Oleander Avenue (LOS D);
- Olympic Parkway from I-805 to Medical Center Drive (LOS E);
- Olympic Parkway from Medical Center Drive to Heritage Road (LOS E);
- Olympic Parkway from Heritage Road to La Media Road (LOS D); and
- Olympic Parkway from SR-125 to Eastlake Parkway (LOS D).

## FREEWAYS

For 2010, segments of I-805 and SR-125 were analyzed. All segments of I-805 between East H Street and Palm Avenue are calculated to continue to operate at LOS D or better in both directions during the AM and PM peak hours. All segments of SR-125 from East H Street to south of Main Street are calculated to operate at LOS A.

*2015 (Proposed Project Land Uses, Proposed Land Uses, and Proposed Circulation Element)*

Peak Hour Intersections

All study area intersections are calculated to operate at LOS D or better for the 2015 condition.

DAILY SEGMENTS

All study area segments are calculated to operate at LOS C or better for the 2015 condition except for the following which are calculated to operate at LOS D or worse:

- Telegraph Canyon Road from I-805 to Oleander Avenue (LOS E);
- Telegraph Canyon Road from Medical Center Drive to Paseo Ranchero/Heritage Road (LOS D);
- Olympic Parkway from I-805 to Medical Center Drive (LOS D);
- Rock Mountain Road from La Media Road to SR-125 (LOS F); and
- Rock Mountain Road from SR-125 to Eastlake Parkway (LOS F).

FREEWAYS

For 2015, segments of I-805 and SR-125 were analyzed. All segments of I-805 between East H Street and Palm Avenue are calculated to continue to operate at LOS D or better in both directions during the AM and PM peak hours except the following, which are calculated to deteriorate:

- Northbound I-805 from Telegraph Canyon Road to East H Street (LOS E during the AM peak hour);
- Southbound I-805 from East H Street to Telegraph Canyon Road (LOS F(0) during the PM peak hour); and
- Southbound I-805 from Olympic Parkway to Main Street (LOS E during the PM peak hour).

All segments of SR-125 from East H Street to south of Main Street are calculated to continue to operate at LOS A.

*2030 (Proposed Project Land Uses, Proposed Land Uses, with Toll on SR-125, and Proposed Circulation Element)*

#### PEAK HOUR INTERSECTIONS

All study area intersections are calculated to operate at LOS D or better for the 2030 condition except the Rock Mountain Road/La Media Road intersection, which is calculated to operate at LOS E during the AM peak hour and LOS F during the PM peak hour.

#### DAILY SEGMENTS

All study area segments are calculated to operate at LOS C or better for the 2030 condition, except the following, which are calculated to operate at LOS D or worse:

- Telegraph Canyon Road from I-805 to Oleander Avenue (LOS E);
- Telegraph Canyon Road from Oleander Avenue to Medical Center Drive (LOS E);
- Telegraph Canyon Road from Medical Center Drive to Paseo Ranchero/Heritage Road (LOS D);
- Otay Lakes Road from Eastlake Parkway to Lane Avenue (LOS D);
- Olympic Parkway from I-805 to Medical Center Drive (LOS E);
- Rock Mountain Road from Main Street to La Media Road (LOS F);
- Rock Mountain Road from La Media Road to SR-125 (LOS F);
- Rock Mountain Road from SR-125 to Eastlake Parkway (LOS F);
- Main Street from I-805 to Oleander Avenue (LOS D);
- Main Street from Oleander Avenue to Brandywine Avenue (LOS D); and
- Oleander Avenue from Telegraph Canyon Road to Palomar St. (LOS D).

#### FREEWAYS

The following segments of I-805 are calculated to deteriorate to LOS E or LOS F. (The remaining segments are calculated to operate at LOS D or better.):

- Northbound I-805 from Telegraph Canyon Road to East H Street (LOS F(0) during the AM peak hour and LOS E during the PM peak hour);
- Southbound I-805 from East H Street to Telegraph Canyon Road (LOS F(0) during the AM and PM peak hours);
- Northbound I-805 from Olympic Parkway to Telegraph Canyon Road (LOS E during the AM peak hour);
- Southbound I-805 from Telegraph Canyon Road to Olympic Parkway (LOS E during the PM peak hour); and
- Southbound I-805 from Olympic Parkway to Main Street (LOS E during the AM peak hour and LOS F(0) during the PM peak hour).

All segments of SR-125 from East H Street to south of Main Street are calculated to continue to operate at LOS A except the segment between East H Street and Telegraph Canyon Road, which is calculated to operate at LOS B.

*City of Chula Vista Buildout (Proposed Project Land Uses, Proposed Land Uses, no Toll on SR-125, and Proposed Circulation Element)*

#### PEAK HOUR INTERSECTIONS

Table 5.10-11 summarizes the peak hour intersection operations for the City of Chula Vista at buildout (assumes proposed project). Figure 5.10-8 shows the proposed project volumes at buildout. All study area intersections are calculated to operate at LOS D or better for this condition except the Rock Mountain Road/La Media Road intersection, which is calculated to operate at LOS E during the AM peak hour and LOS F during the PM peak hour.

#### DAILY SEGMENTS

All study area segments are calculated to operate at LOS C or better for the buildout condition, except the following, which are calculated to operate at LOS D or worse:

- Telegraph Canyon Road from I-805 to Oleander Avenue (LOS D);
- Otay Lakes Road from SR-125 to Eastlake Parkway (LOS D);
- Otay Lakes Road from Eastlake Parkway to Lane Avenue (LOS E);
- Olympic Parkway from SR-125 to Eastlake Parkway (LOS D);

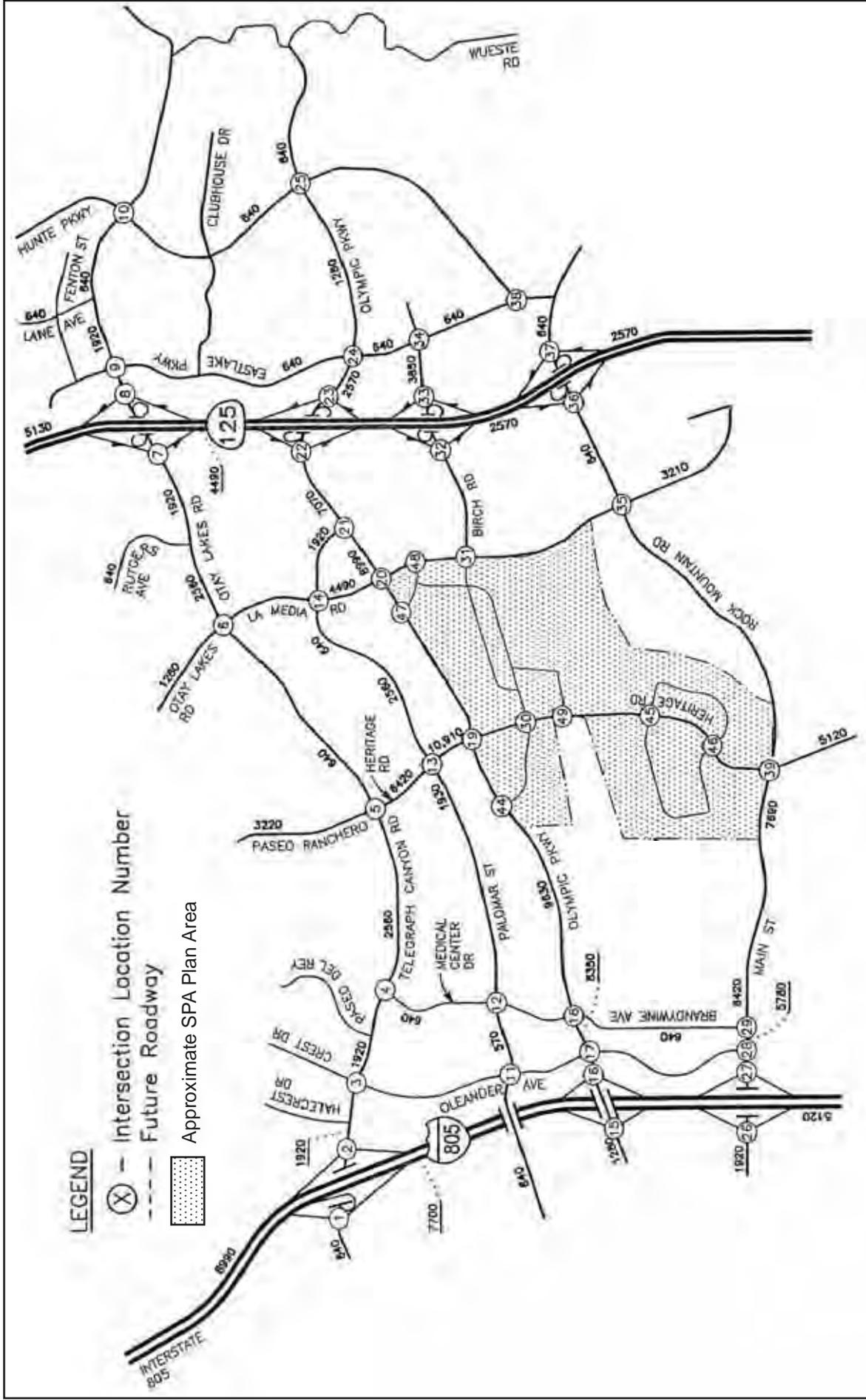


FIGURE 5.10-8  
Proposed Project Volumes at Buildout

- Rock Mountain Road from Main Street to La Media Road (LOS F);
- Rock Mountain Road from La Media Road to SR-125 (LOS F); and
- Rock Mountain Road from SR-125 to Eastlake Parkway (LOS F).

#### FREEWAYS

The following segments of I-805 are calculated to continue to operate at LOS E or LOS F as under the buildout condition. (The remaining segments are calculated to continue to operate at LOS D or better.):

- Northbound I-805 from Telegraph Canyon Road to East H Street (LOS F(0) during the AM peak hour)
- Southbound I-805 from East H Street to Telegraph Canyon Road (LOS F(0) during the PM peak hour);
- Southbound I-805 from Telegraph Canyon Road to Olympic Parkway (LOS E during the PM peak hour); and
- Southbound I-805 from Olympic Parkway to Main Street (LOS E during the AM hour and LOS F(0) during the PM peak hour).

As shown above, operations along some segments are calculated to improve over that for the 2030 condition. This may be due to the removal of toll on SR-125, which results in the reduction of traffic on the northern two segments of I-805. For buildout, all segments of SR-125 from East H Street to south of Main Street are calculated to operate at LOS D or better except one. The southbound segment of SR-125 from East H Street to Telegraph Canyon Road is calculated to deteriorate to LOS E.

#### *CMP Compliance*

This project is calculated to add more than 50 new directional peak hour trips to I-805. This is the only CMP facility in the study area. A complete analysis of I-805 is included in the traffic study prepared by LLG and included in this EIR as Appendix F.

#### *Public Facilities Financing Plan Analysis*

The following discussion pertains to the Public Facilities Financing Plan (PFFP) for the proposed project. The PFFP describes the transportation development impact fees based on equivalent dwelling units (EDUs) by project phase. The proposed PFFP identifies the development impact fees that the applicant must pay to mitigate impacts, the estimated cost

of the improvements, and the applicant's obligation to construct and/or pay for the necessary mitigation.

The near-term assignment of project traffic assumes that the southward connection of Heritage Road from Olympic Parkway to Main Street does not exist. In the traffic analysis, LLG determined approximately how many dwelling units within the project could be constructed before Heritage Road would need to be connected southward to Main Street. Table 5.10-13 summarizes the PFFP thresholds and Figure 5.10-9 shows the subject roadway segments.

Based on LLG's knowledge of the area and an inspection of the project access points, it was determined that the "constraint" in the roadway system that would result in the need for the Heritage Road southward connection would be either the AM peak hour left turn onto Olympic Parkway from one of four project access points (Street D, Heritage Road, Santa Venetia, or La Media Road), or the PM peak hour right turn from Olympic Parkway onto Heritage Road. Furthermore, assuming the northbound approach at each of the four access points provides dual left turn lanes, the volume constraint would either be when the northbound left turn peak hour volume reaches 600 or the peak hour eastbound right-turn volume reaches 400 (the theoretical capacity of a right-turn lane). Based on LLG's inspection, it was determined that the PM (inbound) peak hour would "fail" prior to the AM peak hour.

Access to the project site from La Media Road is assumed. The majority of inbound traffic from Olympic Parkway is expected to use Heritage Road since it will be out of direction for the majority of the residential uses to utilize Santa Venetia or La Media Road to reach their home. Based on LLG's inspection, the eastbound right turn from Olympic Parkway onto Heritage Road is expected to be the PFFP constraint. It is assumed that a second eastbound right-turn lane cannot be provided for slope and safety reasons.

There will be some non-residential uses, which will add traffic to the eastbound right turns. The PM inbound peak hour volume is 798. Assuming 15 percent of the non-residential traffic is captured internally, the volume drops to 678.

Assuming 27 percent of this 678 volume uses Heritage Road to turn right, the non-residential eastbound right-turn volume is 183. Therefore, there is capacity for 217 PM peak hour right-turn vehicles. Using a residential ADT of 9 ADT/dwelling unit (average of multi-family and single-family rate), based on SANDAG peak hour percentages each dwelling unit generates 0.63 PM inbound peak hour trips. Since 1,276 units would generate 217 PM peak hour eastbound right turns at the Olympic Parkway/Heritage Road intersection, Heritage Road should be connected between Olympic Parkway and Main Street once 1,276 EDU within Village Two are built. Based on SANDAG rates, 106 acres of industrial development is the same as 1,276 EDU.

**TABLE 5.10-13  
PFFP THRESHOLDS**

Facility	PFFP Threshold
A. Heritage Road between Olympic Parkway and Santa Victoria (Street "D")	Access or Frontage <sup>a</sup> , 1 <sup>st</sup> unit in Village Two west of Heritage Road or 1,008 EDUs <sup>2</sup> in Village Two overall
B. Heritage Road: Santa Victoria (Street "D") to Santa Lisa (Street "F")	Access or Frontage <sup>a</sup> , 1,276 EDUs <sup>b</sup> overall or 380 EDUs (31.7 acres of industrial) in Village Three
C. Heritage Road: Santa Lisa (Street "F") to Street "J" North	Access or Frontage <sup>a</sup> , 1,276 EDUs <sup>b</sup> overall or 380 EDUs (31.7 acres of industrial) in Village Three
D. Heritage Road: Street "J" North to Street "J" South	Access or Frontage <sup>a</sup> , 1,276 EDUs <sup>b</sup> overall or 380 EDUs (31.7 acres of industrial) in Village Three
E. Heritage Road: Street "J" South to Main Street <sup>c</sup>	Access or Frontage <sup>a</sup> , 1,276 EDUs <sup>b</sup> overall or 380 EDUs (31.7 acres of industrial) in Village Three
F. Main Street: Heritage Road to connect to existing improvements	Access or Frontage <sup>a</sup> , 1,276 EDUs <sup>b</sup> overall or 380 EDUs (31.7 acres of industrial) in Village Three
G. Santa Victoria (Street "D"): Olympic Parkway to Heritage Road	1 <sup>st</sup> EDU in Village Two west of Heritage Road
H. Santa Diana (Street "E"): Santa Victoria (Street "D") to State Street	Access or Frontage <sup>a</sup> or 1,008 EDUs <sup>b</sup> in Village Two overall
I. La Media Road: Santa Venetia to Birch Road	1 <sup>st</sup> EDU in Village Two
J. State Street (Street "E"): Santa Victoria (Street "B") to La Media Road	1 <sup>st</sup> EDU in Village Two
K. La Media Road: Birch Road to Park P-4 Entrance	With Park development
L. Rock Mountain Road: East of Heritage Road and/or Main Street within the SPA boundaries	Access of Frontage <sup>a</sup> , 1 <sup>st</sup> EDU <sup>b</sup> in Village Three, 2,090 EDUs in Village Two overall
M. Santa Victoria (Street "B"): Santa Diana to State Street	Access or Frontage <sup>a</sup> or 1,008 EDUs <sup>b</sup> in Village Two overall
N. Santa Victoria (Street "B"): Santa Venetia to Santa Diana (Street "E")	1 <sup>st</sup> EDU in Village Two
O. Santa Victoria (Street "D"): Heritage Road to Santa Diana (Street "E")	Access of Frontage or 1,008 EDUs <sup>b</sup> in Village Two overall

<sup>a</sup>A/F: Access or Frontage – Roadways needed for continuity and minimum access: roadway segment as determined by the City Engineer, is triggered with the first final map which has frontage on the roadway, or if roadway is required to provide access.

<sup>b</sup>In terms of equivalent dwelling units (EDUs) 1,276 residential units represents 1,276 equivalent dwelling units and 106 acres of industrial represents 1,276 EDUs based on SANDAG rates. Commercial uses are not included in the EDU calculations.

<sup>c</sup>Interim layout for Heritage Road and Main Street.

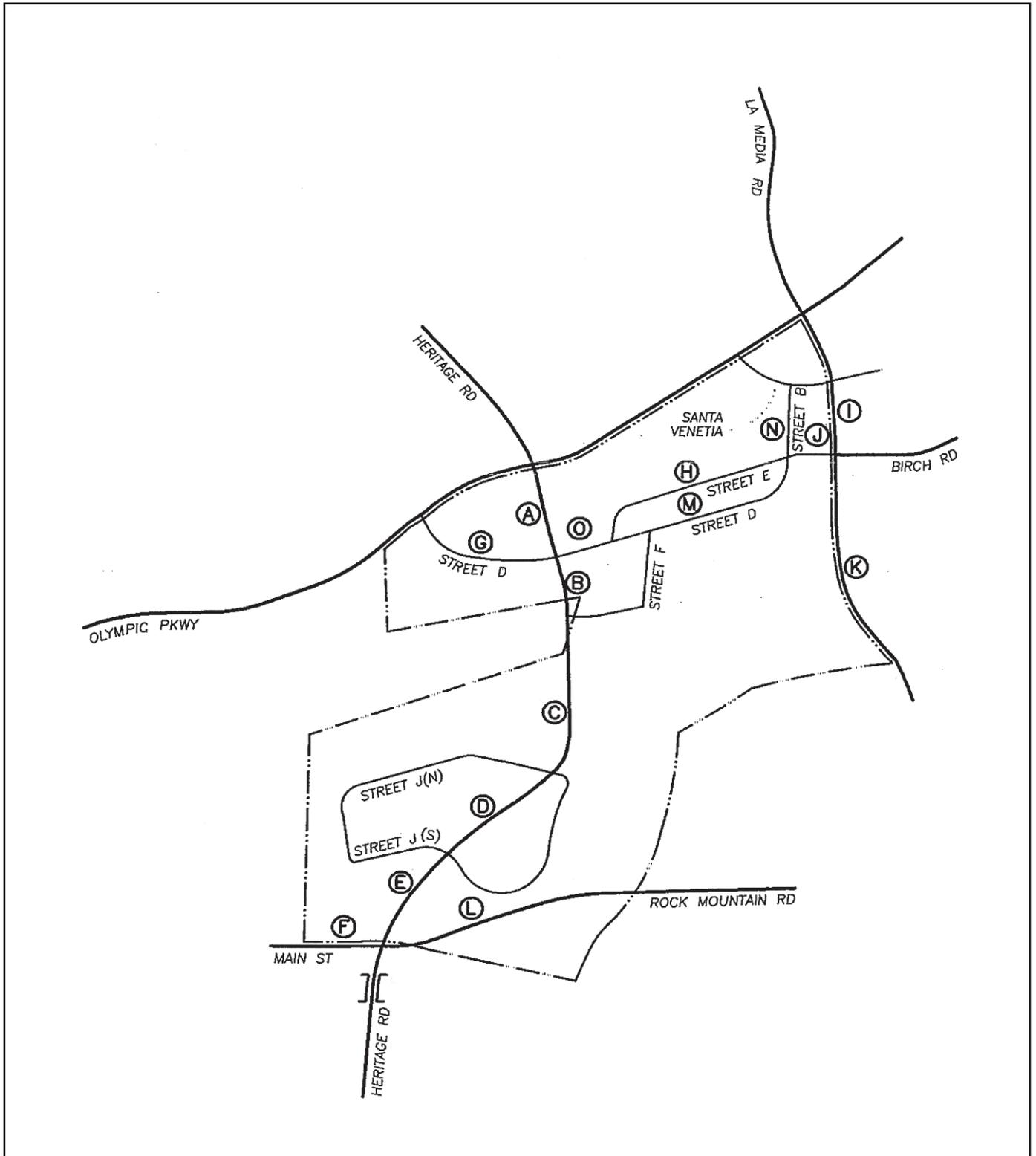


FIGURE 5.10-9  
PFFP Roadways

The volume at the Main Street/Heritage Road intersection would exceed City capacity standards for dual left-turn lanes (600 vehicles per hour) or right-turn lanes (400 vehicles per hour) if the industrial portion of the project did not have access to Olympic Parkway. Based on SANDAG's rates, industrial uses generate 120 ADT/acre, 13.44 AM inbound trips/acre, and 12.6 PM outbound trips/acre. If all industrial traffic was oriented to/from the west on Main Street from Heritage Road, 31.7 acres of industrial development would generate 400 PM peak hour southbound right-turn vehicles, and 41.6 acres would generate 600 AM peak hour eastbound left-turn vehicles. Therefore, access northward on Heritage Road to Olympic Parkway is needed once 31.7 acres of industrial land uses are developed. It may be necessary to provide northward access to Olympic Parkway with an industrial development if it is determined that access only to the south to Main Street is not sufficient from a safety standpoint.

#### *Temporary Main Street/Heritage Road Intersection Analysis*

A temporary intersection is necessary at the Main Street and Heritage Road intersection because the ultimate road cannot be built until the Heritage Road bridge over the Otay Valley or Rock Mountain Road is constructed. Therefore, LLG analyzed two different network scenarios for the intersection geometry of the temporary Main Street/Heritage Road intersection to determine if this temporary intersection can accommodate all of the residential units and a portion of industrial uses planned within Otay Range Villages Two and Three. Year 2010 land uses and network assumptions were used for both scenarios. Figure 5.10-10 depicts the intersection geometry assumed for the two scenarios.

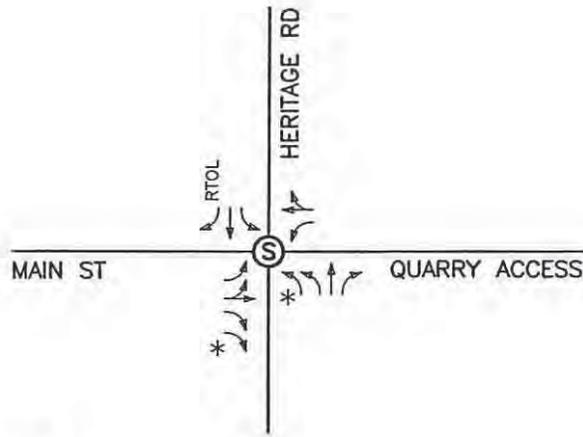
#### SCENARIO A

Scenario A analyzed the intersection configuration without Rock Mountain Road completed between Heritage Road and La Media Road. Based on the City threshold of right-turn volume of 400 vehicles per hour, with construction of the intersection configuration shown in Figure 5.10-10 for Scenario A, all the proposed land uses within Village Two, including the 87.9 acres of industrial uses, and 61.3 acres of industrial uses within Village Three can be built. These land uses are the equivalent to 4,216 EDU as shown below:

986 single-family units	986 EDU
1,800 multi-family units	1,440 EDU
149.2 acres of Industrial (assuming 120 ADT/acre)	<u>1,790 EDU</u>
TOTAL	4,216 EDU

The non-residential land uses within Village Two other than industrial uses (i.e., park, school, and commercial land uses) would not count towards the EDU threshold since these uses are local serving and are actually a traffic benefit since they capture traffic within the Village. Under Scenario A, the Heritage Road/Main Street temporary intersection is calculated to operate at LOS D or better with the addition of project traffic.

**SCENARIO A  
NO ROCK MOUNTAIN ROAD**

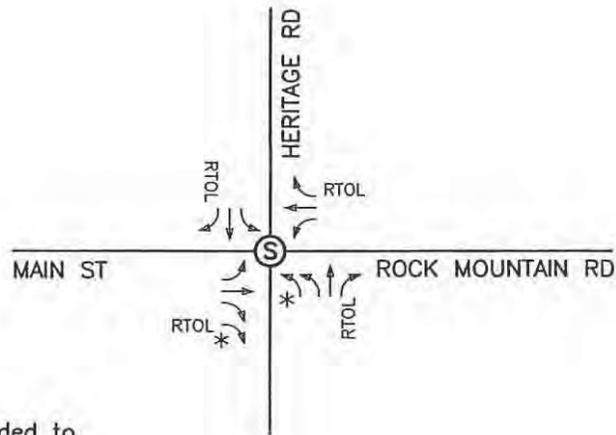


**LEGEND**

- Ⓢ - Traffic Signal
- RTOL - Right-Turn Overlap
- \* - Dual lanes assumed to be needed to serve the amphitheater

NOTE: Split phasing assumed for the East/West approaches.

**SCENARIO B  
WITH ROCK MOUNTAIN RD**



**LEGEND**

- Ⓢ - Traffic Signal
- RTOL - Right-Turn Overlap
- \* - Dual lanes assumed to be needed to serve the amphitheater

**FIGURE 5.10-10**

Intersection Configurations With and Without Rock Mountain Road  
Temporary Main Street/Heritage Road Interchange

## SCENARIO B

Scenario B analyzed the intersection configuration with Rock Mountain Road completed between Heritage Road and La Media Road. Based on the City threshold of right-turn volume of 400 vehicles per hour, with construction of the intersection configuration shown in Figure 5.10-10 for Scenario B, all the proposed land uses within Villages Two and Three can be built. For Scenario B, the Heritage Road/Main Street intersection is calculated to operate at LOS D or better with the addition of project traffic.

### 5.10.4 Level of Significance Prior to Mitigation

Based on the peak hour intersection, segment and freeway analyses, the significance of impacts under each analysis timeframe was determined. Table 5.10-14 summarizes the significant intersection impacts, while Table 5.10-15 summarizes the significant street segment impacts.

Significant cumulative impacts are calculated on I-805 since LOS F is calculated for individual scenarios, and the proposed project adds traffic to this freeway. In addition, access-related impacts would occur if appropriate lane configurations are not provided at the project driveways.

### 5.10.5 Mitigation Measures

Implementation of the SPA Plan and the Composite TM would be required to conform with the following mitigation measures to reduce impacts to traffic and circulation.

#### Direct Impacts

- 5.10-1 Prior to the issuance of building permits, the applicant(s) shall pay the applicable Transportation Development Impact Fee (TDIF), as amended to design, construct, and secure a fully actuated traffic signal, including interconnect wiring, mast arms, signal heads and associated equipment, underground improvements, standards and luminaries at the Rock Mountain Road/La Media Road intersection. The design of the signal shall be to the satisfaction of the City Engineer. Turn lane storage lengths shall be provided as indicated in Table 5.10-16.

**TABLE 5.10-14  
SIGNIFICANCE OF IMPACTS AT INTERSECTIONS**

Impacted Intersections	Traffic Entering Intersection		Project Traffic XX% of Total Traffic Entering Intersection	Impact: Not Significant, Cumulative or Project Specific	Mitigated (At Buildout)	
	Total	Project			Delay	LOS
Scenario 1 - Year 2005 Without SR-125 None	5,930	9	0.1%	Cumulative	NA	NA
Scenario 2 - Year 2010 None	NA	NA	NA	None	NA	NA
Scenario 3 - Year 2015 None	NA	NA	NA	None	NA	NA
Scenario 5 - Year 2030 None	NA	NA	NA	None	NA	NA
Scenario 6 - Buildout 35. Rock Mountain Road/La Media Road (LOS E-AM/LOS F-PM)	4,750	478	10%	Project Specific	38.5	D

NOTE: Scenarios 4 and 7 of the traffic study compared 2030 and buildout timeframes with the 1989 General Plan project land uses. Subsequent to the preparation of the traffic study, in 2005 the updated General Plan was adopted and therefore, the results of the analysis for those two scenarios are not included in this EIR.  
NA - Not applicable since there is no significant impact.

**TABLE 5.10-15  
SIGNIFICANCE OF IMPACTS ALONG SEGMENTS**

Impacted Segments	# of Project ADT >800	Project Responsible for XX%	Intersections Along Segment Operating @ LOS D or Better?	Impact: Not Significant, Cumulative or Direct	Mitigated LOS	
					Capacity	Volume
Scenario 1 - Year 2005 Without SR-125						
Telegraph Canyon Road						
I-805 to Oleander Ave. (LOS D)	No	0.3%	Yes	Not Significant	-	2
Otay Lakes Road						
North of Telegraph Canyon Rd. (LOS E)	No	0.6%	Yes	Not Significant	-	2
Olympic Parkway						
I-805 to Medical Center Dr. (LOS E)	Yes	1.7%	Yes	Not Significant	-	2
Scenario 2 - Year 2010						
Telegraph Canyon Road						
I-805 to Oleander Ave. (LOS D)	Yes	3.0%	Yes	Not Significant	-	2
Olympic Parkway						
I-805 to Medical Center Dr. (LOS E)	Yes	12.8%	Yes	Not Significant	-	2
Medical Center Dr. to Heritage Rd. (LOS E)	Yes	15.8%	Yes	Not Significant	-	2
Heritage Rd. to La Media Rd. (LOS D)	Yes	2.0%	Yes	Not Significant	-	2
SR-125 to Eastlake Pkwy. (LOS D)	Yes	2.3%	Yes	Not Significant	-	2
Scenario 3 - Year 2015						
Telegraph Canyon Road						
I-805 to Oleander Ave. (LOS E)	Yes	3.6%	Yes	Not Significant	-	2
Medical Center Dr. to Paseo Rancho/Heritage Rd. (LOS D)	Yes	4.7%	Yes	Not Significant	-	2
Olympic Parkway						
I-805 to Medical Center Dr. (LOS D)	Yes	13.2%	Yes	Not Significant	-	2
Rock Mountain Road						
Main St. to La Media Rd. (LOS F)	No	1.9%	Yes	Cumulative	40,000 <sup>3</sup>	A
La Media Rd. to SR-125 (LOS F)	No	1.4%	Yes	Cumulative	50,000 <sup>4</sup>	B
SR-125 to Eastlake Pkwy. (LOS F)	No	0.0%	Yes	Cumulative	50,000 <sup>4</sup>	C
Scenario 5 - Year 2030 (Proposed Land Uses)						
Telegraph Canyon Road						
I-805 to Oleander Ave. (LOS E)	Yes	3.6%	Yes	Not Significant	-	2
Oleander Ave. to Medical Center Dr. (LOS D)	Yes	3.7%	Yes	Not Significant	-	2
Medical Center Dr. to Paseo Rancho/Heritage Rd. (LOS D)	Yes	5.0%	Yes	Not Significant	-	2
Otay Lakes Road						
Eastlake Pkwy. to Lane Ave. (LOS D)	Yes	3.5%	Yes	Not Significant	-	2

**TABLE 5.10-15  
SIGNIFICANCE OF IMPACTS ALONG SEGMENTS  
(continued)**

Impacted Segments	# of Project ADT >800	Project Responsible for XX%	Intersections Along Segment Operating @ LOS D or Better?	Impact: Not Significant, Cumulative or Direct	Mitigated LOS	
					Capacity	Volume
Olympic Parkway						
I-805 to Medical Center Dr. (LOS D)	Yes	15.1%	Yes	Not Significant	-	2
Heritage Rd. to La Media Rd. (LOS D)	Yes	2.0%	Yes	Not Significant	-	2
Rock Mountain Road						
La Media Rd. to SR-125 (LOS D)	No	2.9%	Yes	Not Significant	-	2
SR-125 to Eastlake Pkwy. (LOS F)	No	0.0%	Yes	Cumulative	50,000 <sup>4</sup>	B
Scenario 6 - Buildout (Proposed Land Uses)						
Telegraph Canyon Road						
I-805 to Oleander Ave. (LOS D)	Yes	3.5%	Yes	Not Significant	-	2
Otay Lakes Road						
SR-125 to Eastlake Pkwy. (LOS D)	Yes	2.7%	Yes	Not Significant	-	2
Eastlake Pkwy. to Lane Ave. (LOS E)	Yes	2.0%	Yes	Not Significant	-	2
Olympic Parkway						
SR-125 to Eastlake Pkwy. (LOS D)	Yes	4.1%	Yes	Not Significant	-	2
Rock Mountain Road						
Main St. to La Media Rd. (LOS F)	No	1.7%	No	Cumulative	40,000 <sup>3</sup>	A
La Media Rd. to SR-125 (LOS F)	No	1.1%	No	Cumulative	66,700 <sup>5</sup>	B
SR-125 to Eastlake Pkwy. (LOS F)	No	0.9%	No	Cumulative	66,700 <sup>5</sup>	D

NOTE: Scenarios 4 and 7 of the traffic study compared 2030 and buildout timeframes with the 1989 General Plan project land uses. Subsequent to the preparation of the traffic study, in 2005 the updated General Plan was adopted and therefore, the results of the analysis for those two scenarios are not included in this EIR.

<sup>1</sup>Not applicable since impact is not being fully mitigated.

<sup>2</sup>Not applicable since there is no significant impact.

<sup>3</sup>Mitigated as a 6-lane Major Street (this will require a General Plan Amendment).

<sup>4</sup>Mitigated as a 6-lane Prime Arterial (this will require a General Plan Amendment).

<sup>5</sup>Mitigated as a 8-lane Prime Arterial (this will require a General Plan Amendment).

**TABLE 5.10-16  
PROJECT DRIVEWAY INTERSECTION TURN LANE STORAGE**

Intersection	Southbound		Westbound		Northbound		Eastbound	
	Left	Right	Left	Right	Left	Right	Left	Right
19. Olympic Pkwy./Heritage Rd.	150 <sup>1</sup>	325	100 <sup>1</sup>	400	125 <sup>1</sup>	525	100 <sup>1</sup>	175
20. Olympic Pkwy./La Media Rd.	100 <sup>1</sup>	50 <sup>2</sup>	100 <sup>1</sup>	200	75 <sup>1</sup>	175	150 <sup>1</sup>	75 <sup>2</sup>
30. Street "D"/Heritage Rd.	200 <sup>1</sup>	250	125	175	75 <sup>1</sup>	25	150 <sup>1</sup>	200
31. Birch Rd./La Media Rd.	300 <sup>1</sup>	300	125 <sup>1</sup>	275	125	350	150	100
39. Main St./Heritage Rd.	50 <sup>1</sup>	250	125 <sup>1</sup>	275	200 <sup>1</sup>	250	75 <sup>1</sup>	550
44. Street "D"/Olympic Pkwy.	3	3	150	3	225	100	3	125
45. Street "J" (North)/Heritage Rd.	100 <sup>1</sup>	325	175	350	200	75	225 <sup>1</sup>	125
46. Street "J" (South)/Heritage Rd.	225	200	75 <sup>1</sup>	175	225	125	100 <sup>1</sup>	150
47. Santa Venetia/Olympic Pkwy.	3	3	250	3	250	150	3	225
48. Santa Venetia/La Media Rd.	125	325	100	75	175	350	250	100
49. Street "F"/Heritage Rd.	75	3	75	75	3	4	3	3
50. Santa Luna/La Media Rd.	50	75	50	50	50	50	125	50

<sup>1</sup>Dual left-turn lanes. Storage indicated is per lane.

<sup>2</sup>Dual right-turn lane. Storage indicated is per lane.

<sup>3</sup>Movement does not exist.

<sup>4</sup>Shared Through-right lane

<sup>5</sup>The City Engineer must approve changes to the intersection turn-lane storage length prior to final design.

### Cumulative Impacts

- 5.10-2 Prior to the issuance of building permits, the applicant(s) shall pay the applicable Transportation Development Impact Fee (TDIF), as amended, towards widening Rock Mountain Road from La Media Road to Eastlake Parkway to six lanes or toward an intersection improvement along Rock Mountain Road to the satisfaction of the City Engineer by year 2015.
- 5.10-3 Prior to the issuance of building permits, the applicant(s) shall pay the applicable Transportation Development Impact Fee (TDIF), as amended, toward widening Rock Mountain Road from Main Street to SR-125 to six lanes and SR-125 to Eastlake Parkway to eight lanes or towards an intersection improvement along Rock Mountain Road, to the satisfaction of the City Engineer by year 2030.

### Freeways

- 5.10-4 For the following freeway segments, additional lanes would be required to maintain acceptable LOS. The City of Chula Vista recommends continued freeway planning efforts and deficiency planning by Caltrans and SANDAG will determine mitigation strategies for the regional freeway system.
- Northbound I-805 from Telegraph Canyon Road to East H Street
  - Southbound I-805 from East H Street to Telegraph Canyon Road
  - Southbound I-805 from Olympic Parkway to Main Street
  - Northbound I-805 from Olympic Parkway to Telegraph Canyon Road
  - Southbound I-805 from Telegraph Canyon Road to Olympic Parkway
  - Southbound I-805 from Olympic Parkway to Main Street

### Project Access

- 5.10-5 Phasing of the following improvements shall be consistent with the project PFFP and to the satisfaction of the City Engineer, with intersection lane geometry per Figure 5.10-11. Prior to the approval of the final map triggering the construction of the intersection improvements, including installation of a traffic signal, the applicant shall enter into an agreement to design, construct, and secure a fully actuated traffic signal including interconnect wiring, mast arms, signal heads and associated equipment, underground improvements, standards and luminaries at

NOTES:

- The City Engineer may approve changes to the recommended lane configuration prior to final design

RTOL - Right-turn overlap

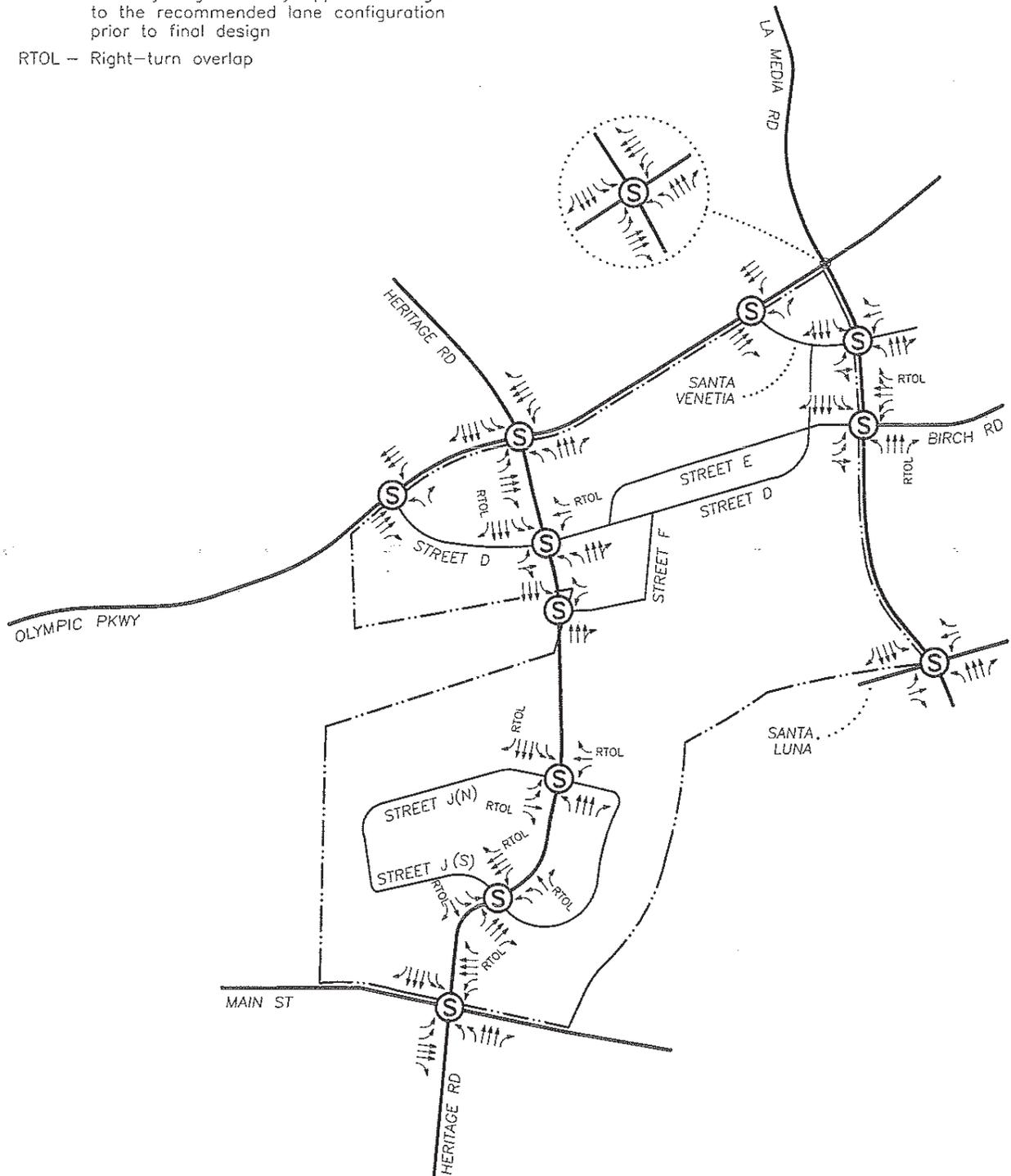


FIGURE 5.10-11  
Access Intersection Geometry

the intersections listed below. The design of the signal shall be to the satisfaction of the City Engineer and conform to City standards. The applicant shall provide turn lane storage lengths as listed in Table 5.10-16.

- Heritage Road/Olympic Parkway
- Heritage Road/Main Street
- Heritage Road/Street “D”
- Heritage Road/Street “F”
- Heritage Road/Street “J” North
- Heritage Road/Street “J” South
- La Media Road/Birch Road
- La Media Road/Santa Luna
- Olympic Parkway/Street “D”

#### PFFP

- 5.10-6 Prior to the approval of the final map containing the EDU threshold triggering the construction of street improvements, as defined by the PFFP, the applicant shall enter into an agreement to design, construct, and secure full street improvements to the street segments listed below. Phasing of improvements shall be consistent with the project PFFP and to the satisfaction of the City Engineer.

#### *Heritage Road*

Olympic Parkway to Street “D”  
 Street “D” to Street “F”  
 Street “F” to Street “J” North  
 Street “J” North to Street “J” South  
 Street “J” South to Main Street  
 Heritage Road south of Main Street

#### *Main Street*

From Heritage Road to existing improvements  
 East of Heritage Road to project SPA boundary

*Street "D"*

Heritage Road to Street E  
 Street E to State Street  
 State Street to Santa Venetia  
 Olympic Parkway to Heritage Road

*Street "E"*

Street "D" to Street "B"  
 Street "B" to La Media Road

*La Media Road*

Santa Venetia to Birch Avenue  
 South of Birch Road to community park entrance (or Santa Luna)

- 5.10-7 No units within the project area shall be constructed which would result in the total number of units within the Eastern Territories exceeding 8,990 units, prior to the construction of SR-125 between SR-54 and the International Border. The City may issue additional building permits if the City Council determines that each of the following conditions have been met: (1) SR-125 is constructed and open between SR-54 and Olympic Parkway; and (2) traffic studies, prepared to the satisfaction of the City Engineer and the City Council, demonstrates that the opening of SR-125 to Olympic Parkway provides additional capacity to mitigate the project's cumulative significant impacts to a level below significance without exceeding Growth Management Oversight Committee traffic threshold standards. Additionally, the City may issue building permits if the City Council has approved an alternative method to implement the City's Growth Management Ordinance, as amended from time to time.

**5.10.6 Level of Significance After Mitigation**

With the required mitigation measures specified above for the implementation of the SPA Plan and the Composite TM for Village Two and the park within a portion of Village Four, impacts to intersections and street segments would be reduced to below a level of significance. Since the freeway system is developed and managed by Caltrans, the City has only limited ability to affect the level of congestion on these roadways, as such, mitigation is not within the authority of the City of Chula Vista sufficient to avoid the cumulative contribution to traffic on these roadways and the impact remains significant.

## **5.11 Air Quality**

The following air quality analysis is based on a technical report entitled Air Quality Report for the Otay Ranch Villages Two and Three, Planning Area 18b, and a Portion of Village Four SPA Plan, prepared by RECON Environmental, Inc. A copy of this report is attached to this EIR in Appendix G. This air quality section evaluates potential local and regional air quality impacts associated with the proposed project. The Otay Ranch GDP Program EIR concluded that implementation of the Otay Ranch GDP would result in significant and unavoidable impacts to air quality. A statement of Overriding Considerations was prepared for the Otay Ranch GDP project.

In order to gauge the significance of the air quality impacts associated with implementation of the proposed SPA Plan, the project's emissions, together with existing background air quality levels, have been compared to the applicable ambient air quality standards.

### **5.11.1 Existing Conditions**

#### **Meteorology/Climate**

The proposed SPA Plan area is in the coastal plain physiographic province and experiences the semiarid climate conditions typical of San Diego County coastal areas, and is characterized by cool, dry summers and mild, wet winters. The area is strongly influenced by the subtropical high pressure of the north Pacific. In the fall and winter, this pressure system can shift inland, sometimes centering over Nevada, resulting in winds from the east, referred to as Santa Anas. These winds tend to blow pollutants out over the ocean, producing clear days. However, at the onset or breakdown of these conditions, or if the Santa Ana is weak, air quality may be adversely affected. In these cases, emissions from the South Coast Air Basin in the Los Angeles area to the north are blown out over the ocean, and low pressure over Baja California draws this pollutant-laden air mass southward.

As the high pressure weakens, prevailing northwesterlies reassert themselves and send this cloud of contamination ashore in the San Diego Air Basin (SDAB). When this impact does occur, the combination of transported and locally produced contaminants produces the worst air quality measurements recorded in the SDAB.

On-shore flow of air provides the driving mechanism for both air pollution transport and dispersion. The interior valleys of the county also have numerous temperature inversions that control the vertical extent through which pollutants can be mixed. These inversions allow for good local mixing, but act like a giant cover over the larger area. A second inversion type forms when cool air drifts into lower valleys at night and pools on the valley floor. Because coastal areas experience fresh breezes during the daytime, areas like the Chula Vista generally do not experience the same frequency of air pollution problems found in some areas of the eastern county. Unhealthy air quality may occur at times in summer during limited localized stagnation, but mainly in conjunction with the occasional intrusion of

polluted air from the South Coast Air Basin. Except for the occasional interbasin transport, air quality in the vicinity of the proposed SPA Plan is expected to be good.

### Air Quality Standards

Ambient air quality standards (AAQS) represent the maximum levels of background pollution considered safe, with an adequate margin of safety, to protect the public health and welfare. The federal Clean Air Act (CAA) was enacted in 1970, and amended in 1977 and 1990 [42 U.S.C. §7506(c)] for the purposes of protecting and enhancing the quality of the nation's air resources to benefit public health, welfare, and productivity.

In 1971, in order to achieve the purposes of Section 109 of the CAA, the Environmental Protection Agency (EPA) developed primary and secondary national ambient air quality standards (NAAQS). Seven pollutants of primary concern were designated: ozone (O<sub>3</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), lead and suspended particulates PM<sub>10</sub> and PM<sub>2.5</sub>. California has also set standards on four other pollutants: sulfates, hydrogen sulfide (H<sub>2</sub>S), vinyl chloride, and visibility reducing particles. The current state and federal AAQS are presented in Table 5.11-1. Table 5.11-2 presents a brief discussion of the principal sources of each criteria pollutant and the health effects associated with exposure to them. If an air basin is not in federal attainment for a particular pollutant, the basin is classified as marginal, moderate, serious, severe, or extreme (there is also a marginal classification for federal non-attainment areas).

The State Implementation Plan (SIP) is the document that sets forth the state's strategies for achieving the air quality standards. The San Diego Air Pollution Control District (SDAPCD) is responsible for air quality planning, monitoring, and enforcement in the SDAB. In addition, the SDAPCD prepares and implements the portion of the SIP applicable to the SDAB. The SDAPCD adopts rules, regulations, and programs to attain state and federal air quality standards, and appropriates money (including permit fees) to achieve these objectives. In order to meet federal air quality standards in California, the California Air Resources Board (CARB) requires each air basin to develop its own strategy for achieving the NAAQS. The SDAPCD prepared the 1991/1992 Regional Air Quality Strategy (RAQS) in response to the requirements set forth in AB 2595. The draft was adopted, with amendments, on June 30, 1992 (County of San Diego 1992). Attached to RAQS are transportation control measures (TCM) prepared by the San Diego Association of Governments (SANDAG) in accordance with AB-2595 and adopted by SANDAG on March 27, 1992, as Resolution Number 92-49 and Addendum. The required triennial updates of the RAQS and corresponding TCM were adopted in 1995, 1998, 2001, and 2004. The RAQS and TCM plan set forth the steps needed to accomplish attainment of state and federal ambient air quality standards.

**TABLE 5.11-1  
AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Time	California Standards <sup>1</sup>		Federal Standards <sup>2</sup>		
		Concentration <sup>3</sup>	Method <sup>4</sup>	Primary <sup>3,5</sup>	Secondary <sup>3,6</sup>	Method <sup>7</sup>
Ozone (O <sub>3</sub> )	1 Hour	0.09 ppm (180 µg/m <sup>3</sup> )	Ultraviolet Photometry	0.12 ppm (235 µg/m <sup>3</sup> ) <sup>8</sup>	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m <sup>3</sup> )*		0.08 ppm (157 µg/m <sup>3</sup> ) <sup>8</sup>		
Respirable Particulate Matter (PM <sub>10</sub> )	24 Hour	50 µg/m <sup>3</sup>	Gravimetric or Beta Attenuation	150 µg/m <sup>3</sup>	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m <sup>3</sup>		50 µg/m <sup>3</sup>		
Fine Particulate Matter (PM <sub>2.5</sub> )	24 Hour	No Separate State Standard		65 µg/m <sup>3</sup>	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	Gravimetric or Beta Attenuation	15 µg/m <sup>3</sup>		
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m <sup>3</sup> )	Non-dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m <sup>3</sup> )	None	Non-dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m <sup>3</sup> )		35 ppm (40 mg/m <sup>3</sup> )		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m <sup>3</sup> )		–		
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Arithmetic Mean	–	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m <sup>3</sup> )	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.25 ppm (470 µg/m <sup>3</sup> )		–		
Sulfur Dioxide (SO <sub>2</sub> )	Annual Arithmetic Mean	–	Ultraviolet Fluorescence	0.030 ppm (80 µg/m <sup>3</sup> )	–	Spectrophotometry (Pararosaniline Method)
	24 Hour	0.04 ppm (105 µg/m <sup>3</sup> )		0.14 ppm (365 µg/m <sup>3</sup> )	–	
	3 Hour	–		–	0.5 ppm (1300 µg/m <sup>3</sup> )	
	1 Hour	0.25 ppm (655 µg/m <sup>3</sup> )		–	–	
Lead <sup>9</sup>	30 Day Average	1.5 µg/m <sup>3</sup>	Atomic Absorption	–	–	–
(Pb)	Calendar Quarter	–		1.5 µg/m <sup>3</sup>	Same as Primary Standard	High Volume Sampler and Atomic Absorption
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer –visibility of 10 miles or more (0.07 – 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates	24 Hour	25 µg/m <sup>3</sup>	Ion Chromatography	No Federal Standards		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m <sup>3</sup> )	Ultraviolet Fluorescence	No Federal Standards		
Vinyl Chloride <sup>9</sup>	24 Hour	0.01 ppm (26 µg/m <sup>3</sup> )	Gas Chromatography	No Federal Standards		

\*This ozone concentration was approved by the ARB on April 18, 2005, and is expected to become effective in early 2006. See also footnotes on next page.

SOURCE: CARB (2005)

**TABLE 5.11-1**  
**AMBIENT AIR QUALITY STANDARDS**  
**(continued)**

---

ppm = parts per million;  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter.

<sup>1</sup>California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter— $\text{PM}_{10}$ ,  $\text{PM}_{2.5}$ , and visibility reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

<sup>2</sup>National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For  $\text{PM}_{10}$ , the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above  $150 \mu\text{g}/\text{m}^3$  is equal to or less than one. For  $\text{PM}_{2.5}$ , the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.

<sup>3</sup>Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of  $25^\circ \text{C}$  and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of  $25^\circ \text{C}$  and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

<sup>4</sup>Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

<sup>5</sup>National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

<sup>6</sup>National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

<sup>7</sup>Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

<sup>8</sup>New federal 8-hour ozone and fine particulate matter standards were promulgated by U.S. EPA on July 18, 1997. Contact U.S. EPA for further clarification and current federal policies.

<sup>9</sup>The ARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

**TABLE 5.11-2  
CRITERIA POLLUTANTS - SOURCES AND HEALTH EFFECTS**

Pollutant	Characteristics	Major Sources	Health Effects
Ozone (O <sub>3</sub> )	A highly reactive photochemical pollutant that is formed at ground level from emissions of volatile organic compounds (VOC) and nitrogen oxides (NOx) in the presence of sunlight. Ozone is a major component of photochemical smog.	Combustion sources such as engines in automobiles and factories, and evaporation of solvents and fuels.	<ul style="list-style-type: none"> <li>• Eye irritation</li> <li>• Respiratory function impairment</li> </ul>
Carbon Monoxide (CO)	An odorless, colorless and poisonous gas. It is formed during the incomplete combustion of fuels.	Automobile exhaust, combustion of fuels, combustion of wood in woodstoves and fireplaces.	<ul style="list-style-type: none"> <li>• Increase of carboxyhemoglobin - Impairment of oxygen transport in the bloodstream</li> <li>• Aggravation of cardiovascular disease</li> <li>• Impairment of central nervous system function</li> <li>• Fatigue, headache, confusion, dizziness</li> <li>• Can be fatal in the case of very high concentrations in enclosed places</li> </ul>
Sulfur Dioxide (SO <sub>2</sub> )	A colorless gas with a pungent, irritating odor.	Diesel vehicle exhaust, oil-powered power plants, industrial processes.	<ul style="list-style-type: none"> <li>• Aggravation of chronic obstruction lung disease</li> <li>• Increased risk of acute and chronic respiratory disease</li> </ul>
Nitrogen Dioxide (NO <sub>2</sub> )	Reddish-brown gas that discolors the air. It is formed during combustion.	Automobile and diesel truck exhaust, industrial processes, fossil-fueled power plants	<ul style="list-style-type: none"> <li>• Increased risk of acute and chronic respiratory disease</li> </ul>

**TABLE 5.11-2  
CRITERIA POLLUTANTS - SOURCES AND HEALTH EFFECTS  
(continued)**

Pollutant	Characteristics	Major Sources	Health Effects
Particulate Matter (PM <sub>10</sub> & PM <sub>2.5</sub> )	Solid and liquid particles of dust, soot, aerosols, and other matter that are small enough to remain suspended in the air for a long period of time.	Combustion, automobiles, field burning, factories, and unpaved roads. Diesel engines for PM <sub>2.5</sub> . Also a result of photochemical processes.	<ul style="list-style-type: none"> <li>• Aggravation of respiratory effects like asthma and emphysema</li> <li>• May cause heart and lung problems</li> <li>• May carry toxic materials deep into the respiratory system</li> </ul>
Lead (Pb)	A toxic heavy metal found in dust and soils.	Lead gasoline additives, metal refineries, manufacture of lead storage batteries, paint	<ul style="list-style-type: none"> <li>• Brain and other nervous system damage</li> <li>• Carcinogenic</li> <li>• Digestive and other health problems</li> </ul>
Sulfates	A fully oxidized ionic form of sulfur	Combustion of petroleum-derived fuels that contain sulfur	<ul style="list-style-type: none"> <li>• Decrease in ventilatory function</li> <li>• Aggravation of asthmatic symptoms</li> <li>• Increased risk of cardio-pulmonary disease</li> </ul>
Hydrogen Sulfide (H <sub>2</sub> S)	Colorless gas with the odor of rotten eggs formed during bacterial decomposition of sulfur-containing organic substances	Geothermal power plants, petroleum production and refining, sewer gas	<ul style="list-style-type: none"> <li>• Nuisance odor</li> <li>• Headache and breathing difficulties</li> </ul>

**TABLE 5.11-2  
CRITERIA POLLUTANTS - SOURCES AND HEALTH EFFECTS  
(continued)**

Pollutant	Characteristics	Major Sources	Health Effects
Vinyl Chloride	Colorless gas with mild, sweet odor.	Microbial breakdown of chlorinated solvents	<ul style="list-style-type: none"> <li>• Central nervous system effects such as dizziness, drowsiness, and headaches</li> </ul>
Visibility Reducing Particles	Suspended particulate matter made up of different materials such as metals, soot, soil, dust, and salt	See Particulate Matter	<ul style="list-style-type: none"> <li>• Liver damage</li> <li>• Carcinogenic</li> <li>• Visibility impairment</li> </ul>

SOURCE: CARB (2005).

The TCM plan for San Diego includes the following measures:

- Trip Reduction Program
  - Single Passenger Vehicle Trip Reduction Program
  - Parking Management
- Alternative Transportation Mode Capacity Expansion
  - Expanded Transit
  - Park-and-Ride Facilities
  - High-Occupancy Vehicle Facilities
  - Bicycle and Pedestrian Facilities
- Transportation System Management
  - Traffic Control Improvements
  - Ramp Metering
  - Incident Management
- Land Use
  - Job-housing Balance
  - Mixed Use Development
  - Transit Corridor Development

The SDAPCD has also established a set of rules and regulations initially adopted on January 1, 1969, and periodically reviewed and updated. The rules and regulations apply to stationary sources of air pollutants and fugitive dust. These rules and regulations are available for review on the SDAPCD website ([www.sdapcd.co.san-diego.ca.us](http://www.sdapcd.co.san-diego.ca.us)), and at the Chula Vista Department of Planning and Building located at 276 Fourth Ave, Chula Vista, CA 91910 and incorporated by reference in this EIR.

Local agencies can control neither the source nor the transportation of pollutants from outside the SDAB. The SDAPCD's policy, therefore, has been to control local sources to reduce locally produced contamination. Through the use of air pollution control measures outlined in the RAQS, the SDAPCD has effectively reduced ozone levels in the SDAB.

The City has included a Growth Management Element (GME) in its General Plan. One of the stated objectives of the GME is to actively plan to meet federal and state air quality standards. This objective is incorporated into the GME's action program. In addition, the City's Growth Management Ordinance requires an Air Quality Improvement Plan (AQIP) be prepared for all major development projects (50 dwelling units or greater) as part of the SPA plan process. The AQIP for the SPA Plan project must comply with the City's AQIP

Guidelines. Copies of the AQIP Guidelines are available at the City's Planning and Building Department located at 276 Fourth Avenue, Chula Vista, California 91910.

### Existing Conditions

While emission-control programs have created a substantial improvement in regional air quality within the last several decades, clean air standards are still often exceeded in parts of the SDAB. Table 5.11-3 provides a summary of measurements of ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), 10-micron particulate matter (PM<sub>10</sub>), and 2.5-micron particulate matter (PM<sub>2.5</sub>) for the SDAB as a whole from 2000 through 2004. Table 5.11-3 shows a general trend of a reduction in pollutant concentrations.

If an air basin is not in federal attainment for a particular pollutant, the basin is classified as marginal, moderate, serious, severe, or extreme (there is also a marginal classification for federal non-attainment areas). The nearest air quality measurements to the proposed SPA Plan area are taken in downtown Chula Vista. A review of the last seven years of published monitoring data from the city's air quality monitoring station (80 East J Street) reveals that progress toward cleaner air is seen in almost every pollution category. Table 5.11-4 summarizes the 2000 through 2004 monitoring data for the city's air quality monitoring station. As seen in Table 5.11-4, exceedances of state ozone and PM<sub>10</sub> and national PM<sub>2.5</sub> standards have occurred at the city's monitoring station in recent years.

The following is a brief description of criteria pollutants. More detailed information is included in the air quality technical report prepared for the proposed project (see Appendix G).

#### *Ozone*

Ozone is the primary air pollution problem in the SDAB. Currently, mobile sources emit about half of the smog-forming emissions in the SDAB. Mobile sources consist mainly of cars, trucks, and buses, but also include construction equipment, trains, and airplanes. Emission standards for mobile sources are established by state and federal agencies such as the CARB and the EPA.

Ozone pollution, or smog, is mainly a concern during the daytime in summer months because sunlight plays an important role in its formation. Nitrogen oxides (NO<sub>x</sub>) and hydrocarbons (reactive organic gases) are known as the chief "precursors" of ozone. These compounds react in the presence of sunlight to produce ozone. The SDAB is currently designated a federal attainment area for the one-hour ozone standard, a federal "basic" non-attainment area for the eight-hour ozone standard, and a state non-attainment area for ozone. Ozone concentration measurements recorded in the SDAB dating back to the late 1970s show a distinctive downward trend with occasional peaks due primarily to meteorological influences (County of San Diego 2001). More strict automobile emission

TABLE 5.11-3  
 AMBIENT AIR QUALITY SUMMARY – SAN DIEGO AIR BASIN

Pollutant	Average Time	California Ambient Air Quality Standards <sup>a</sup>		Attainment Status <sup>b</sup>	National Ambient Air Quality Standards <sup>c</sup>	Attainment Status <sup>b</sup>	Maximum Concentration <sup>d</sup>				Number of Days Exceeding State Standard <sup>d</sup>				Number of Days Exceeding National Standard <sup>d</sup>											
		Ambient Air Quality Standards <sup>a</sup>					2000		2001		2002		2003		2004		2000		2001		2002		2003		2004	
		Standard <sup>a</sup>	Attainment Status <sup>b</sup>				2000	2001	2002	2003	2004	2000	2001	2002	2003	2004	2000	2001	2002	2003	2004	2000	2001	2002	2003	2004
O <sub>3</sub>	1 hour	0.09 ppm	N	.124	.141	.125	.129	.129	.129	.129	.129	.129	.129	.129	.129	.129	.129	.129	.129	.129	.129	.129	.129			
O <sub>3</sub>	8 hours	N/A	N/A	.114	.121	.100	.103	.095	.095	.095	.095	.095	.095	.095	.095	.095	.095	.095	.095	.095	.095	.095				
CO	1 hour	20 ppm	A	9.3	8.5	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na				
CO	8 hours	9.0 ppm	A	5.86	5.11	4.68	10.64	4.11	4.11	4.11	4.11	4.11	4.11	4.11	4.11	4.11	4.11	4.11	4.11	4.11	4.11	4.11				
NO <sub>2</sub>	1 hour	0.25 ppm	A	.117	.148	.126	.148	.125	.125	.125	.125	.125	.125	.125	.125	.125	.125	.125	.125	.125	.125	.125				
NO <sub>2</sub>	Annual	N/A	N/A	.020	.018	.018	.019	.017	.017	.017	.017	.017	.017	.017	.017	.017	.017	.017	.017	.017	.017	.017				
SO <sub>2</sub>	1 hour	25 pphm	A	5.8	6.0	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na				
SO <sub>2</sub>	24 hours	4 pphm	A	1.1	1.4	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na				
SO <sub>2</sub>	Annual	N/A	N/A	0.4	0.4	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na				
PM <sub>10</sub>	24 hours	50 µg/m <sup>3</sup>	N	139	107	130	280	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79				
PM <sub>10</sub>	Annual	20 µg/m <sup>3</sup>	N	45	49	55	52	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na				
PM <sub>2.5</sub>	24 hours	N/A	N/A	66.3	60.0	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na				
PM <sub>2.5</sub>	Annual	12 µg/m <sup>3</sup>	N	15.8	17.7	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na				

SOURCE: State of California 2005b.

<sup>a</sup>California standards for ozone, carbon monoxide (except at Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, and PM<sub>10</sub> are values that are not to be exceeded. Some measurements gathered for pollutants with air quality standards that are based upon 1-hour, 8-hour, or 24-hour averages, may be excluded if the CARB determines they would occur less than once per year on average.

<sup>b</sup>A-attainment; M-maintenance; N-non-attainment; U-unclassifiable; N/A-not applicable;

<sup>c</sup>National standards other than for ozone and particulates, and those based on annual averages or annual arithmetic means are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent 3-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one.

<sup>d</sup>N/A – not applicable; Na – data not available; NX – annual average not exceeded; EX – annual average exceeded.

<sup>e</sup>Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

\*\*Measured days (calculated days not available)

**TABLE 5.11-4  
SUMMARY OF AIR QUALITY MEASUREMENTS RECORDED  
AT THE CHULA VISTA MONITORING STATION**

Pollutant/Standard	2000	2001	2002	2003	2004
<b>Ozone</b>					
Days State 1-hour Standard Exceeded (0.09 ppm)	0	2	1	0	1
Days Federal 1-hour Standard Exceeded (0.12 ppm)	0	0	0	0	0
Max. 1-hr (ppm)	0.091	0.102	0.115	0.075	0.097
Days Federal 8-hour Standard Exceeded (0.08 ppm)	0	0	0	0	1
Max. 8-hr (ppm)	0.077	0.079	0.073	0.056	0.087
<b>Carbon Monoxide</b>					
Days State 8-hour Standard Exceeded (9.0 ppm)	0	0	0	0	0
Days Federal 8-hour Standard Exceeded (9 ppm)	0	0	0	0	0
State Max. 8-hr (ppm)	3.35	4.64	2.61	5.40	2.48
Federal Max. 8-hr (ppm)	3.14	4.65	2.61	5.40	2.48
<b>Nitrogen Dioxide</b>					
Days State 1-hour Standard Exceeded (0.25 ppm)	0	0	0	0	0
Max. 1-hr (ppm)	0.072	0.071	0.093	0.102	0.072
Federal Annual Average (0.053 ppm)	0.017	0.017	0.018	0.018	0.016
<b>Sulfur Dioxide</b>					
Days State 24-hour Standard Exceeded (0.04 ppm)	0	0	0	0	0
Days Federal 24-hour Standard Exceeded (0.14 ppm)	0	0	0	0	0
Max. 24-hr (ppm)	0.012	0.015	0.012	0.011	0.016
Federal Annual Average (0.030 ppm)	0.003	0.003	0.004	0.004	0.003
<b>PM<sub>10</sub></b>					
Days State 24-hour Standard Exceeded (50 µg/m <sup>3</sup> )*	1**	12.1	6.1	12.3	Na
Days Federal 24-hour Standard Exceeded (150 µg/m <sup>3</sup> )*	0	0	0	0	Na
State Max. Daily (µg/m <sup>3</sup> )	54.0	66.0	52.0	78.0	45.0
Federal Max. Daily (µg/m <sup>3</sup> )	52.0	64.0	50.0	75.0	44.0
State Annual Average (µg/m <sup>3</sup> )	NA	28.6	27.1	27.6	Na
Federal Annual Average (µg/m <sup>3</sup> )	NA	27.8	26.5	27.0	Na
<b>PM<sub>2.5</sub></b>					
Days Federal 24-hour Standard Exceeded (65 µg/m <sup>3</sup> )	0	0	0	1	0
State Max. Daily (µg/m <sup>3</sup> )	40.5	41.0	41.0	239.2	32.7
Federal Max. Daily (µg/m <sup>3</sup> )	40.5	41.0	41.0	239.2	32.7
State Annual Average (µg/m <sup>3</sup> )	NA	NA	13.9	14.4	Na
Federal Annual Average (µg/m <sup>3</sup> )	13.1	15.5	13.9	14.4	Na

SOURCE: State of California 2005b.

NOTE: Lead concentrations in the SDAB have not exceeded the state or federal standard during the past 10 years.

\*Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

\*\*Measured days above standard; calculated days not available

Na – data not available

controls including more efficient automobile engines have played a large role in why ozone levels have steadily decreased.

### *Carbon Monoxide*

The SDAB is classified as a state and federal attainment area for carbon monoxide (County of San Diego 1998). As of 2003, no violations of the state standard for CO had been recorded in the SDAB since 1991, and no violations of the national standard had been recorded in the SDAB since 1989. As seen in Table 5.11-3, both the federal and state eight-hour CO standards were exceeded in the SDAB on one day in 2003. These exceedances occurred on October 28, 2003, at a time when major wildfires were raging throughout the county. Consequently, this exceedance was likely caused by the wildfires (a natural event) and would be considered beyond the control of the SDAPCD. However, as seen in Table 5.11-4, neither the state nor federal standards were exceeded during the period from 2000 through 2004 at the Chula Vista monitoring station.

Small-scale, localized concentrations of carbon monoxide above the state and national standards have the potential to occur at intersections with stagnation points, such as those that occur on major highways and heavily traveled and congested roadways. Localized high concentrations of CO are referred to as “CO hot spots” and are a concern particularly during winter months when automobile engines burn fuel less efficiently and their exhaust contains more CO.

### *Particulates*

Particulate matter is a complex mixture of very tiny solid or liquid particles composed of chemicals, soot, and dust. Sources of PM<sub>10</sub> emissions in the SDAB consist mainly of urban activities, dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere. For comparison, 10 microns is about one-seventh the diameter of a human hair.

Particles classified under the PM<sub>10</sub> category are mainly emitted directly from activities that disturb the soil, including travel on roads and construction, mining, or agricultural operations. Other sources include windblown dust, salts, brake dust, and tire wear (County of San Diego 1998). For several reasons related to the area’s dry climate and coastal location, the SDAB has found it difficult to develop adequate tactics to meet present state particulate standards.

Until 2003, the national standards for PM<sub>10</sub> were not exceeded in the SDAB since the standards were established, and therefore the EPA has designated the SDAB unclassifiable for PM<sub>10</sub>. In 2003, the measured federal PM<sub>10</sub> standard was exceeded twice in the SDAB. These two exceedances resulted in a calculated number of approximately nine days that the federal standard was exceeded for the year (see Table 5.11-3). The first exceedance

occurred on October 29, 2003, at a time when major wildfires were raging throughout the county. The second exceedance occurred on November 23, 2003, during high winds that caused large amounts of ash from the previous fires to be resuspended. However, as shown in Table 5.11-4, the federal PM<sub>10</sub> standards were not exceeded at the city's monitoring station in 2003.

In contrast, the more strict state standards for PM<sub>10</sub> are currently not being met, and as a result, the SDAB is designated a state non-attainment area for PM<sub>10</sub>.

A list of recommended PM<sub>2.5</sub> designations was due to the EPA by February 15, 2004. The CARB supplied monitoring data for the years 2000 through 2002, to the EPA on February 11, 2004. The EPA reviewed the designation recommendations and on January 5, 2005, listed the final designations with some modifications in the Federal Register (EPA 2004). These designations became effective April 5, 2005.

The SDAB was initially classified as a non-attainment area PM<sub>2.5</sub>; however, it has since been reclassified as an attainment area for the federal PM<sub>2.5</sub> standard. The SDAB is a non-attainment area for the state PM<sub>2.5</sub> standard (State of California 2005).

#### *Other Pollutants*

The national and state standards for NO<sub>2</sub>, SO<sub>2</sub>, and lead are being met in the SDAB and the latest pollutant trends suggest that these standards will not be exceeded in the foreseeable future.

The SDAPCD is the primary agency that handles industrial odor and dust complaints. As a part of their nuisance complaint program, the SDAPCD responds to citizen complaints concerning air pollution problems, such as smoke, odors, and dust from permitted and unpermitted operations. State and local regulations prohibit air pollution discharges which may cause injury, detriment, nuisance, or annoyance to any considerable number of persons, or the public, or which cause or have the tendency to cause injury or damage to business or property. These regulations, which are referred to as the public nuisance laws, do not apply to odors from agricultural operations, i.e., the growing of crops, or raising of fowls or animals, or to composting facilities (County of San Diego 2001).

#### **5.11.2 Thresholds of Significance**

Based on the thresholds identified in Appendix G of the CEQA Guidelines, the proposed project would result in a significant impact to air quality if it would:

Threshold 1: Conflict with or obstruct implementation of the applicable air quality plan;

Threshold 2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

Threshold 3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

The City uses the following SCAQMD thresholds to assess the significance of air quality impacts (SCAQMD 1993) (Table 5.11-5):

**TABLE 5.11-5  
SCAQMD THRESHOLDS**

Pollutant	Project Construction		Project Operation
	Pounds/Day	Tons/Quarter	Pounds/Day
Carbon Monoxide	550	24.75	550
Reactive Organic Compounds	75	2.5	55
Oxides of Nitrogen	100	2.5	55
Oxides of Sulfur	150	6.75	150
PM <sub>10</sub>	150	6.75	150

Threshold 4: Expose sensitive receptors to substantial pollutant concentrations; or

Threshold 5: Create objectionable odors affecting a substantial number of people.

### 5.11.3 Impacts

#### Threshold 1: Conflict With or Obstruct Implementation of the Applicable Air Quality Plan

The proposed SPA Plan project requires an amendment to the City's General Plan and would increase development from that currently approved for Village Two. If a project is consistent with the City's General Plan, it can be considered consistent with the growth assumptions in the RAQS (State of California 1989). Consequently, the proposed SPA Plan project is not consistent with the City's General Plan and therefore, it is not considered consistent with the growth assumptions in the RAQS.

While the proposed project incorporates many of the TCMs attached to the RAQS, they do not alleviate the inconsistency resulting from the fact that the existing General Plan is not the plan upon which the most recent air quality plan was developed.

Measures have been incorporated into the design of the proposed SPA Plan to lessen air quality impacts. These measures include pedestrian trails, on-street bicycle paths, and

public transit stops. Nevertheless, because the proposed project is not consistent with the goals and objectives of the RAQS, implementation of the proposed project could result in significant air emissions to the SDAB.

Threshold 2: Violate any Air Quality Standard or Contribute Substantially to an Existing or Projected Air Quality Violation

The SDAB is currently classified as attainment for all criterion pollutants except ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>. As of April 15, 2004, the SDAB was classified as non-attainment for ozone as a result of the application of the federal eight-hour ozone standard. Ozone is not emitted directly, but is a result of atmospheric activity on precursors. Nitrogen oxides and hydrocarbons (reactive organic gases; ROG) are known as the chief “precursors” of ozone. These compounds react in the presence of sunlight to produce ozone.

In order to assess the potential for the project to contribute to an increase in a criteria pollutant, the URBEMIS computer program was developed. This program calculates estimates for air emissions from construction, area emissions, and operation of the project. The URBEMIS program limits project construction to five years. For a project as large as the one currently proposed, this results in a worst case analysis.

The URBEMIS2002 program also allows for a number of “mitigation” options related to such things as pedestrian access, mass transit, and other project design features, which correspond to the TCM measures noted above. These options were chosen for those features that were included in the project design, as discussed in Chapter 3.0 of this EIR.

Short-term emissions of air pollutants would occur from construction. Table 5.11-6 provides emissions factors for a typical mix of equipment on a large construction site. For example, a diesel-powered scraper, the most common equipment used for grading operations, generates 1.26 pounds per hour (lb/hr) of carbon monoxide, 0.28 lb/hr of hydrocarbons, 3.84 lb/hr of nitrogen oxides, 0.46 lb/hr of sulfur oxides, and 0.41 lb/hr of particulate matter. Actual air emissions at any given time would depend on the number and types of equipment in operation and the total cubic yards being graded.

Table 5.11-7 shows the projected maximum quarterly emission levels for each pollutant associated with construction of the site, except PM<sub>2.5</sub>. URBEMIS does not calculate projected emissions of PM<sub>2.5</sub>. Assuming 16.6 million cubic yards of grading, URBEMIS predicts an average PM<sub>10</sub> generation of 1,486 pounds per day. Assuming a 22-day work month, this equates to approximately 49 tons per quarter, which exceeds the standard recommended by the SCAQMD. Construction emissions are also projected to exceed the threshold for the precursor elements of ozone (ROG and NOx).

**TABLE 5.11-6  
EXHAUST EMISSIONS FACTORS FROM TYPICAL CONSTRUCTION EQUIPMENT**  
[in grams (pounds) per hour]

Equipment Type	Carbon Monoxide		Hydrocarbons		Nitrogen Oxides		Sulfur Oxides		Particulate	
	G	D	G	D	G	D	G	D	G	D
Trucks: off-highway	-	816.81 (1.794)	-	86.84 (0.192)	-	1889.16 (4.166)	-	206.0 (0.454)	-	116.0 (0.256)
Tracked loader	-	91.15 (0.201)	-	44.55 (0.098)	-	375.22 (0.827)	-	34.4 (0.076)	-	26.4 (0.058)
Tracked tractor	-	157.01 (0.346)	-	55.06 (0.121)	-	570.70 (1.26)	-	62.3 (0.137)	-	50.7 (0.112)
Scraper	-	568.19 (1.257)	-	128.15 (0.282)	-	1740.74 (3.840)	-	210.0 (0.463)	-	184.0 (0.406)
Motor grader	5490.0 (12.1)	68.46 (0.151)	186.0 (0.410)	18.07 (0.040)	145.0 (0.320)	324.43 (0.713)	7.59 (0.0167)	39.0 (0.086)	9.40 (0.0207)	27.7 (0.061)
Wheeled dozer	-	816.81 (1.794)	-	86.84 (0.192)	-	1889.16 (4.166)	-	206.0 (0.454)	-	116.0 (0.256)
Wheeled loader	7060.0 (15.6)	259.58 (0.572)	241.0 (0.531)	113.17 (0.25)	235.0 (0.518)	858.19 (1.89)	10.6 (0.0234)	85.2 (0.182)	13.5 (0.0298)	77.9 (0.172)
Wheeled tractor	4320.0 (9.52)	1622.77 (3.59)	164.0 (0.362)	85.26 (0.188)	195.0 (0.430)	575.84 (1.269)	7.03 (0.0155)	40.9 (0.090)	10.9 (0.0240)	61.5 (0.136)

SOURCE: EPA AP-42 1985; Tables II-7.1 and II-7.2.

Fuel types: G = gasoline-powered; D = diesel-powered.

**TABLE 5.11-7**  
**PROJECTED DAILY CONSTRUCTION EMISSIONS BY YEAR**  
**(tons/quarter)**

Pollutant	SCAQMD						
	Threshold*	2005	2006	2007	2008	2009	2010
CO	24.75	20.00	193.96	205.84	211.06	216.44	221.65
NO <sub>x</sub>	2.5	23.84	199.42	190.95	182.17	173.64	165.33
PM <sub>10</sub>	6.75	246.46	8.40	8.40	7.63	7.18	6.51
ROG	2.5	2.88	37.19	37.19	37.11	37.04	36.96
SO <sub>2</sub>	6.75	0.00	0.00	0.00	0.00	0.00	0.00

\*1 ton/quarter = 30.3 lbs/day – assumes 22 working days per month.

Long-term emissions of air pollutants occur from both stationary and mobile sources. Stationary source pollutant emissions include those generated by the consumption of natural gas, electricity for space and water heating, and the burning of wood in residential fireplaces.

Vehicle travel associated with the proposed SPA Plan project would generate mobile source emissions including carbon monoxide, nitrogen oxides, and hydrocarbons. Most default area source parameters in URBEMIS2002 were used for the analysis of area emissions, except for those parameters associated with wood burning fireplaces. For this analysis it was assumed that five percent of the residential units would have wood burning fireplaces and that the average residence would only burn a quarter of a cord of wood a year.

The result of the URBEMIS modeling process for air emissions from operation of the proposed project is provided in Table 5.11-8. Table 5.11-8 shows that the increase in mobile and stationary emissions emitted to the SDAB as a result of implementing the proposed SPA Plan is expected to exceed the SCAQMD and the SDAPCD incremental thresholds discussed above for PM<sub>10</sub>, carbon monoxide, and the ozone precursors NO<sub>x</sub> and ROGs. As such, significant air quality impacts are anticipated due to mobile sources as a result of implementation of the project.

For area source emissions alone, only ROG is anticipated to exceed the applicable thresholds. However, as shown in Table 5.11-8, the total emissions resulting from vehicular traffic and on-site area sources are projected to exceed applicable thresholds for PM<sub>10</sub> and ozone precursors. Consequently, occupancy of the proposed project is expected to result in significant air quality impacts.

**TABLE 5.11-8  
PROJECT OPERATION EMISSIONS TO THE SAN DIEGO AIR BASIN  
(pounds per day)**

Season	Pollutant	Mobile Emissions (vehicle)	Area Emissions <sup>1</sup>	Total Emissions <sup>2</sup>	SCAQMD Significance Threshold	APCD Significance Threshold	Does Change Exceed Threshold?
Summer	CO	3832.46	29.09	3861.55	550	550	Yes
	NOx	371.90	30.98	402.88	55	250	Yes
	ROG	317.34	140.62	457.96	55	---	Yes
	SOx <sup>3</sup>	2.97	0.37	3.34	150	250	No
	PM <sub>10</sub>	294.62	0.09	294.71	150	100	Yes
Winter	CO	4210.81	303.7	4514.51	550	550	Yes
	NOx	569.54	33.77	635.75	55	250	Yes
	ROG	342.59	402.22	744.81	55	---	Yes
	SOx <sup>3</sup>	2.95	0.46	3.41	250	250	No
	PM <sub>10</sub>	294.62	39.88	337.5	150	100	Yes

SOURCE: SDAPCD, Rule 20.2 (12/17/1998); SCAQMD 1993.

<sup>1</sup>Area emissions include emissions from on-site stationary sources such as natural gas combustion (e.g., heating systems), landscaping maintenance, etc.

<sup>2</sup>Totals may differ due to rounding.

<sup>3</sup>Emissions calculated by URBEMIS2002 are for SO<sub>2</sub>.