CITY OF WILDOMAR

OAK CREEK CANYON DEVELOPMENT

ADMINISTRATIVE DRAFT ENVIRONMENTAL IMPACT REPORT

SCH No. 2012031064
SPECIFIC PLAN NO. 116, AMENDMENT NO. 4
CHANGE OF ZONE AND TENTATIVE TRACT MAP NO. 36388
(PLANNING APPLICATION NO. 11-0261)

Lead Agency:

CITY OF WILDOMAR
23873 CLINTON KEITH ROAD, SUITE 201
WILDOMAR, CA 92595

NOVEMBER 2012

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ES - EXECUTIVE SUMMARY

ES1 Purpose and Scope of the Draft Environmental Impact Report ES-1
ES2 Project Summary ES-1
ES3 Project Alternatives Summary ES-2
ES4 Areas of Controversy/Issues to be Resolved ES-3
ES5 Summary of Environmental Impacts ES-3

1.0 – INTRODUCTION

1.1 Project Summary 1.0-1
1.2 Regional Location 1.0-1
1.3 Purpose of the DEIR 1.0-1
1.4 Known Trustee and Responsible Agencies 1.0-9
1.5 Type of Document 1.0-9
1.6 Intended Use of the EIR 1.0-9
1.7 Organization and Scope 1.0-10
1.8 Environmental Review Process 1.0-11
1.9 Comments Received on the Notice of Preparation 1.0-12

2.0 – PROJECT DESCRIPTION

2.1 Project Summary 2.0-1
2.2 Project Objectives 2.0-1
2.3 Project Characteristics 2.0-1
2.4 Regulatory Requirements, Permits, and Approvals Potentially Required From Other Public Agencies 2.0-33

3.0 – ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

3.1 Land Use 3.1-1
3.2 Population, Housing, and Employment 3.2-1
3.3 Traffic and Circulation 3.3-1
3.4 Air Quality 3.4-1
3.5 Noise 3.5-1
3.6 Geology and Soils 3.6-1
3.7 Hydrology and Water Quality 3.7-1
3.8 Biological and Natural Resources 3.8-1
3.9 Cultural and Paleontological Resources 3.9-1
3.10 Public Services and Utilities 3.10-1
3.11 Aesthetics and Visual Resources 3.11-1
3.12 Energy Use and Greenhouse Gases 3.12-1

4.0 – CUMULATIVE IMPACTS

4.1 Introduction 4.0-1
4.2 Cumulative Setting 4.0-2
4.3 Cumulative Impacts Analysis 4.0-2

5.0 – PROJECT ALTERNATIVES

5.1 General CEQA Requirements 5.0-1
5.2 Development of Project Alternatives 5.0-1
5.3 Alternatives Analysis 5.0-3
5.4 Identification of the Environmentally Superior Alternative 5.0-10

6.0 – LONG-TERM IMPLICATIONS

6.1 Significant and Unavoidable Environmental Effects of the Proposed Project 6.0-1
6.2 Significant Irreversible Changes Which Would be Caused by the Proposed Project Should It Be Implemented 6.0-1
6.3 Growth-Inducing Impacts 6.0-6

7.0 – REPORT PREPARERS

APPENDICES

*** - Appendices are located on the CD attached to the inside back cover of this document.**

1.0-1 Notice of Preparation
1.0-2 Notice of Preparation Public Comments
2.0-1 Major Planning Project Application
2.0-2 The Farm Specific Plan Amendment
3.3-1 Traffic Impact Analysis
3.3-2 Traffic Impact Analysis: Appendices
3.4-1 Air Quality Impact Analysis
3.5-1 Noise Impact Analysis
3.5-2 Noise Impact Analysis: Appendices
3.6-1 Preliminary Geotechnical Investigation
3.6-2 Soils Map
3.7-1 Preliminary Hydrology and Hydraulic Study
3.7-2 Preliminary Water Quality Management Plan
3.7-3 Downstream Pre-Project and Post Project Velocities
3.7-4 Supplemental Hydrology and Hydraulic Study
3.8-1 Jurisdictional Delineation of Waters and Wetlands
3.8-2 Western Riverside County MSHCP Consistency Analysis
3.8-3 Nesting Season Survey Burrowing Owl
3.9-1 Phase I Cultural Resources Assessment (Excerpt Summary Only)
3.9-2 Phase II Cultural Resources Assessment (Excerpt Summary Only)
3.9-3 SB-18 Consultation Letters
3.10-1 Elsinore Valley Municipal Water District Will-Serve Letter
3.10-2 LAFCO Formation Documents for the Farm Mutual Water Company
3.10-3 Farm Mutual Water Company Will-Serve Letter
3.10-4 Riverside County Fire District Conditions of Approval
3.12-1 Greenhouse Gas Analysis

LIST OF TABLES

Table ES-1 Summary of Impacts and Mitigation Measures ES-5
Table 3.1-1 Summary of Residential Zone Districts 3.1-5
Table 3.2-1 Growth of the 10 Most Populated Counties in California 3.2-1
Table 3.2-2 Regional Population 3.2-2
Table 3.2-3 Riverside County/City of Wildomar Population Growth 3.2-3
Table 3.2-4 Forecast Populations – Western Riverside County and City of Wildomar 3.2-4
Table 3.2-5 Existing Regional and Local Housing Characteristics – Occupancy/Type (Year 2010) 3.2-4
Table 3.2-6 Existing Regional and Local Housing Characteristics – Tenure (Year 2010) 3.2-5
Table 3.2-7 Wildomar Occupations in 2010 ..... 3.2-5
Table 3.2-8 Comparison of Population Change from the Proposed Project to Existing Farm Specific Plan 3.2-7
Table 3.3-1 Intersection Analysis Locations 3.3-1
Table 3.3-2 Intersection Analysis for Existing (2011) Conditions 3.3-7
Table 3.3-3 Signalized Intersection LOS Thresholds 3.3-12
Table 3.3-4 Unsignalized Intersection LOS Thresholds 3.3-13
Table 3.3-5 Project Trip Generation Rates 3.3-17
Table 3.3-6 Project Trip Generation Summary 3.3-17
Table 3.3-7 Cumulative Development Trip Generation Rates1 ..... 3.3-22
Table 3.3-8 Cumulative Development Trip Generation Summary 3.3-23
Table 3.3-9 Intersection Analysis for Existing Plus Project Conditions 3.3-46
Table 3.3-10 Intersection Analysis for Opening Year (2015) Conditions 3.3-48
Table 3.3-11 City of Wildomar Significant Impact Criteria Test for Opening Year (2015) Conditions 3.3-50
Table 3.3-12 Intersection Analysis for Horizon Year (2035) Conditions 3.3-51
Table 3.3-13 Intersection Analysis for Existing Plus Project Conditions with Project Mitigation Measures 3.3-57
Table 3.3-14 Intersection Analysis for Opening Year (2015) Conditions With Project Mitigation Measures 3.3-58
Table 3.3-15 Cumulative Development Trip Generation Summary 3.3-61
Table 3.3-16 Intersection Analysis for Existing Plus Project Conditions with Cumulative Mitigation Measures 3.3-67
Table 3.3-17 Intersection Analysis for Opening Year (2015) Conditions With Cumulative Mitigation Measures 3.3-68
Table 3.4-1 State and National Criteria Pollutant Standards, Effects, and Source 3.4-4
Table 3.4-2 Attainment Status of Criteria Pollutants in the South Coast Air Basin (SCAB) 3.4-6
Table 3.4-4 Maximum Daily Emissions Thresholds 3.4-14
Table 3.4-5 Localized Significance Summary – Construction (without Mitigation) (Pounds per Day) 3.4-18
Table 3.4-6 Localized Significance Summary – Construction (with Mitigation) (Pounds per Day) 3.4-20
Table 3.4-7 Construction Equipment Assumptions 3.4-21
Table 3.4-8 Construction-Related Criteria Pollutant and Precursor Emissions (without Mitigation) (Pounds per Day) 3.4-22
Table 3.4-9 Construction-Related Criteria Pollutant and Precursor Emissions (with Mitigation) (Pounds per Day) 3.4-23
Table 3.4-10 Operational-Related Criteria Pollutant and Precursor Emissions (Maximum Emissions) (Pounds per Day) 3.4-25
Table 3.5-1 Federal Interagency Committee on Noise Recommended Criteria for Evaluation of Increases in Ambient Noise Levels 3.5-6

Table 3.5-2 Existing Conditions Noise Contours ... 3.5-8
Table 3.5-3 City of Wildomar Land Use Compatibility Noise Criteria ... 3.5-10
Table 3.5-4 Hourly Traffic Flow Distribution[1] ... 3.5-15
Table 3.5-5 On-Site Roadway Parameters ... 3.5-15
Table 3.5-6 Future Exterior Noise Levels (dBA CNEL) ... 3.5-16
Table 3.5-7 Year 2015 without Project Conditions Noise Contours ... 3.5-17
Table 3.5-8 Year 2015 with Project Conditions Noise Contours ... 3.5-17
Table 3.5-9 Horizon Year 2035 without Project Conditions Noise Contours ... 3.5-18
Table 3.5-10 Horizon Year 2035 with Project Conditions Noise Contours ... 3.5-19
Table 3.5-11 Year 2015 Off-Site Project-Related Traffic Noise Impacts ... 3.5-20
Table 3.5.12 Horizon Year 2035 Off-Site Project-Related Traffic Noise Impacts ... 3.5-20
Table 3.5-13 Damage Potential to Buildings at Various Groundborne Vibration Levels ... 3.5-22
Table 3.5-14 Annoyance Potential to People at Various Groundborne Vibration Levels ... 3.5-22
Table 3.5-15 Representative Construction Equipment Vibration Levels ... 3.5-23
Table 3.5-16 Off-Site Roadway Parameters ... 3.5-24
Table 3.5-17 Average Daily Traffic for Existing, Year 2015, and Post Year 2035 Conditions ... 3.5-25
Table 3.7-1 Receiving Waters for Urban Runoff from Site – Santa Margarita Watershed ... 3.7-6
Table 3.7-2 Receiving Waters for Urban Runoff from Site – Santa Ana Watershed ... 3.7-6
Table 3.7-3 Expected Urban Runoff Pollutants and 303(d) Impairments ... 3.7-17
Table 3.7-4 Basin Routed Flow Rates vs. Pre-Project Flow Rates ... 3.7-25
Table 3.7-5 Drainage Area B at Node 225 100- Year Condition for Off-Site Peak Flows & On-Site Routed Peak Flow Rate (Unit of Flow Rate is ft3/s) ... 3.7-25
Table 3.7-6 Drainage Area C at Node 304 100- Year Condition for Off-Site Peak Flows & On-Site Routed Peak Flow Rate (Unit of Flow Rate is ft3/s) ... 3.7-26
Table 3.7-7 Drainage Area D at Node 408 100- Year Condition for Off-Site Peak Flows & On-Site Routed Peak Flow Rate (Unit of Flow Rate is ft3/s) ... 3.7-26
Table 3.7-8 Drainage Area B, Node 225 10- Year & 2- Year, 24-Hour Condition On-Site Peak Flow Rate & On-Site Routed Peak Flow Rate (Unit of Flow Rate is ft3/s) ... 3.7-26
Table 3.8-1 Vegetation Associations Identified on the Project Site ... 3.8-2
Table 3.8-2 Summary of Potential Jurisdictional Waters ... 3.8-7
Table 3.8-3 Special-Status Species Considered in the Impact Analysis ... 3.8-15
Table 3.9-1 Previously Recorded Cultural Resources in the Scope of the Records Search ... 3.9-8
Table 3.10.3-1 LEUSD Schools ... 3.10-10
Table 3.10.3-2 Lake Elsinore Unified School District Enrollment 2001/02–2011/12 ... 3.10-12
Table 3.10.4-1 EVMWD Demand Assumptions and Predictions ... 3.10-18
Table 3.10.6-1 Landfill Capacity ... 3.10-27
Table 3.10.7-1 Park and Open Space Facilities ... 3.10-29
Table 3.11-1 Summary of Visual Resources ... 3.11-1
Table 3.11-2 Lamp Type and Shielding Requirements per Fixture from Ordinance 8.88 Regulating Light Pollution ... 3.11-3
Table 5.0-1 Comparison of Proposed Lot Size and Yield to the Reduced Density Alternative 5.0-6
Table 5.0-2 Comparison of Alternatives to the Proposed Project ... 5.0-10
Table 5.0-3 Comparison of Project Alternatives to the Project Objectives ... 5.0-11
Table 6.0-1 Summary of Significant Impacts and the intent of the Mitigation Measures ... 6.0-2
Table 6.0-2 Comparison of Existing Farm Specific Plan Densities to Proposed Project ... 6.0-8
Table 6.0-3 Comparison of Existing and Proposed Farm Specific Plan Densities ... 6.0-9

LIST OF FIGURES

Figure 1.0-1 Regional Location Map 1.0-3
Figure 1.0-2 Proposed Project Site 1.0-5
Figure 1.0-3 Site Photos 1.0-7
Figure 2.0-1 Existing Land Use Designations 2.0-3
Figure 2.0-2 Existing Zoning 2.0-5
Figure 2.0-3 Proposed Zoning 2.0-7
Figure 2.0-4a Proposed Subdivision and Phasing Maps 2.0-9
Figure 2.0-4b Proposed Subdivision and Phasing Maps 2.0-11
Figure 2.0-4c Proposed Subdivision and Phasing Maps 2.0-13
Figure 2.0-4d Proposed Subdivision and Phasing Maps 2.0-15
Figure 2.0-4e Proposed Subdivision and Phasing Maps 2.0-17
Figure 2.0-4f Proposed Subdivision and Phasing Maps 2.0-19
Figure 2.0-5 Proposed Site Plan 2.0-21
Figure 2.0-6 Phasing Map 2.0-25
Figure 2.0-7 Park Trails and Basins 2.0-27
Figure 2.0-8 Sound and Retaining Walls 2.0-31
Figure 3.3-1 Study Area Intersections 3.3-3
Figure 3.3-2 Existing Average Daily Traffic (ADT) Volumes 3.3-5
Figure 3.3-3 Project Average Daily Traffic (ADT) 3.3-19
Figure 3.3-4 Cumulative Project Location 3.3-29
Figure 3.3-5 Existing Plus Project Average Daily Traffic (ADT) 3.3-33
Figure 3.3-6 Opening Year Average Daily Traffic (ADT) 3.3-35
Figure 3.3-7 Future Lane Geometrics 3.3-39
Figure 3.3-8 I-215 Scott Road Improvements 3.3-41
Figure 3.3-9 2035 Average Daily Traffic (ADT) 3.3-43
Figure 3.3-10 Project Mitigation Measures 3.3-53
Figure 3.4-1 Wind Rose 3.4-3
Figure 3.5-1 Common Community Noise Sources and Associated Noise Levels 3.5-3
Figure 3.6-1 Existing TOPO 3.0-3
Figure 3.6-2 Fault Zones within the City of Wildomar 3.0-5
Figure 3.7-1 Santa Margarita Watershed and Santa Ana Watershed 3.7-3
Figure 3.7-2 FEMA Designated Flood Zones 3.7-7
Figure 3.7-3 Detention Basins and Project Drainage System 3.7-19
Figure 3.8-1 Vegetation Associations 3.8-3
Figure 3.8-2 Jurisdictional Assessment 3.8-9
Figure 3.8-3 Previously Recorded Occurrences of Special-status Species within One-mile of the Project Area 3.8-13

ES - Executive Summary

Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15123, this section of the Draft Environmental Impact Report (DEIR; Draft EIR) provides a brief summary of the project, significant impacts, and proposed mitigation measures. The remainder of the document and technical appendices provide the discussion and support for the conclusions found here.

ES1 PURPOSE AND SCOPE OF THE DRAFT ENVIRONMENTAL IMPACT REPORT

This DEIR will provide, to the greatest extent possible, an analysis of the potential environmental effects associated with the implementation of the proposed Oak Creek Canyon Residential Development (Planning Application No. 11-0261), pursuant to CEQA.

This DEIR analysis focuses on potential environmental impacts that could arise from implementation of the proposed project, as regulated and guided by the large number of federal, state, and local regulations, including ordinances, General Plan policies, and local resource plans. The DEIR also evaluates the proposed changes to The Farm Specific Plan and proposed rezoning of the project site. The DEIR is intended to provide a credible worst-case scenario of the impacts resulting from project implementation.

ES2 PROJECT SUMMARY

The following applications are the requested City entitlements:

1. **General Plan Amendment** – A proposal to amend the General Plan land use designation for 20.11 acres within Phase/Planning Area No. 18 from Medium Density Residential (MDR) to Medium High Density Residential (MHDR) to accommodate single-family lots with a minimum lot size of 4,500 square feet and to increase the size of the Phase/Planning Area 19 land use designation of Commercial Retail (CR) from 1.1 acres to 5.21 acres, including relocation of the phase/planning area to the southwest corner of the intersection of Bundy Canyon Road and Sunset Avenue.

2. **Specific Plan Amendment No. 116 (Amendment 4) to The Farm Specific Plan** – The Farm Specific Plan (Specific Plan No. 116-C/W), which was originally approved on September 24, 1974, and subsequently amended on July 28, 1981 (Resolution No. 81-269) and on January 29, 2002 (Resolution 2002-27), is a master planned community consisting of approximately 1,520 acres with residential uses assigned to occupy 776.7 acres. The remaining 576.7 acres are dedicated to open space and recreation areas consisting of a clubhouse/swimming pool, private park, and lake. Additionally, there are 37.7 acres set aside for school uses, 4.1 acres for a sewage treatment plant, 21.6 acres for commercial use, and 10.3 acres for street purposes. The proposed modification to the Specific Plan (Amendment No. 4) seeks to change the approved land uses for the planning areas identified as Phases 9, 17A, 18, and 19. These changes include the conversion of 1.1 acres from commercial use to residential/open space use, establishment of lot sizes for each residential unit of the subdivision, and creation of a 5.21-acre commercial site (see **Figure 2.0-1**).

3. **Zone Change** – The proposed project site is currently zoned R-1 (One-Family Dwelling – Phase 9, 17A, and 18) and C-P-S (Scenic Highway Commercial). The proposal to change the zoning designations for three Farm Specific Plan phasing/planning areas is as follows:

    a. Rezone all of the Phase 9 Planning Area from the current Specific Plan designation of R-1 (One-Family Dwelling) to R-4 (Planned Residential Zone) to allow for single-family residential development with a minimum lot size of 6,000 square feet;

b. Rezone all of the Phase 18 Planning Area from the current Specific Plan designation of R-1 (One-Family Dwelling) and C-P-S (Scenic Highway Commercial) to R-4 (Planned Residential Zone) to allow for single-family residential development with a minimum lot size of 4,500 square feet; and

c. Rezone all of the Phase 19 Planning area from the current Specific Plan designation of C-P-S (Scenic Highway Commercial) to C-1/C-P (General Commercial). The applicant is also proposing to increase the size of Phase 19 from 1.1 acres to approximately 5.0 acres and Rezone all of the Phase 19 Planning area from the current Specific Plan designation of C-P-S (Scenic Highway Commercial) to C-1/C-P (General Commercial). The applicant is also proposing to increase the size of Phase 19 from 1.1 acres to approximately 5.0 acres and relocate it from its current location to the southwest corner of Sunset Avenue and Bundy Canyon Road. (See **Figure 2.0-2**, Existing Zoning, and **Figure 2.0-3**, Proposed Zoning.)

4. **Approval of Tentative Tract Map No. 36388** – Tentative Tract Map (TTM) 36388 includes the subdivision of the 151.23-acre proposed project site into 275 single-family lots and 17 total open space lots. The 275 single-family lots will have a minimum lot size of 4,500 square feet to 7,200 square feet. The overall unit density of the proposed project area will be 1.8 units per acre, with a developable density of 3.5 units per acre. As proposed, the map divides the property into five development units, with units 1–4 providing for residential uses and unit 5 allowing for commercial development. (See **Figure 2.0-4**, Proposed Subdivision and Phasing Map.)

5. **Grading Permit** – A grading permit will be needed to prepare the property for development consistent with the approved tentative map. As noted on the tentative map, the proposed project estimates approximately 700,000 cubic yards of cut and fill, but does not anticipate the need for import or export of fill material.

6. **Building Permit** – Building permits will be needed to allow construction.

7. **Encroachment Permit** – Encroachment permits will be needed for any construction that must occur on public property or within publicly held easements.

The proposed project also includes construction of public improvements necessary to support the subdivision, including two 500,000-gallon water tanks and an access road, a realigned portion of Bundy Canyon Road, and internal and external roadway improvements to City of Wildomar standards. The DEIR does not address the future development of the contained commercial property except in a conceptual manner, as there are no proposed land uses or specific development plans for the commercial portion of the site at this time.

ES3 PROJECT ALTERNATIVES SUMMARY

CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project which could feasibly attain the basic objectives of the project and avoid and/or lessen the environmental effects of the project. Further, CEQA Guidelines Section 15126.6(e) requires that a "no project" alternative be evaluated in an EIR. The Draft EIR evaluates the following alternatives:

- **Alternative 1 – No Project Alternative.** This alternative represents the no action alternative on the part of the City and assumes no development of the property at all. This alternative does acknowledge that the property is both designated and zoned for

development by The Farm Specific Plan (No. 116-C/W) and has been identified for residential development for over 38 years. For purposes of this analysis, however, the no project alternative assumes no development of the site.

- **Alternative 2 – Reduced Density Alternative.** As noted in Alternative 1, the proposed project area has been designated and zoned for residential development for over 38 years. This alternative evaluates the unit potential associated with the existing Specific Plan and zoning and does not allow for minimum lot sizes of 4,500 square feet.

ES4 AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

The City of Wildomar was identified as the lead agency for the proposed project. In accordance with Section 15082 of the CEQA Guidelines, the City of Wildomar prepared and distributed a Notice of Preparation (NOP) for the proposed project that was circulated for public review on March 19, 2012 (SCH 2012031064). Written comments received in response to the NOP were considered in the preparation of the DEIR. The issues identified in response letters to the NOP included biological, cultural, traffic and transportation, recreation, public services, energy use, noise, and safety concerns. Section 1.0, Introduction, provides a summary of issues and areas of concern related to the proposed project, as presented to the City by agencies and the public during the NOP review period. The complete text of the NOP and NOP comments are included as **Appendix 1.0-1** and **Appendix 1.0-2** to this Draft EIR.

ES5 SUMMARY OF ENVIRONMENTAL IMPACTS

Table ES-1 displays a summary of impacts for the proposed project and proposed mitigation measures that would avoid or minimize potential impacts. In the table, the level of significance is indicated both before and after the implementation of each mitigation measure. For detailed discussions of all mitigation measures that would provide mitigation for each type of environmental impact addressed in this Draft EIR, refer to the appropriate environmental topic section (i.e., Sections 3.1 through 3.12).

This EIR identifies impacts that require mitigation in the following topic areas:

- Traffic and Circulation
- Air Quality
- Noise
- Geology and Soils
- Hydrology and Water Quality
- Biological and Natural Resources
- Cultural and Paleontological Resources
- Aesthetics and Visual Resources

None of the impacts in the DEIR remain significant after mitigation is applied. There are no cumulatively considerable or significant and unavoidable impacts.

Areas of No Impact

The potential for the proposed project to result in certain impacts was not included in Table ES-1 because the City of Wildomar determined that the proposed project could not result in an impact in these environmental areas for the following reasons. Impacts not included in Table ES-1 include those pertaining to:

- **Mineral Resources** – The proposed project site is located within Mineral Zone MRZ-3, indicating that there no current determination regarding the significance of mineral resources present.

- **Agricultural Resources** – The proposed project site does not contain, and is not adjacent to, Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or any land subject to a Williamson Act contract.

- **Hazards and Hazardous Materials** – The proposed project will not impact a designated evacuation plan or produce hazardous materials or emissions. The proposed project site is not included on any list of hazardous materials sites, and it is located approximately 4 miles from the nearest airport, Skylark Field.

TABLE ES-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Land Use				
Impact 3.1.1	The proposed project will occur within an area that is currently vacant and surrounded by separate single-family communities. The proposed project will be an infill project and will not physically divide an established community.	NI	None required.	NI
Impact 3.1.2	The proposed project has been prepared to be consistent with the Wildomar General Plan and Zoning Ordinance as well as with The Farm Specific Plan.	LS	None required.	LS
Impact 3.1.3	The proposed project will occur within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).	NI	None required.	NI
Impact 3.1.4	Development of the proposed project will be consistent with the planning policies of the City of Wildomar General Plan while also being consistent with the surrounding land uses.	NI	None required.	NI
Population/Housing /Employment				
Impact 3.2.1	Buildout of the proposed project would result in population growth and the generation of employment.	LS	None required.	LS
Impact 3.2.2	Development of the proposed project would result in a slight increase in the population of the City of Wildomar.	LCC	None required.	LCC

NI – No Impact LS – Less Than Significant PS – Potentially Significant LSM – Less Than Significant with Mitigation
LCC – Less Than Cumulatively Considerable CC – Cumulatively Considerable

Impact		Level of Significance Without Mitigation	Mitigation Measure		Resulting Level of Significance
Traffic and Circulation					
Impact 3.3.1	Implementation of the proposed project would cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.	PS	**MM 3.3.1**	The project applicant shall be required to implement the following traffic improvements: *Sellers Road/Bundy Canyon Road* • Install a traffic signal. *Monte Vista Drive/Bundy Canyon Road* • Install a traffic signal. *Harvest Way West/Bundy Canyon Road* • Install a traffic signal. • Stripe a shared northbound through-right turn lane in place of the existing de facto right turn lane. • Construct a southbound left turn lane and shared through-right turn lane. • Construct an eastbound left turn lane and two additional through lanes. • Construct two additional westbound through lanes. *Harvest Way East/Bundy Canyon Road* • Install a traffic signal. • Construct an eastbound left turn lane and two additional through lanes. • Construct a westbound left turn lane. *Sunset Avenue/Bundy Canyon Road* • Install a traffic signal. • Construct an eastbound left turn lane and two additional through lanes. • Construct a westbound left turn lane. *Timing/Implementation: Prior to issuance of Final Map, a*	LS

NI – No Impact LS – Less Than Significant PS – Potentially Significant LSM – Less Than Significant with Mitigation
LCC – Less Than Cumulatively Considerable CC – Cumulatively Considerable

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
			subdivision improvement agreement will be executed that will establish the precise timing for the improvements. All improvements shall be in place prior to full buildout of the project. *Enforcement/Monitoring: City of Wildomar Public Works Department*	
Impact 3.3.2	Implementation of the proposed project will not conflict with adopted policies, plans or programs supporting alternative transportation.	LS	None required.	LS
Impact 3.3.3	Implementation of the proposed project will not result in increased hazards due to a design feature or incompatible uses.	LS	None required.	LS
Impact 3.3.4	Implementation of the proposed project could result in temporary blockages of Bundy Canyon Road and other roadways, causing an impact on emergency access.	LSM	**MM 3.3.4** The project applicant will prepare and implement a Traffic Management Plan (TMP) to minimize the inconveniences during construction. Included among the provisions, the contractor will coordinate with the City of Wildomar, Riverside County, and local police, fire, and emergency medical service providers regarding construction scheduling and any other practical measures to maintain adequate access to properties and response times. The TMP will include contact information for the general public who may have questions concerning the project and access to their property. Two-way traffic through the construction zone will be maintained throughout the construction period. *Timing/Implementation: Prior to fling of a final map* *Enforcement/Monitoring: City of Wildomar Public Works and Planning Departments*	LS

NI – No Impact LS – Less Than Significant PS – Potentially Significant LSM – Less Than Significant with Mitigation
LCC – Less Than Cumulatively Considerable CC – Cumulatively Considerable

Impact		Level of Significance Without Mitigation	Mitigation Measure		Resulting Level of Significance
Impact 3.3.5	When considered with existing, proposed, planned, and approved development in the region, implementation of the proposed project would contribute to cumulative traffic volumes in the region that result in significant impacts to level of service and operations.	CC	**MM 3.3.5**	The project applicant shall be required to implement, or pay a fair share of the costs of the implementation of, the following traffic improvements: *Murrieta Road/Scott Road* • Install a traffic signal. • Construct an eastbound left turn lane. • Restripe the southbound shared left-right turn lane as a right turn lane and construct two left turn lanes. • Construct an additional eastbound through lane. • Construct an additional westbound through lane and a dedicated right turn lane. *I-215 Southbound Ramps/Scott Road* • Restripe the southbound shared left-through lane as a left turn lane and construct a second left turn lane and second right turn lane. • Construct three additional eastbound through lanes. • Eliminate the westbound left turn lane and construct two additional through lanes and a right turn lane. It should be noted that these improvements are consistent with the planned Bundy Canyon Road/Scott Road and Interstate 215 at Scott Road interchange improvements planned by the Riverside County Transportation Commission funded by the Transportation Uniform Mitigation Fee. *I-215 Northbound Ramps/Scott Road* • Construct a second northbound right turn lane	LCC

NI – No Impact LS – Less Than Significant PS – Potentially Significant LSM – Less Than Significant with Mitigation
LCC – Less Than Cumulatively Considerable CC – Cumulatively Considerable

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
			and restripe the shared left-through lane as a through lane. • Construct two southbound right turn lanes. • Construct a second eastbound left turn lane and two additional through lanes. • Construct two additional westbound through lanes and a shared through-right turn lane. It should be noted that these improvements are consistent with the planned Bundy Canyon Road/Scott Road and Interstate 215 at Scott Road interchange improvements planned by the Riverside County Transportation Commission funded by the Transportation Uniform Mitigation Fee. This project's payment of the TUMF is considered adequate mitigation. *Timing/Implementation: Prior to issuance of building permits* *Enforcement/Monitoring: City of Wildomar Public Works and Building Departments*	
Air Quality				
Impact 3.4.1	Land use activities associated with the proposed project will not conflict with or obstruct implementation of regional air quality management planning.	LS	None required.	LS
Impact 3.4.2	Construction-generated emissions could result in an air quality violation concerning localized significance.	PS	**MM 3.4.2a** The following measures shall be incorporated into project plans and specifications and complied with by the project applicant at all times during construction: • All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour (mph).	LS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		• The construction contractor shall ensure that all disturbed unpaved roads and disturbed areas within the project site are watered daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day. (As shown in Table XI-A in **Appendix 3.4-1**, implementation of this measure is estimated to reduce PM_{10} and $PM_{2.5}$ fugitive dust emissions by approximately 61 percent.) • The contractor shall ensure that traffic speeds on unpaved roads and project site areas are reduced to 15 miles per hour (mph) or less to reduce PM_{10} and $PM_{2.5}$ fugitive dust haul road emissions by approximately 44 percent. *Timing/Implementation:* *As a condition of project approval, and implemented during ground-disturbing activities* *Enforcement/Monitoring:* *City of Wildomar Planning and Building Departments* **MM 3.4.2b** Prior to issuance of a grading permit, the grading plans shall reference that a sign will be posted on-site stating that construction workers need to shut off engines after 5 minutes of idling. The California Air Resources Board, in Title 13, Chapter 10, Section 2485, Division 3 of the California Code of Regulations, imposes a requirement that heavy-duty trucks accessing the site shall not idle for greater than 5 minutes at any location. This measure is intended to apply to construction traffic. *Timing/Implementation:* *As a condition of project approval, and implemented during ground-disturbing activities*	

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Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
			Enforcement/Monitoring: City of Wildomar Planning and Building Departments	
Impact 3.4.3	Construction-generated emissions will not contribute substantially to an existing or projected air quality violation.	LS	None required.	LS
Impact 3.4.4	Subsequent land use activities associated with implementation of the proposed project will not result in long-term operational emissions that could violate or substantially contribute to a violation of federal and state standards for ozone and coarse and fine particulate matter.	LS	None required.	LS
Impact 3.4.5	The proposed project will not contribute to localized concentrations of CO that would exceed applicable ambient air quality standards.	LS	None required.	LS
Impact 3.4.6	The proposed project would not result in exposure of sensitive receptors to substantial toxic emissions.	LS	None required.	LS
Impact 3.4.7	Development of the proposed project will not result in exposure of sensitive receptors to substantial odorous emissions.	LS	None required.	LS
Impact 3.4.8	Construction of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the South Coast Air Basin, will not significantly contribute to cumulative increases in emissions of criteria air pollutants that could contribute to future concentrations of pollutants for which the region is currently designated nonattainment.	LCC	None required.	LCC

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Impact		Level of Significance Without Mitigation	Mitigation Measure		Resulting Level of Significance
Noise					
Impact 3.5.1	The completed proposed project may expose persons to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	LSM	**MM 3.5.1a**	The project applicant shall construct at least a 6.5-foot-high decorative block wall or similarly effective noise barrier consistent with the design/wall guidelines of the specific plan for lots 33–50 adjacent to Bundy Canyon Road to mitigate for exterior noise impacts to residents. The designed noise screening may only be accomplished if the barrier's weight is at least 3.5 pounds per square foot of face area and has no decorative cutouts or line-of-sight openings between shielded areas and the roadways. The recommended noise control barrier may be constructed using one of the following alternative materials: 1. Masonry block 2. Stucco veneer over wood framing (or foam core), or 1-inch-thick tongue-and-groove wood of sufficient weight per square foot 3. Glass (1/4 inch thick), or other transparent material with sufficient weight per square foot 4. Earthen berm 5. Any combination of these construction materials The recommended barrier must present a solid face from top to bottom. Unnecessary openings or decorative cutouts should not be made. All gaps (except for weep holes) should be filled with grout or caulking. *Timing/Implementation:* *Prior to a Certificate of Occupancy for lots 33–50 (Phase 18 planning area)* *Enforcement/Monitoring:* *City of Wildomar Planning and*		LS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		Building Departments **MM 3.5.1b** The project applicant shall construct a 6.0-foot-high decorative block wall or similarly effective noise barrier consistent with the design/wall guidelines of the specific plan for lots 89–96, 131–144, 150–164, and 198–222 adjacent to Bundy Canyon Road to mitigate for exterior noise impacts to residents. The designed noise screening may only be accomplished if the barrier's weight is at least 3.5 pounds per square foot of face area and has no decorative cutouts or line-of-sight openings between shielded areas and the roadways. The recommended noise control barrier may be constructed using one of the following alternative materials: 1. Masonry block 2. Stucco veneer over wood framing (or foam core), or 1-inch-thick tongue-and-groove wood of sufficient weight per square foot 3. Glass (1/4 inch thick), or other transparent material with sufficient weight per square foot 4. Earthen berm 5. Any combination of these construction materials The recommended barrier must present a solid face from top to bottom. Unnecessary openings or decorative cutouts should not be made. All gaps (except for weep holes) should be filled with grout or caulking. *Timing/Implementation: Prior to a Certificate of Occupancy for lots 89–96, 131–144, 150–164 (Phase 9 planning area) and 198–222 (Phase 17A planning area)*	

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		Enforcement/Monitoring: City of Wildomar Planning and Building Departments **MM 3.5.1c** The project applicant shall provide a "windows closed" condition, requiring a means of mechanical ventilation and standard dual-glazed windows with a minimum Sound Transmission Class (STC) rating of 26 at first-floor elevations, with upgraded dual-glazed windows with a minimum Sound Transmission Class (STC) rating of 29 at second-floor elevations for lots 33–50, 89–96, 131–144, 152–164, and 198–222. *Timing/Implementation: Prior to a Certificate of Occupancy (as a part of building permit requirements) for lots 33–50, 89–96, 131–144, 152–164, and 198–222* *Enforcement/Monitoring: City of Wildomar Planning and Building Departments* **MM 3.5.1d** The project applicant shall provide a "windows closed" condition, requiring a means of mechanical ventilation and standard dual-glazed windows with a minimum Sound Transmission Class (STC) rating of 26 at first- and second-floor elevations for lots 1–3, 145–151, 173, 197, and 223–224. *Timing/Implementation: Prior to a Certificate of Occupancy (as a part of building permit requirements) for lots 1–3, 145–151, 173, 197, and 223–224* *Enforcement/Monitoring: City of Wildomar Planning and Building Departments* **MM 3.5.1e** All window and door assemblies used throughout the project shall be free of cutouts and openings and shall be well fitted and well weather-stripped.	

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		Timing/Implementation: *Prior to a Certificate of Occupancy (as a part of building permit requirements)* *Enforcement/Monitoring:* *City of Wildomar Planning and Building Departments* **MM 3.5.1f** A final noise study shall be prepared prior to obtaining building permits for lots 1–3, 33–50, 89–96, 131–151, 152–164, 173, and 197–224. This report will finalize the noise requirements based upon precise grading plans and actual building design specifications. The report may result in the need for additional building-specific architectural treatments to meet the interior noise specifications of the City. *Timing/Implementation:* *As a part of building permit requirements* *Enforcement/Monitoring:* *City of Wildomar Planning and Building Departments*	
Impact 3.5.2 The implementation of proposed project may expose persons to or generate minimal, short-duration groundborne vibration or groundborne noise levels.	LS	None required.	LS
Impact 3.5.3 Completion of the proposed project may result in a substantial permanent increase in ambient noise levels in the project vicinity.	LSM	**MM 3.5.3** The project applicant shall ensure that future commercial uses do not result in exterior noise levels at the nearest sensitive receptor that exceeds 65 dB or interior noise levels that exceed 45 dB. Examples of design features that can be used to reduce noise impacts associated with any future commercial use include, but are not limited to, noise barriers (walls), limited hours of operation, reconfiguration of site design, or restriction of uses or types of use.	LS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		Timing/Implementation: *Prior to approval of a Plot Plan or Conditional Use Permit for any commercial development within the Phase 19 planning area* *Enforcement/Monitoring:* *City of Wildomar Planning Department*	
Impact 3.5.4 Construction of the proposed project may result in a temporary increase in ambient noise levels in the project vicinity.	LSM	**MM 3.5.4a** Pursuant to Section 9.48.020 of the City of Wildomar Municipal Code establishing noise regulations, from June through September, construction can occur from 6:00 AM through 6:00 PM. During the period of October through May, construction activities can occur from 7:00 AM through 6:00 PM (Municipal Code Section 9.48.020I(1)(2)). Hours of construction during these seasons shall be limited to these time frames. *Timing/Implementation:* *During construction* *Enforcement/Monitoring:* *City of Wildomar Planning and Building Departments* **MM 3.5.4b** During all project site excavation and grading, construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise-sensitive receptors nearest the project site. *Timing/Implementation:* *During construction* *Enforcement/Monitoring:* *City of Wildomar Planning and Building Departments* **MM 3.5.4c** The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment. To the extent feasible,	LS

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			haul routes shall not pass sensitive land uses or residential dwellings. *Timing/Implementation:* *During construction* *Enforcement/Monitoring:* *City of Wildomar Planning and Building Departments* **MM 3.5.4d** Homeowners adjacent to project construction areas shall be notified via US mail and postings on the construction site at least 24 hours prior to the commencement of major construction-related noise impacts, such as grading, which may affect them. *Timing/Implementation:* *During construction* *Enforcement/Monitoring:* *City of Wildomar Planning Department and Public Works Department*	
Impact 3.5.5	Implementation of the proposed project will not result in a substantial contribution to cumulative noise levels.	LCC	None required.	LCC
Geology and Soils				
Impact 3.6.1	The potential for the project site to be exposed to hazards associated with fault rupture or strong seismic ground shaking is considered unlikely.	LS	None required.	LS
Impact 3.6.2	The project site does not include soils which may be subject to seismic-related ground failure, including liquefaction and landslide.	LS	None required.	LS
Impact 3.6.3	Within the project site, areas of undocumented artificial fills, alluvium, and portions of the old alluvium may become unstable as a result of the project.	LSM	**MM 3.6.3** All existing undocumented artificial fill, topsoil, Quaternary alluvium, Quaternary older alluvium, and unsuitable upper intensely weathered Cretaceous gabbro should be over-excavated to underlying competent Cretaceous gabbro within the areas of proposed structures, fill, or	LS

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			improvements. Anticipated removal depths range from approximately 2 to 14 feet below the existing surface. *Timing/Implementation:* *During grading and building activities* *Enforcement/Monitoring:* *City of Wildomar City Public Works and Building Departments*	
Impact 3.6.4	Soils testing indicates that non-expansive and expansive soils are present within the proposed project site.	LSM	Implement mitigation measure **MM 3.6.3**.	LS
Impact 3.6.5	Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the City of Wildomar and nearby areas of Riverside County, would not contribute to cumulative geologic and soils impacts.	LCC	None required.	LCC
Hydrology and Water Quality				
Impact 3.7.1	Construction and operation of the proposed project will not result in erosion and water quality degradation of downstream surface water and groundwater resources.	LSM	**MM 3.7.1** Prior to the approval of the grading permit for future development on the project site, the project applicant(s) shall be required to prepare a stormwater pollution and prevention plan (SWPPP) consistent with the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2010-0014-DWQ), which is to be administered through all phases of grading and project construction. The SWPPP shall incorporate best management practices (BMPs) to ensure that potential water quality impacts during construction phases are minimized. The SWPPP shall be submitted to the Regional Water Quality Control Board and to the City of Wildomar for review. A copy of the SWPPP must be kept accessible on the	LS

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		project site at all times. In addition, the project applicant(s) will be required to submit, and obtain City approval of, a Water Quality Management Plan prior to the issuance of any building or grading permit for future development on the project site in order to comply with the Areawide Urban Runoff Management Program. The project shall implement site design BMPs, source control BMPs, and treatment control BMPs as identified in the Water Quality Management Plan. Site design BMPs shall include, but are not limited to, landscape buffer areas, on-site ponding areas, roof and paved area runoff directed to vegetated areas, and vegetated swales. Source control BMPs shall include, but are not limited to, education, landscape maintenance, litter control, parking lot sweeping, irrigation design to prevent overspray, and covered trash storage. Treatment control BMPs shall include vegetated swales and a detention basin, or an infiltration device. The project will be responsible for maintenance of the basins. Timing/*Implementation:* *Prior to the issuance of a grading permit* *Enforcement/Monitoring:* *City of Wildomar Engineering Department*	
Impact 3.7.2 The proposed project would introduce impervious surfaces in the form of structures and parking lots to a previously undeveloped piece of land. This would result in an incremental reduction in recharge of the local groundwater aquifer.	LS	None required.	LS

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Impact 3.7.3	Development of the proposed project will alter the existing drainage pattern of the site and may impact stormwater runoff rates and volumes compared to existing conditions.	LS	None required.	LS
Impact 3.7.4	The project site is not within the 100-year floodplain or in an area designated by FEMA as a special flood hazard area. In addition, the project includes a storm drain system that will provide flood protection to the project site.	LS	None required.	LS
Impact 3.7.5	The proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the Santa Margarita and Santa Ana watersheds, could alter drainage conditions, rates, volumes, and water quality, which could result in potential erosion, flooding, and water quality impacts within the overall watersheds.	LCC	None required.	LCC
Biological and Natural Resources				
Impact 3.8.1	Implementation of the proposed project will not result in impacts to endangered, threatened, and other listed species.	LS	None required.	LS
Impact 3.8.2	Implementation of the proposed project could result in the direct mortality or loss of habitat for raptors and migratory birds.	PS	**MM 3.8.2** The project applicant shall conduct construction and clearing activities outside of the avian nesting season (January 15–August 31), where feasible. If clearing and/or construction activities occur during nesting season, then preconstruction surveys for nesting raptors and migratory birds shall be conducted by a qualified biologist, up to 14 days before initiation of construction activities. The qualified biologist shall survey the construction zone and a 250-foot radius surrounding the construction zone to determine whether the	LS

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		activities taking place have the potential to disturb or otherwise harm nesting birds. If an active nest is located within 100 feet (250 feet for raptors) of construction activities, the project applicant shall establish an exclusion zone (no ingress of personnel or equipment) at a minimum radius of 100 feet or 250 feet, as appropriate, around the nest. Alternative exclusion zones may be established through consultation with the CDFG and the USFWS. The exclusion zones shall remain in force until all young have fledged. Reference to this requirement and to the Migratory Bird Treaty Act shall be included in the construction specifications. If construction activities or tree removal are proposed to occur during the non-breeding season (September 1–January 14), a survey is not required, no further studies are necessary, and no mitigation is required. *Timing/Implementation:* *The project applicant shall incorporate requirements into all rough and/or precise grading plan documents. The project applicant's construction inspector shall monitor to ensure that measures are implemented during construction.* *Enforcement/Monitoring:* *City of Wildomar Planning and Public Works Departments*	
Impact 3.8.3 Project implementation may also result in the loss of western burrowing owls through destruction of active nesting sites, as well as incidental burial of adults, young, and eggs.	PS	**MM 3.8.3a** Per MSHCP Species-Specific Objective 6, pre-construction presence/absence surveys for burrowing owl within the survey area where suitable habitat is present will be conducted for all covered activities through the life of the permit. Surveys will be conducted within 30 days prior to	LS

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		disturbance. Take of active nests will be avoided. Passive relocation (use of one-way doors and collapse of burrows) will occur when owls are present outside the nesting season. The breeding period for burrowing owls is February 1 through August 31, with the peak being April 15 to July 15, the recommended survey window. Winter surveys may be conducted between December 1 and January 31. If construction is delayed or suspended for more than 30 days after the survey, the area shall be resurveyed. Surveys shall be completed for occupied burrowing owl burrows within all construction areas and within 150 meters (500 feet) out from the project work areas (where possible and appropriate based on habitat). All occupied burrows will be mapped on an aerial photo. *Timing/Implementation:* *30-days prior to any vegetation removal or ground-disturbing activities* *Enforcement/Monitoring:* *City of Wildomar Planning Department* **MM 3.8.3b** Based on the burrowing owl survey results, the City shall require the project applicant to take the following actions to offset impacts prior to ground disturbance if owls are found to be present: • If paired owls are nesting in areas scheduled for disturbance or degradation, nest(s) shall be avoided from February 1 through August 31 by a minimum of a 75-meter (250 feet) buffer or until fledging has occurred. Following fledging, owls may be passively relocated by a qualified biologist.	

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		• If impacts on occupied burrows in the non-nesting period are unavoidable, on-site passive relocation techniques may be used if approved by the CDFG to encourage owls to move to alternative burrows outside of the impact area. However, no occupied burrows shall be disturbed during the nesting season unless a qualified biologist verifies through noninvasive methods that the burrow is no longer occupied. Foraging habitat for relocated pairs shall be provided in accordance with guidelines provided by the CDFG (2012). • If relocation of the owls is approved for the site by the CDFG, the City shall require the developer to hire a qualified biologist to prepare a plan for relocating the owls to a suitable site. The relocation plan must include all of the following: – The location of the nest and owls proposed for relocation. – The location of the proposed relocation site. – The number of owls involved and the time of year when the relocation is proposed to take place. – The name and credentials of the biologist who will be retained to supervise the relocation. – The proposed method of capture and transport for the owls to the new site. – A description of site preparation at the relocation site (e.g., enhancement of existing burrows, creation of artificial burrows, one-time or long-term	

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		vegetation control). – A description of efforts and funding support proposed to monitor the relocation. • If paired owls are present within 50 meters (160 feet) of a temporary project disturbance (i.e., parking areas), active burrows shall be protected with fencing/cones/flagging and monitored by a qualified biologist throughout construction to identify losses from nest abandonment and/or loss of reproductive effort (e.g., killing of young). *Timing/Implementation:* *Prior to any vegetation removal or ground-disturbing activities* *Enforcement/Monitoring:* *City of Wildomar Planning Department*	
Impact 3.8.4 Implementation of the proposed project could result in disturbance and degradation of riparian habitat identified in local or regional plans, policies, or regulations, or by the CDFG or the USFWS.	PS	**MM 3.8.4** The project applicant shall ensure that the there is no net loss of riparian vegetation. Mitigation can include on-site restoration or purchase of mitigation credits at a US Army Corps of Engineers (USACE) approved or mitigation bank. Mitigation associated with regulatory permits issued through the CDFG, USACE, MSHCP, or the Water Resources Control Board may be applied to satisfy this measure. Evidence of compliance with this mitigation measure shall be provided prior to construction and grading activities for the proposed project. *Timing/Implementation:* *Prior to project vegetation removal or ground-disturbing activities* *Enforcement/Monitoring:* *City of Wildomar Planning Department and Public Works Department*	LS

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Impact 3.8.5	Implementation of the proposed project would result in the loss of jurisdictional waters of the United States and waters of the State.	PS	**MM 3.8.5a** The jurisdictional delineation shall be verified by the USACE and submitted to the City for review. *Timing/Implementation:* *Prior to any vegetation removal or ground-disturbing activities* *Enforcement/Monitoring:* *City of Wildomar Planning Department and Public Works Department* **MM 3.8.5b** The project applicant shall ensure that the project will result in no net loss of waters of the United States and waters of the State by providing mitigation through impact avoidance, impact minimization, and/or compensatory mitigation. Compensatory mitigation may consist of (a) obtaining credits from a mitigation bank; (b) making a payment to an in-lieu fee program that will conduct wetland, stream, or other aquatic resource restoration, creation, enhancement, or preservation activities; these programs are generally administered by government agencies or nonprofit organizations that have established an agreement with the regulatory agencies to use in-lieu fee payments collected from permit applicants; and/or (c) providing compensatory mitigation through an aquatic resource restoration, establishment, enhancement, and/or preservation activity. Evidence of compliance with this mitigation measure shall be provided prior to construction and grading activities for the proposed project. *Timing/Implementation:* *Prior to any vegetation removal or ground-disturbing activities* *Enforcement/Monitoring:* *City of Wildomar Planning Department and Public Works Department*	LS

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Impact 3.8.6	Implementation of the proposed project could interfere substantially with the movement of native resident or migratory fish or wildlife species.	LS	None required.	NI
Impact 3.8.7	Implementation of the proposed project may result in a conflict with a local policy or ordinance protecting biological resources.	LS	None required.	LS
Impact 3.8.8	Implementation of the proposed project would result in disturbance and degradation of riparian/riverine habitat, as defined in Section 6.1.2 of the MSHCP.	PS	**MM 3.8.8a** If riparian/riverine habitats covered under the MSHCP cannot be avoided, the project applicant shall submit a Determination of Biological Equivalent or Superior Preservation (DBESP), as outlined in Section 4.2 of the MSHCP Permittee Implementation Guidance Manual, to the City for approval. The project applicant shall ensure that the project will result in no net loss of riparian/riverine habitats by providing mitigation through impact avoidance, impact minimization, and/or compensatory mitigation for the impact, as determined in the DBESP. Mitigation accomplished under mitigation measure **MM 3.8.5b** may apply to meet the standards where appropriate. *Timing/Implementation: Prior to any vegetation removal or ground-disturbing activities* *Enforcement/Monitoring: City of Wildomar Planning Department and Public Works Department* **MM 3.8.8b** The project applicant shall submit plans that illustrate how disturbance to the portion of the project site located within the portion of Cell #5046 of Cell Group J in the Sedco Hills Subunit (SU4) of the Elsinore Area Plan will be avoided for City for approval.	LS

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			Timing/Implementation: *Prior to any vegetation removal or ground-disturbing activities* *Enforcement/Monitoring:* *City of Wildomar Planning Department and Public Works Department* **MM 3.8.8c** The project applicant shall submit fees to the City in accordance to the requirements of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Mitigation Fee Areas, including the MSHCP Mitigation Fee Area and the Stephens' Kangaroo Rat Mitigation Fee Area. *Timing/Implementation:* *Prior to any vegetation removal or ground-disturbing activities* *Enforcement/Monitoring:* *City of Wildomar Planning Department*	
Impact 3.8.9	Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the immediate area of the proposed project, will result in the conversion of habitat and impact biological resources.	LCC	None required.	LCC
Cultural and Paleontological Resources				
Impact 3.9.1	Implementation of the proposed project would not cause a substantial adverse change in the significance of a known historical resource.	NI	None required.	NI
Impact 3.9.2	Implementation of the proposed project could result in a substantial adverse change in the significance of an archaeological resource, as well as the potential disturbance of currently undiscovered cultural resources (i.e., prehistoric archaeological sites, historical archaeological sites, and isolated artifacts and features) and	PS	**MM 3.9.2a** Prior to the issuance of the first grading permit, the project applicant shall enter into a Tribal Monitoring Agreement with the Pechanga Band of Luiseno Indians and/or the Cahuilla Band of Indians. The agreement shall include, but not be limited to, outlining provisions and requirements for addressing the treatment of cultural resources and establishing on-site monitoring provisions	LS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
human remains.		and/or requirements during all ground-disturbing activities. A copy of this signed agreement shall be provided to the Planning Director and Building Official prior to the issuance of the first grading permit. *Timing/Implementation: Prior to ground-disturbing activities* *Enforcement/Monitoring: City of Wildomar Planning and Building Department* **MM 3.9.2b** Should any culturally significant resources be uncovered during the grading and construction phases of the proposed project, work shall be halted or relocated to an area outside of the area in which the resource was found while a qualified archeologist and tribal representative identify the resource and reassess the area. If the resource found is determined to be an historical or unique archeological resource, a time allotment sufficient to allow for the implementation of avoidance measures or appropriate mitigation shall be made available. Work on the proposed project may continue in other areas of the project site while any historical or unique archeological resource mitigation takes place. *Timing/Implementation: During all grading and construction activities* *Enforcement/Monitoring: City of Wildomar Planning Department* and *Public Works Department*	
Impact 3.9.3 Implementation of the proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	PS	**MM 3.9.3** Prior to issuance of a grading permit, the project applicant shall present a letter to the Chief Building Official indicating that a qualified paleontologist has been retained to carry out a paleontological monitoring and salvage program. The contracting paleontologist shall be present to monitor all initial	LS

NI – No Impact LS – Less Than Significant PS – Potentially Significant LSM – Less Than Significant with Mitigation
LCC – Less Than Cumulatively Considerable CC – Cumulatively Considerable

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		ground-disturbing activities in native soils or sediments, including all vegetation removal. Should any paleontological resources (i.e., fossils) be uncovered during project construction activities, all work in the immediate vicinity shall be halted or diverted to other areas on the site and the City shall be immediately notified. The qualified paleontologist shall be retained to evaluate the finds and recommend appropriate mitigation measures for the inadvertently discovered paleontological resources. The City and the project applicant shall consider the recommendations of the qualified paleontologist. The City, the qualified paleontologist, and the project applicant shall consult and agree upon implementation of a measure or measures that the City, the qualified paleontologist, and the project applicant deem feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. Further ground disturbance shall not resume within the area of the discovery until an agreement has been reached by the project applicant, qualified paleontologist, and the City, as well as the Native American tribal representative if relevant, as to the appropriate preservation or mitigation measures. *Timing/Implementation:* *As a condition of project approval, and implemented prior to issuance of a grading permit and during ground-disturbing activities* *Enforcement/Monitoring:* *City of Wildomar Planning Department and Public Works Department*	

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Impact		Level of Significance Without Mitigation	Mitigation Measure		Resulting Level of Significance
Impact 3.9.4	No human remains have been identified within the project site; however, implementation of the proposed project could result in the inadvertent disturbance of currently undiscovered human remains. Any discovery of human remains would trigger state law governing the treatment of human remains.	PS	**MM 3.9.4**	In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps shall be taken: (1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: a. The Riverside County Coroner shall be contacted to determine whether an investigation into the cause of death is required; and b. If the Riverside County Coroner determines the remains are Native American: i. The Coroner shall contact the Native American Heritage Commission within 24 hours. ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98; or	LS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		(2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission; b. The descendant identified fails to make a recommendation; or c. The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner. *Timing/Implementation:* *As a condition of project approval, and implemented prior to issuance of a grading permit and during ground-disturbing activities* *Enforcement/Monitoring:* *City of Wildomar Planning Department and Public Works Department*	
Impact 3.9.5 Implementation of the proposed project, along with any foreseeable development in the project vicinity, could result in cumulative impacts to cultural resources, i.e., prehistoric sites, historic sites, and isolated artifacts and features).	LCC	None required.	LCC

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Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Public Services and Utilities				
Impact 3.10.1a	Implementation of the proposed project will not result in the need for additional fire protection and emergency services in order to maintain acceptable service levels. However, the proposed project may result in a slight increase in demand for fire protection and emergency medical services.	LS	None required.	LS
Impact 3.10.1b	While the proposed project is located within an area that is identified as being exposed to a very high risk of wildfire, it is more specifically located in an area that is developed and well served by fire prevention services.	LS	None required.	LS
Impact 3.10.1c	While the proposed project will result in an additional need for water supply, this additional need will not require the creation of additional water supply infrastructure. Implementation of the proposed project may result in additional need for water supply and infrastructure to provide adequate fire flows for fire protection. The provision of these facilities could cause environmental impacts.	LS	None required.	LS
Impact 3.10.1d	Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the immediate area, may increase the demand for fire protection and emergency medical services. However, given the requirement for CEQA review of development, any necessary infrastructure or facilities expansion will be reviewed for potential impacts.	LCC	None required.	LCC

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Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.10.2a	Implementation of the proposed project will not result in a significant increased demand for law enforcement services and will not result in the need for new or physically altered law enforcement facilities, the construction of which could cause significant environmental impacts.	LS	None required.	LS
Impact 3.10.2b	The proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the RCSD service area, would increase the demand for law enforcement services.	LCC	None required.	LCC
Impact 3.10.3a	The proposed project will not result in significant increased enrollment in the local school district ultimately resulting in the need for construction of additional school facilities.	LS	None required.	LS
Impact 3.10.3b	Population growth associated with implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the cumulative setting, will not result in a significant cumulative increase in student enrollment.	LCC	None required.	LS
Impact 3.10.4a	Implementation of the proposed project will slightly increase demand for water supply, which could result in significant effects on the physical environment. However, adequate water supply sources exist, and the proposed project's and the Elsinore Valley Municipal Water District's water conservation provisions, would ensure adequate water service.	LS	None required.	LS

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Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.10.4b	Implementation of the proposed project would increase demand for water supply and thus require additional water supply infrastructure that could result in a physical impact to the environment.	LS	None required.	LS
Impact 3.10.4c	Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development within the cumulative setting, would increase the cumulative demand for water supplies. However, this increased demand will not be sufficient to lead to a requirement for new water facilities and related infrastructure..	LCC	None required.	LS
Impact 3.10.5a	Implementation of the proposed project will not result in wastewater discharge that would exceed the wastewater treatment requirements of the San Diego Regional Water Quality Control Board.	LS	None required.	LS
Impact 3.10.5b	The proposed project will slightly increase wastewater flows. However, the increase represented by the proposed project will not require any additional infrastructure or treatment capacity.	LS	None required.	LS
Impact 3.10.5c	Implementation of the proposed project, along with other existing, planned, proposed, approved, and reasonably foreseeable development within the cumulative setting, would contribute to the cumulative demand for wastewater service. However, continued implementation of EVMWD standards would ensure adequate wastewater facilities are provided.	LCC	None required.	LCC

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Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.10.6a	Implementation of the proposed project will generate increased amounts of solid waste that will need to be disposed of in landfills or recycled.	LS	None required.	LS
Impact 3.10.6b	Implementation of the proposed project could fail to comply with federal, state, and local statutes and regulations related to solid waste.	LS	None required.	LS
Impact 3.10.6c	Implementation of the proposed project, along with other existing, planned, proposed, approved, and reasonably foreseeable development in the region, would result in increased demand for solid waste services.	LCC	None required.	LCC
Impact 3.10.7a	Implementation of the proposed project would accommodate a slight increase in population that will be served by the park and recreation facilities to be built as part of the proposed project.	LS	None required.	LS
Impact 3.10.7b	Implementation of the proposed project, along with other existing, planned, proposed, approved, and reasonably foreseeable development, would increase the use of existing parks and would require additional park and recreation facilities within the cumulative setting, the provision of which could have an adverse physical effect on the environment.	LCC	None required.	LCC
Aesthetics and Visual Resources				
Impact 3.11.1	The proposed project will not have a substantial adverse effect on a scenic vista or substantially degrade the existing visual character or quality of the site and its surroundings.	LS	None required.	LS

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Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.11.2	While the potential project will result in changes to the existing visual character of the project site, these changes will not lead to a significant degradation of the existing visual character of the area.	LS	None required.	LS
Impact 3.11.3	The proposed project will not result in any new significant sources of glare or light that would adversely affect the day or nighttime views of the area.	LS	None required.	LS
Impact 3.11.4	Implementation of the proposed project, in combination with the planned Bundy Canyon–Scott Road widening project, would contribute to the alteration of the visual character of the region.	LCCM	**MM 3.11.4** Prior to any development activity or the issuance of any permit or approval removing or encroaching upon oak trees on the project site (this generally includes the canopy dripline of trees within the area of ground disturbance and trees subject to changes in hydrologic regime), an Oak Tree Mitigation Plan prepared by a certified arborist, registered professional forester, botanist, or landscape architect shall be submitted for review and approval by the City that includes: 1) A survey showing the location of oak trees 5 inches or more in diameter at breast height, as defined by Public Resources Code Section 21083.4(a). 2) The removal of all oak trees 5 inches or more in diameter at breast height shall be mitigated. Removal shall be mitigated by planting (or replanting) and maintaining oak trees. A minimum of three native oak trees of 5 gallons or larger size shall be planted for each oak tree removed that is greater than or equal to 5 inches diameter at breast height (DBH). The trees shall be planted in areas deemed appropriate by the Oak Tree Mitigation Plan, considering future lot development and	LCC

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		interference with foundations, fencing, roadways, driveways, and utilities. Replanted oak trees shall be maintained for a period of seven years after they are planted. If any of the replanted oak trees die or become diseased, they shall be replaced and maintained for seven years after the new oak trees are planted. 3) A replanting schedule and diagram for trees removed or encroached upon by the project shall be submitted to and approved by the City. Replanted trees shall be planted in areas deemed appropriate by the Oak Tree Mitigation Plan, considering future lot development and interference with foundations, fencing, roadways, driveways, and utilities. Trees planted shall be protected from livestock and other animals. 4) Oak tree protection measures for trees to be retained within the project site shall be included in construction specifications. Each oak tree to be preserved shall be surrounded by a tree zone identified by the dripline of the tree. An orange plastic fence or other suitable type of fence shall be used to identify the tree zone during construction activities. No vegetation removal, soil disturbance, or other development activities shall occur within the tree zone in order to protect root systems and minimize compaction of the soil, unless authorized by the Oak Tree Mitigation Plan. 5) Conservation easements or funds for off-site oak woodlands conservation shall be proposed to and approved by the City.	

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Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
			Timing/Implementation: *Prior to any ground disturbance activities* *Enforcement/Monitoring:* *City of Wildomar Planning Department and Public Works Department*	
Energy Use and Greenhouse Gases				
Impact 3.12.1	The construction and operation of the proposed project will not result in inefficient, wasteful, and unnecessary consumption of energy.	LS	None required.	LS
Impact 3.12.2	The proposed project will not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	LS	None required.	LS
Impact 3.12.3	Implementation of the proposed project will not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	LS	None required.	LS

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1.0 – Introduction

This Draft Environmental Impact Report (Draft EIR or DEIR) was prepared in accordance with and in fulfillment of the California Environmental Quality Act (CEQA) and the CEQA Guidelines. As described in CEQA Guidelines Section 15121(a), an environmental impact report (EIR) is a public informational document that assesses the potential environmental impacts of a project. CEQA requires that an EIR be prepared by the agency with primary responsibility over the approval of a project (the lead agency). The City of Wildomar (City) is the lead agency for the proposed Oak Creek Canyon Residential Development (project).

1.1 PROJECT SUMMARY

The proposed project, known as the Oak Creek Canyon Subdivision, includes an amendment to the Farm Specific Plan and adoption of supporting zoning to allow for a 275-parcel residential development that will include a range of property sizes from a minimum of 4,500 square feet on 137.82 acres of land. The development also includes three parks, trails, drainage basins, one million gallons of water storage, and roadways. As part of the project, Bundy Canyon Road will be realigned consistent with existing City of Wildomar and Riverside County general plans. Approximately 5.2 acres of the site will be designated and zoned for future neighborhood commercial development.

1.2 REGIONAL LOCATION

The project site is located in the City of Wildomar within Riverside County. Bounded by San Bernardino County to the north, Imperial and San Diego counties to the south, and Orange County to the west, Riverside County is located in the Inland Empire region of Southern California.

The City of Wildomar is located in the southwestern portion of Riverside County along Interstate 15 (I-15) southeast of Lake Elsinore. I-15 is a major north–south highway that runs through Southern California. The proposed 137.82-acre project site is located entirely within the City of Wildomar. **Figure 1.0-1** depicts the regional location of the project site, and **Figure 1.0-2** depicts the proposed project site. **Figure 1.0-3** shows views on and near the proposed project site.

1.3 PURPOSE OF THE DEIR

The City of Wildomar has determined that a Draft EIR is the appropriate CEQA-required documentation due to the potential for significant environmental impacts that could result from implementation of the proposed project. This DEIR evaluates the existing environmental resources in the vicinity of the project site and within its boundaries, analyzes potential impacts on those resources due to the proposed project, and if necessary, identifies mitigation measures to reduce those impacts to less than significant levels. This DEIR provides a review of the environmental effects of new development at the project site based on the existing local and regional environmental conditions. This DEIR will be used to evaluate the direct and indirect environmental effects of the proposed project. This DEIR also evaluates reasonable alternatives to the proposed project as well as the cumulative impacts of the project when viewed in the context of the effects of past, current, and probable future projects.

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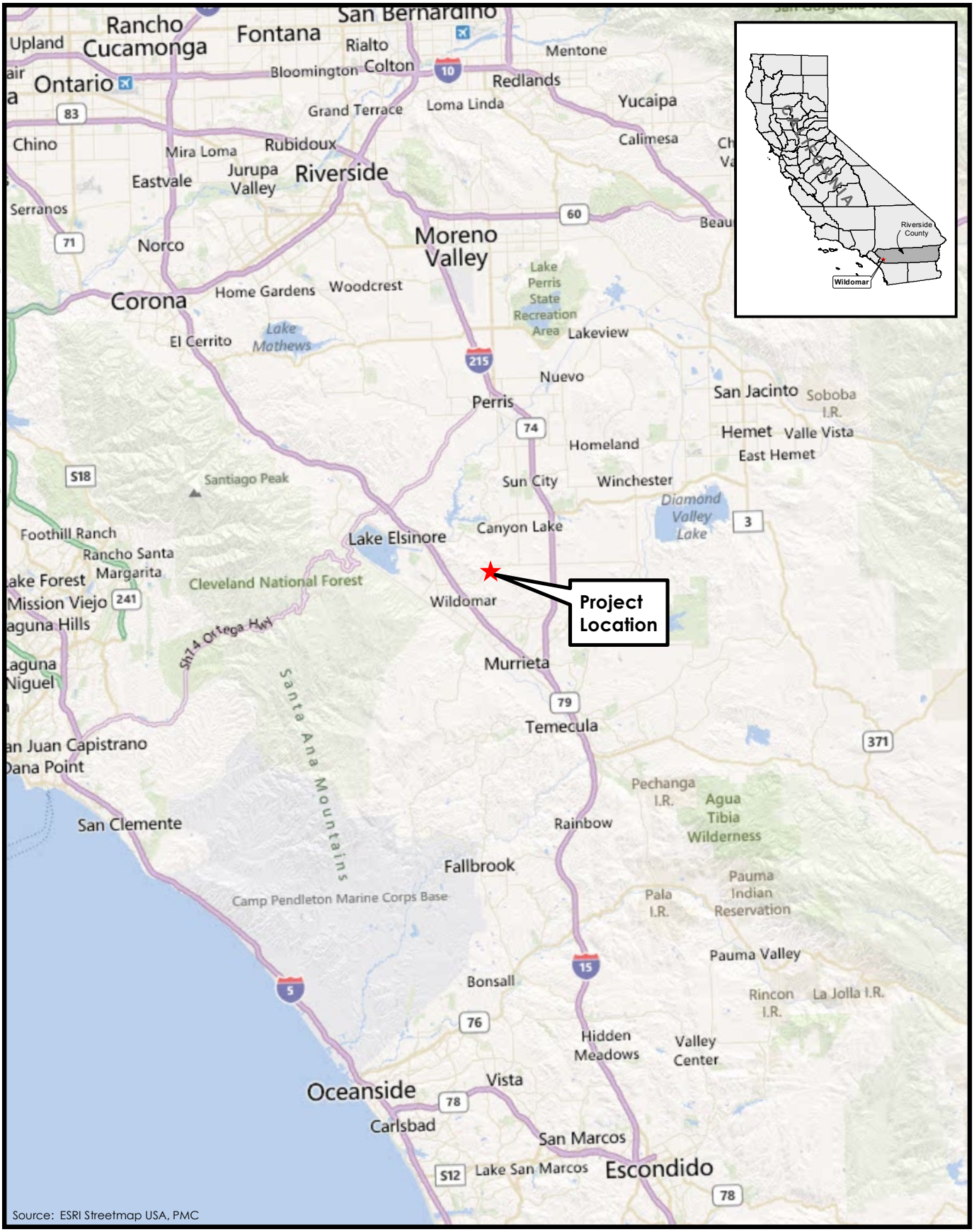

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Figure 1.0-1
Regional Vicinity Map

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T:_GIS\RIVERSIDE_COUNTY\WXDS\WILDOMAR\OAK_CREEK\FIGURE 2.0-2 PROJECT LOCATION.MXD - 8/1/2012 @ 1:47:59 PM

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Figure 1.0-2
Project Location Map

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Entrance Monument to the Farm Community at Bundy Canyon Road and Harvest Way West

Bundy Canyon Road Eastbound through wooded drainage

Eastern portion of Phase 9 seen from Harvest Way East

Phase 19 seen from Sunset Avenue

Phase 17A looking East

Western portion of Phase 9 seen from intersection of Bundy Canyon Rd and Harvest Way East

Source: City of Wildomar

Figure 1.0-3

Site Photos

PMC®

1.4 KNOWN TRUSTEE AND RESPONSIBLE AGENCIES

For the purpose of CEQA, the term "trustee agency" means a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California. Specifically, the following trustee agencies may have an interest in the proposed project and its implementation and were provided notice of the City's preparation of this DEIR:

- California Department of Fish and Game, Region 6 (CDFG)
- California Department of Transportation, District 8 (Caltrans)
- California Office of Historic Preservation (OHP)
- California Native American Heritage Commission (NAHC)
- San Diego Regional Water Quality Control Board, Region 9 (SDRWQCB)

In CEQA, the term "responsible agency" includes all public agencies other than the lead agency that may have discretionary actions associated with the implementation of the proposed project or an aspect of subsequent implementation of the Oak Creek Canyon Residential Development. It is anticipated that the following agencies may have a role in implementing the proposed project and have been identified as potential responsible agencies and notified of the preparation of this DEIR:

- Lake Elsinore Unified School District (LEUSD)
- Elsinore Valley Municipal Water District (EVMWD)
- Riverside County Flood Control and Water Conservation District (RCFCWCD)
- South Coast Air Quality Management District (SCAQMD)
- US Army Corps of Engineers (USACE)

1.5 TYPE OF DOCUMENT

The CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Project EIR pursuant to CEQA Guidelines Section 15161. The analysis associated with a Project EIR focuses primarily on the changes in the environment that would occur as a result of project implementation and examines all phases of the project (i.e., planning, construction, and operation). This document will not analyze the potential impacts of any future use of the 5.21-acre commercial area of the proposed project due to a lack of specific plans for the area. A subsequent programmatic environmental analysis will be performed once the future use of the commercial area of the proposed project has been developed and proposed.

1.6 INTENDED USE OF THE EIR

This Draft EIR is intended to evaluate the environmental impacts of the development of the proposed Oak Creek Canyon Residential Development.

1.7 ORGANIZATION AND SCOPE

Sections 15122 through 15132 of the CEQA Guidelines identify content requirements for EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. The environmental issues addressed in this Draft EIR were established through review of environmental documentation developed for the project, environmental documentation for nearby projects, and public comments and public agency responses to the Notice of Preparation (NOP). This Draft EIR is organized in the following sections:

EXECUTIVE SUMMARY

This section provides a project narrative and identifies environmental impacts and mitigation measures through a summary matrix consistent with CEQA Guidelines Section 15123.

SECTION 1.0 – INTRODUCTION

This section provides an overview that describes the intended use of the EIR, as well as the review and certification process.

SECTION 2.0 – PROJECT DESCRIPTION

This section provides a detailed description of the proposed project and project objectives, along with background information and physical characteristics consistent with CEQA Guidelines Section 15124.

SECTION 3.0 – ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

This section contains technical analyses relative to each environmental topic. Included in this section is a comprehensive analysis related to impacts and mitigations that correspond to project implementation. Each subsection contains a description of the existing setting of the project area. The environmental topics are summarized as follows:

- Land Use
- Population, Housing, and Employment
- Traffic and Circulation
- Air Quality
- Noise
- Geology and Soils
- Hydrology and Water Quality
- Biological and Natural Resources
- Cultural and Paleontological Resources
- Public Services and Utilities
- Aesthetics and Visual Resources
- Energy Use and Greenhouse Gases

SECTION 4.0 – CUMULATIVE IMPACTS

This section discusses the cumulative impacts associated with the proposed project that, when combined with past, present, and reasonably anticipated future events, may have a cumulative impact.

SECTION 5.0 – PROJECT ALTERNATIVES

This section discusses alternatives to the proposed project, including the CEQA mandatory "No Project" alternative, that are intended to avoid or reduce significant environmental impacts of the proposed project.

SECTION 6.0 – LONG-TERM IMPLICATIONS

This section contains discussions of significant irreversible environmental changes which would be involved in the proposed project should it be implemented, as well as unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance.

SECTION 7.0 – REPORT PREPARERS

This section lists all authors and agencies that assisted in the preparation of the report by name, title, and company or agency affiliation.

VOLUME II – TECHNICAL APPENDICES

This volume includes all notices and other procedural documents pertinent to the EIR, as well as all technical material prepared to support the analysis. All technical appendices are provided on CD-ROM.

1.8 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the Oak Creek Canyon Residential project EIR will involve the following general procedural steps:

NOTICE OF PREPARATION

In accordance with Section 15082 of the CEQA Guidelines, the City prepared a Notice of Preparation (NOP) of an EIR for the project on March 19, 2012. The City was identified as the lead agency for the proposed project. The notice was circulated to the public, local, state, and federal agencies, and other interested parties to solicit comments on the proposed project. A scoping meeting was held on March 13, 2012, and a community workshop was held on May 17, 2012, to receive additional comments. Concerns raised in response to the scoping meeting and community workshop were considered during preparation of the Draft EIR. The NOP and comments by interested parties are presented in **Appendix 1.0-1** and **Appendix 1.0-2,** respectively**.**

DRAFT EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives. Upon

completion of the Draft EIR, the City will file the Notice of Completion (NOC) with the Governor's Office of Planning and Research to begin the public review period (Public Resources Code Section 21161).

PUBLIC NOTICE/PUBLIC REVIEW

Concurrent with the Notice of Completion, the City will provide public notice of the availability of the Draft EIR for public review and invite comment from the general public, agencies, organizations, and other interested parties. The public review and comment period is 45 days. Public comment on the Draft EIR will be accepted both in written form and orally at public hearings. Notice of the time and location of the hearing will be published prior to the hearing. All comments or questions regarding the Draft EIR should be addressed to:

City of Wildomar
OAK CREEK CANYON EIR COMMENT
Planning Department
23873 Clinton Keith Road, Suite 201
Wildomar, CA 92595
Attention: Matthew Bassi, Planning Director
mbassi@cityofwildomar.org

RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR (FEIR) will be prepared. The FEIR will respond to written comments received during the public review period and to oral comments made at any public hearing.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The City will independently review and consider the FEIR. If the City finds that the FEIR is "adequate and complete," the City may certify the FEIR. Upon certification of the FEIR, the City may act upon the proposed project. A decision to approve the project would be accompanied by written findings in accordance with CEQA Guidelines Section 15091 and, if applicable, Section 15093. The City would also adopt a Mitigation Monitoring and Reporting Program, as described below, for mitigation measures that have been incorporated into or imposed upon the project to reduce or avoid significant effects on the environment.

MITIGATION MONITORING

CEQA requires lead agencies to adopt a mitigation monitoring and reporting program to describe measures which have been adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment (California Public Resources Code Section 21081.6[a]). The specific "reporting or monitoring" program required by CEQA is not required to be included in the EIR; however, it will be presented to the City Council for adoption and incorporation into any action on the proposed project. The mitigation measures outlined in the DEIR will be proposed as conditions of approval for Tentative Tract Map (TTM) 36388.

1.9 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

The City received several comment letters on the Notice of Preparation for the proposed project. A copy of the Notice of Preparation is provided in **Appendix 1.0-1** and a copy of each

comment letter is provided in **Appendix 1.0-2** of this DEIR. The City received letters from the following federal, state, and local agencies and other interested parties.

- California Department of Fish and Game
- California Native American Heritage Commission
- City of Lake Elsinore
- City of Menifee
- Farm Property Owners Association
- Pechanga Indian Reservation
- Residents Gary Andre, Nancy Brown, Robert Cashman, Cheryl and Ray Parrish, Elizabeth Ross, Alan and Leda Sack, Arlene Stovall, George Taylor, and Emil Vukasovic; Thompson and Associates on behalf of Penny Umbrell
- Riverside County Transportation and Land Management Agency
- Riverside Transit Agency
- South Coast Air Quality Management District
- US Fish and Wildlife Service

The following summarizes issues raised in the comment letters as well as the author of the letter.

JEFF BRANDT, CALIFORNIA DEPARTMENT OF FISH AND GAME

- A summary of the structure, purpose, and obligations of the lead agency under the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) and an analysis of the project in relation to the Elsinore Area Plan and Criteria Cell biographical goals and objectives should be included in any focused biological report or supplemental environmental report.
- A complete assessment should be provided of the flora and fauna within and adjacent to the project area, with particular emphasis on identifying endangered, threatened, and locally unique species and sensitive habitats.
- A thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts, should be included.
- A range of alternatives should be analyzed to ensure that alternatives to the proposed project are fully considered and evaluated. A range of alternatives which avoid or otherwise minimize impacts to sensitive biological resources should be included. Specific alternative locations should also be evaluated in areas with lower resource sensitivity where appropriate.

- A California Endangered Species Act (CESA) Permit must be obtained if there are impacts to state or federally listed species and the applicant chooses not to process the project through the Resources Conservation Agency of the MSHCP.

- Although the proposed project is within the Western Riverside Multiple Species Habitat Conservation Plan and could be subject to Section 6.1.2, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, a Lake and Streambed Alteration Agreement Notification is required by the CDFG should the site contain jurisdictional waters. The CDFG's criteria for determining the presence of jurisdictional waters are generally more comprehensive than the MSHCP criteria in Section 6.1.2. The CEQA document should include a jurisdictional delineation if there are impacts to riparian vegetation or State waters.

DAVE SINGLETON, CALIFORNIA NATIVE AMERICAN HERITAGE COMMISSION

- Early consultation with Native American tribes in the area of the proposed project will be the best way to avoid unanticipated discoveries of cultural resources or burial sites once the project is under way.

- Native American consulting parties should be provided pertinent project information as pursuant to California Public Resources Code Section 5097.35.

- Confidentiality of historic properties of religious and cultural significance should be considered as protected by California Government Code Section 6254(r).

- Processes mandated by Public Resources Code Section 507.98 regarding the accidental discovery of any human remains at the project location should be followed.

RICHARD J. MACHOTT, CITY OF LAKE ELSINORE

- No comments at this time.

LISA GORDON, CITY OF MENIFEE

- The DEIR shall identify the road improvements for Bundy Canyon Road. Bundy Canyon Road needs to be designed to the roadway width, ultimate vertical and ultimate horizontal alignment for the Bundy Canyon/Scott Road Improvement Project currently under environmental review by Riverside County Transportation.

- The following categories are requested to be assessed in terms of their impact on the City of Menifee: aesthetics, air quality, geology and soils, greenhouse gas emissions, hazardous waste and materials, hydrology and water quality, land use and planning, noise, recreation, and transportation and traffic.

GEORGE W. TAYLOR, FARM PROPERTY OWNERS ASSOCIATION

- Additional recreation facilities should be added to the proposed project's design to prevent expected residents from migrating to recreation facilities owned and operated by the Farm Property Owners Association (FPOA).

- The proposed project should be walled at its boundaries with the Farm Community to prevent criminal activity and a migration of expected residents to the recreational facilities of the Farm Community.

- As a condition of approval for the proposed project and pursuant to the Quimby Act (California Government Code 66477), the project developer should be required to pay a development impact fee to offset any increase in the expense of active recreation facilities.

- The proposed widening of Bundy Canyon Road should be completed prior to construction of the proposed project as a condition of approval.

- Given that the proposed project will not be a component of the Farm Community, assurances must be made that the project is consistent with the most up-to-date and applicable Specific Plan for the project area.

- The development of the proposed project's commercial area will serve to reduce fuel consumption by reducing travel times to obtain sundry and minor grocery items.

- Banners and ornamentation demonstrating the entrance to the Farm Community should remain intact and consistent with the community's entrance points following improvements to Bundy Canyon Road.

- Traffic safety issues at all entrances to Bundy Canyon Road should be considered and addressed.

MICHELE FAHLEY, PECHANGA INDIAN RESERVATION

- The Pechanga Band of Luiseno Indians (the Tribe) should be included on the project's distribution list(s) for public notices and circulation of all documents, including environmental review documents, archeological reports, and all documents pertaining to the project. The Tribe further requests to be directly notified of all public hearings and scheduled approvals concerning the project.

- The environmental document should adequately address the safekeeping of both known cultural resources sites and any inadvertent finds.

- The village identified by the project's archeological study as CA-RIV-1024 may be incorrectly identified or located.

- The Tribe would like to meet with the City and the developer to discuss possible measures for avoiding and preserving two identified and previously recorded cultural areas within the project boundaries.

- If human remains are discovered, California Public Resources Code Section 5097.98 would apply and the mitigation measures for the permit must account for this.

- The Tribe would like to participate with the City, the developer, and the project archeologist to develop avoidance and preservation measures for the existing sites, including a culturally sensitive archeological excavation plan if determined to be appropriate and necessary.

GARY ANDRE, RESIDENT

- Within the proposed project site, current zoning northwest and southeast of Bundy Canyon Road is not consistent with the proposed project.
- Step-down zoning and buffering should be utilized to ensure that the proposed project is compatible with existing land uses.
- The project should be reviewed to ensure consistency with the local applicable urban water management plan.
- Recreational hiking trails developed for the project should be public and should connect to the regional trail on Sunset Road.
- Current water and sewer services to the site are inadequate to support the proposed project.
- Soils testing should ensure that the proposed project site is not contaminated from the nearby sewage treatment facility.
- Current design of Bundy Canyon Road leads to traffic delays. All proposed improvements to Bundy Canyon Road should be completed prior to construction.
- Existing flood control plans and community visioning plans should be adhered to.

NANCY BROWN, RESIDENT

- The DEIR should analyze the need for a bus stop on Bundy Canyon Road. This analysis should be coordinated with the Riverside Transit Authority.

ROBERT CASHMAN, RESIDENT

- The proposed improvements to Bundy Canyon Road do not adequately address the current and projected demands on the road.
- There are no transition points from the high-density portions of the project to those featuring lower densities.
- Small lot sizes do not appear to be compatible with existing development patterns in the City of Wildomar.
- Impacts of the project on wildlife crossing Bundy Canyon Road should be analyzed.
- The Farm Property Owners Association should be permitted to be part of the project's approval process.
- Water and sewer services should be identified to ensure that existing services to the Farm Community are not disrupted.
- The commercial development portion of the project should be larger so as to better serve the area.

CHERYL AND RAY PARRISH, RESIDENTS

- Bundy Canyon Road is inadequate to support increased traffic demand.

ELIZABETH ROSS, RESIDENT

- The increase in local population resulting from the proposed project will result in more traffic and trespassing on the recreational facilities of the Farm Community.
- Barriers which would either restrict access to the farm or limit pedestrian access from the proposed project should be erected.
- The proposed project should be required to include solar energy systems for electrical needs and greywater systems for irrigation needs. In addition, the proposed project should be required more trees per lot than what is currently planned.
- Rainwater catchment basins should be located throughout the project site.
- The efficiency of emergency evacuation routes from the area will be severely degraded by the increased population.

ALAN AND LEDA SACK, RESIDENTS

- The increase in local population resulting from the proposed project will result in more traffic and crime.
- The proposed project will adversely affect air quality due to increased vehicular traffic and construction activities.
- The proposed project represents significant impacts to local biological resources.

ARLENE STOVALL, RESIDENT

- The increase in local population resulting from the proposed project will result in more traffic, noise, crime, and trespassing on the recreational facilities of the Farm Community.
- Increased vehicular traffic will lead to increased emergency response times and air quality impacts.

GEORGE TAYLOR, RESIDENT

- The DEIR should reflect the differences between what was originally intended as a commercial area for residential shopping and the residential use proposed by the project.
- Local roadways in their current configuration will be unable to meet the traffic demands of the proposed project.
- The proposed project's entrance monuments should not compete with, or replace, the pre-existing monuments demonstrating the entrances to the Farm Community.

EMIL VUKASOVIC, RESIDENT

- The increase in local population resulting from the proposed project will result in more traffic and dangerous conditions on Bundy Canyon Road.

FARAH KHORASHADI, RIVERSIDE COUNTY TRANSPORTATION DEPARTMENT

- The City of Wildomar should coordinate with Riverside County during the development of the proposed project and the planned Bundy Canyon Road widening project to address road alignments, environmental document content, etc., to reduce duplication of effort and avoid any inconsistencies that may arise from the two projects.

GORDON ROBINSON, RIVERSIDE TRANSIT AUTHORITY

- Short-range planning being completed by the Riverside Transit Authority (RTA) of bus service to the project area does not include any additional service.

- The RTA will soon be conducting an economic analysis of transit services throughout its service area, which will lead to improved efficiency and a better understanding of consumer needs.

- The project as currently proposed may not feature high enough densities to support additional transit facilities by itself. However, the implementation of park-and-ride facilities and mixed-use development may mitigate for the lower-density design of the project.

- The City of Wildomar should consider the following guidelines in the design of the project's roads and streets: road grade, bus turnouts, intersection radii, location of future transit stops, and accessibility.

IAN MACMILLAN, SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

- The DEIR, all appendices or technical documents related to the air quality and greenhouse gas analysis, and electronic versions of all air quality modeling and health risk assessment files should be forwarded to the South Coast Air Quality Management District (SCAQMD).

- The lead agency should use the 1993 CEQA Air Quality Handbook as guidance when preparing the project's air quality analysis.

- The lead agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project.

- The SCAQMD requests that the lead agency quantify $PM_{2.5}$ emissions and $PM_{2.5}$ significance thresholds.

- When preparing the air quality analysis for the proposed project, the SCAQMD recommends that that the lead agency perform a localized significance analysis by either using the localized significance thresholds developed by the SCAQMD or by performing dispersion modeling as necessary.

- In the event the proposed project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the lead agency perform a mobile health risk assessment. An analysis of all toxic air contaminant impacts due to the decommissioning or use of equipment potentially generating such air pollutants should also be included.

ROBERT THOMPSON, THOMPSON AND ASSOCIATES

- The Planning Application does not appear to adequately take into account the effect that the potential downstream flow of waters will have on the properties located north of Bundy Canyon Road. The Planning Application is based on improper map assumptions, which ultimately and improperly makes the property located at 24550 Bundy Canyon Road, Wildomar, CA 92595 (APN 361-224-008) a catch basin itself. If the plan is approved in its current stage, the property in question will necessarily be damaged and become unusable. For this reason, changes to the flow of water at and from the project site must be reconsidered.

KENNON A. COREY, US FISH AND WILDLIFE SERVICE

- Project implementation relevant to the Multiple Species Habitat Conservation Program (MSHCP) should be addressed in the DEIR.

- The project is located in the Additional Survey Area for burrowing owl. The results of a habitat assessment and, if needed, focused protocol surveys for burrowing owl should also be included in the DEIR.

- Survey results, vegetation mapping, and analysis required under the MSHCP, including a Determination of Biologically Equivalent or Superior Preservation, as appropriate, should also be included in the DEIR.

2.0 – Project Description

This section of the Draft Environmental Impact Report (DEIR or Draft EIR) describes the entirety of the project, including all anticipated development and infrastructure needed to serve the project. See **Appendix 2.0-1**, Major Planning Project Application.

2.1 PROJECT SUMMARY

The proposed project, known as the Oak Creek Canyon Subdivision, includes an amendment to The Farm Specific Plan and adoption of supporting zoning to allow for a 275-parcel residential development that will include a range of property sizes down to a minimum of 4,500 square feet on approximately 168 acres of land. The development also includes three parks, trails, drainage basins, one million gallons of water storage, and roadways. As part of the project, Bundy Canyon Road will be realigned consistent with existing Riverside County plans. Approximately 5.2 acres of the site will be designated and zoned for future neighborhood commercial development.

Development of the project will be phased, with the project divided into at least five development units. While numbered sequentially, the development units might not be developed in numerical sequence and could be developed simultaneously.

2.2 PROJECT OBJECTIVES

The proposed project includes the following project objectives:

- Provide a residential development that would assist the City in meeting its existing and future housing needs;
- Provide a project that minimizes its impact on site resources and existing residents through site design;
- Create the opportunity for future commercial/retail services to become established in the area and serve local residents;
- Provide private park and recreational amenities for the future Oak Creek Canyon residents; and
- Improve existing public access through the site by improving Bundy Canyon Road.

2.3 PROJECT CHARACTERISTICS

REQUESTED ENTITLEMENTS

The following applications are the requested City entitlements:

1. **General Plan Amendment** – A proposal to amend the General Plan land use designation for 20.11 acres within Phase/Planning Area No. 18 from Medium Density Residential (MDR) to Medium High Density Residential (MHDR) to accommodate single-family lots with a minimum lot size of 4,500 square feet and to increase the size of the Phase/Planning Area 19 land use designation of Commercial Retail (CR) from 1.0 acres to 5.21 acres, including relocation of the phase/planning area to the southwest corner of the intersection of Bundy Canyon Road and Sunset Avenue.

2. **Specific Plan Amendment No. 116 (Amendment 4) to The Farm Specific Plan** – The Farm Specific Plan (Specific Plan No. 116-C/W), which was originally approved on September 24, 1974, and subsequently amended on July 28, 1981 (Resolution No. 81-269) and on January 29, 2002 (Resolution 2002-27), is a master planned community consisting of approximately 1,520 acres with residential uses assigned to occupy 776.7 acres. The remaining 576.7 acres are dedicated to open space and recreation areas consisting of a clubhouse/swimming pool, private park, and lake. Additionally, there are 37.7 acres set aside for school uses, 4.1 acres for a sewage treatment plant, 21.6 acres for commercial use, and 10.3 acres for street purposes. The proposed modification to the Specific Plan (Amendment No. 4) seeks to change the existing approved land uses shown in **Figure 2.0-1**, for the planning areas identified as Phases 9, 17A, 18, and 19. These changes include the conversion of 1.1 acres from commercial use to residential/open space use, establishment of lot sizes for each residential unit of the subdivision, and creation of a 5.21-acre commercial site. (See **Appendix 2.0-2.**

3. **Zone Change** – The proposed project site is currently zoned R-1 (One-Family Dwelling – Phase 9, 17A, and 18) and C-P-S (Scenic Highway Commercial. The proposal to change the zoning designations for three Farm Specific Plan phasing/planning areas is as follows:

   a. Rezone all of the Phase 9 Planning Area from the current Specific Plan designation of R-1 (One-Family Dwelling) to R-4 (Planned Residential Zone) to allow for single-family residential development with a minimum lot size of 6,000 square feet;

   b. Rezone all of the Phase 18 Planning Area from the current Specific Plan designation of R-1 (One-Family Dwelling) and C-P-S (Scenic Highway Commercial) to R-4 (Planned Residential Zone) to allow for single-family residential development with a minimum lot size of 4,500 square feet; and

   c. Rezone all of the Phase 19 Planning area from the current Specific Plan designation of C-P-S (Scenic Highway Commercial) to C-1/C-P (General Commercial). The applicant is also proposing to increase the size of Phase 19 from 1.1 acres to approximately 5.0 acres and relocate it from its current location to the southwest corner of Sunset Avenue and Bundy Canyon Road. (See **Figure 2.0-2**, Existing Zoning, and **Figure 2.0-3**, Proposed Zoning.)

4. **Approval of Tentative Tract Map No. 36388** – Tentative Tract Map (TTM) 36388 includes the subdivision of the 151.23-acre proposed project site into 275 single-family lots and 17 total open space lots. The 275 single-family lots will have a minimum lot size of 4,500 square feet to 7,200 square feet. The overall unit density of the proposed project area will be 1.8 units per acre, with a developable density of 3.5 units per acre. As proposed, the map divides the property into five development units, with units 1–4 providing for residential uses and unit 5 allowing for commercial development. (See **Figure 2.0-4a** through **Figure 2.0-4f**, Proposed Subdivision and Phasing Map.) **Figure 2.0-5** shows the proposed site plan and access points.

5. **Grading Permit** – A grading permit will be needed to prepare the property for development consistent with the approved tentative map. As noted on the tentative map, the proposed project estimates approximately 700,000 cubic yards of cut and fill, but does not anticipate the need for import or export of fill material.

6. **Building Permit** – Building permits will be needed to allow construction.

7. **Encroachment Permit** – Encroachment permits will be needed for any construction that must occur on public property or within publicly held easements.

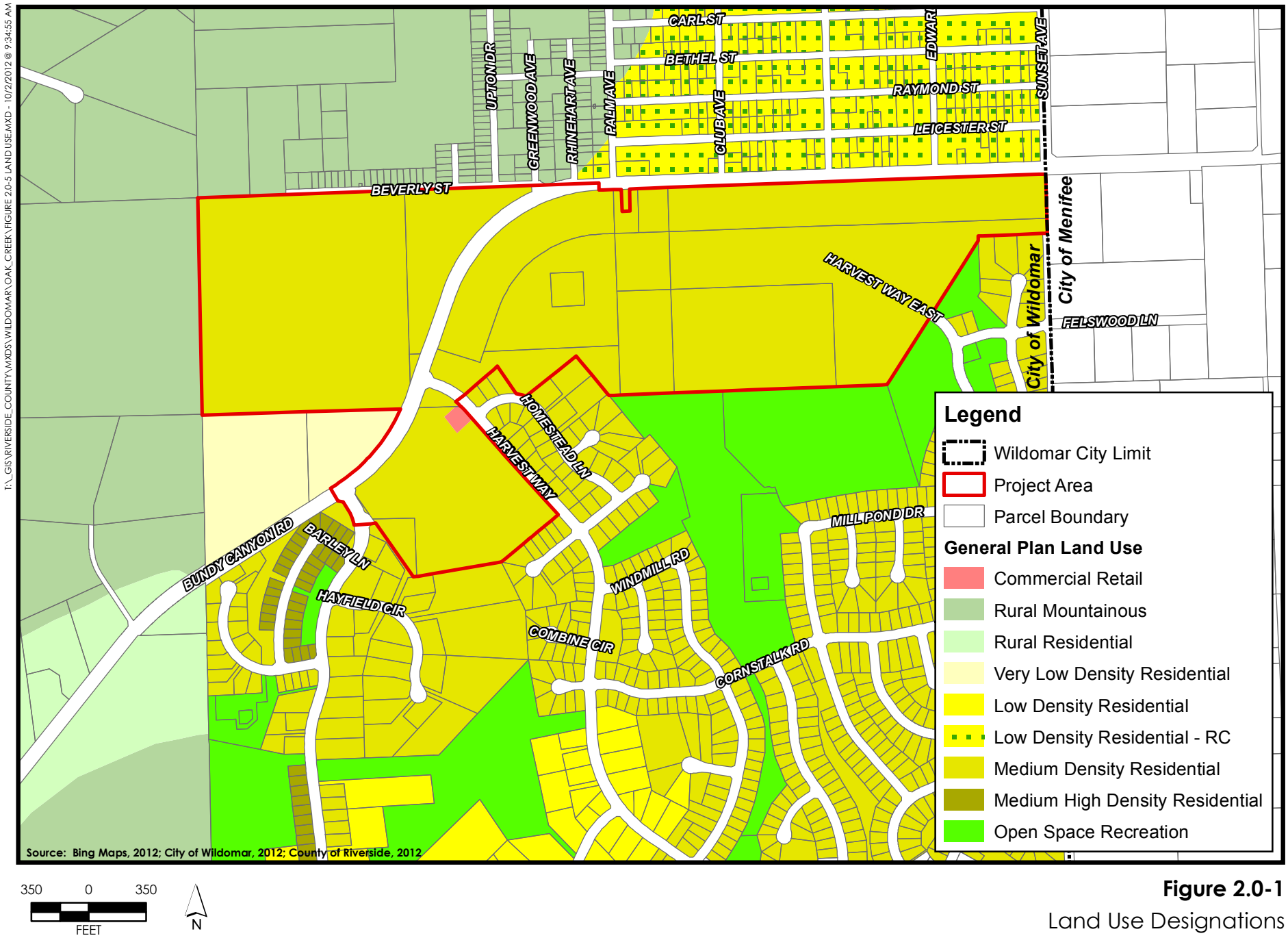
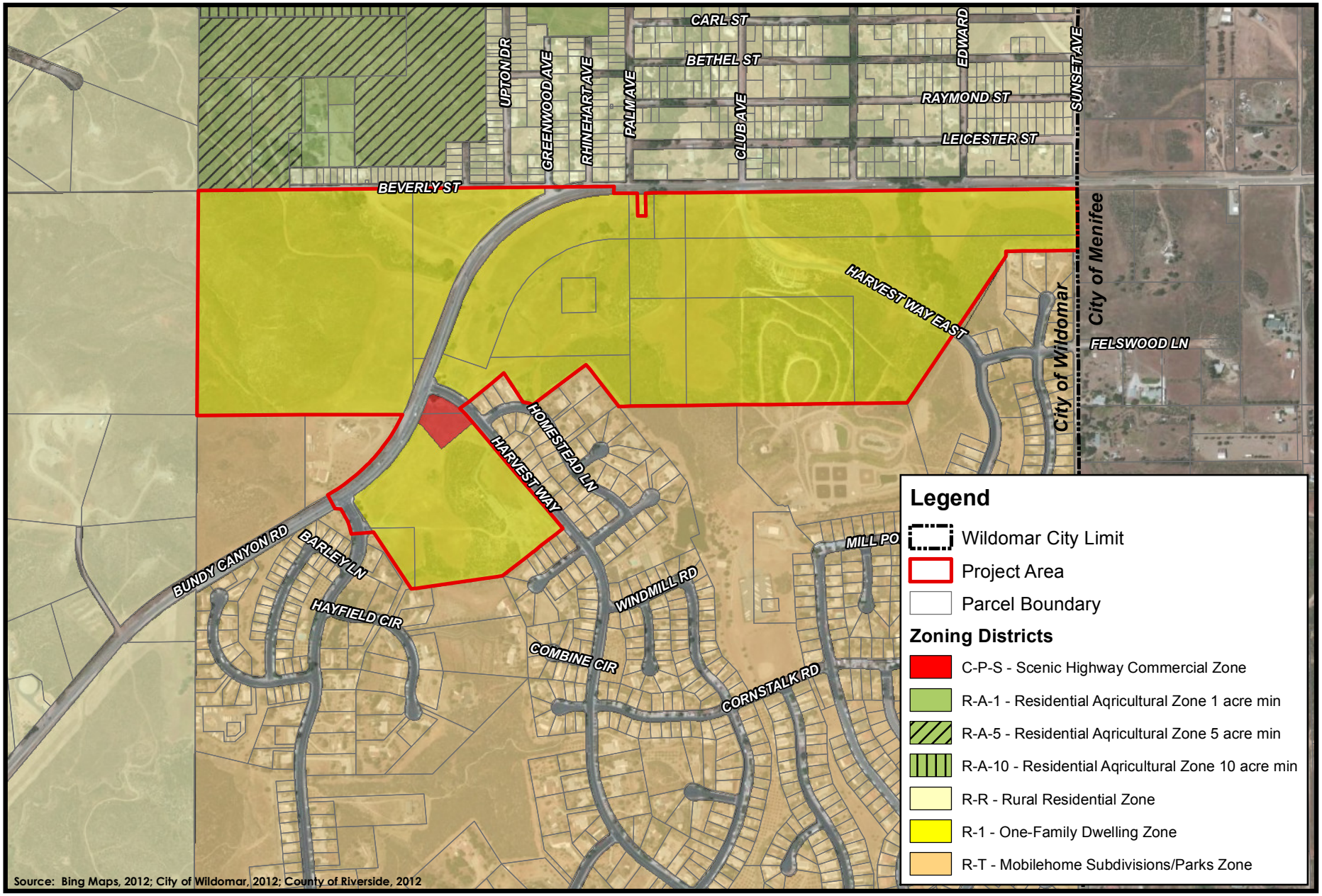
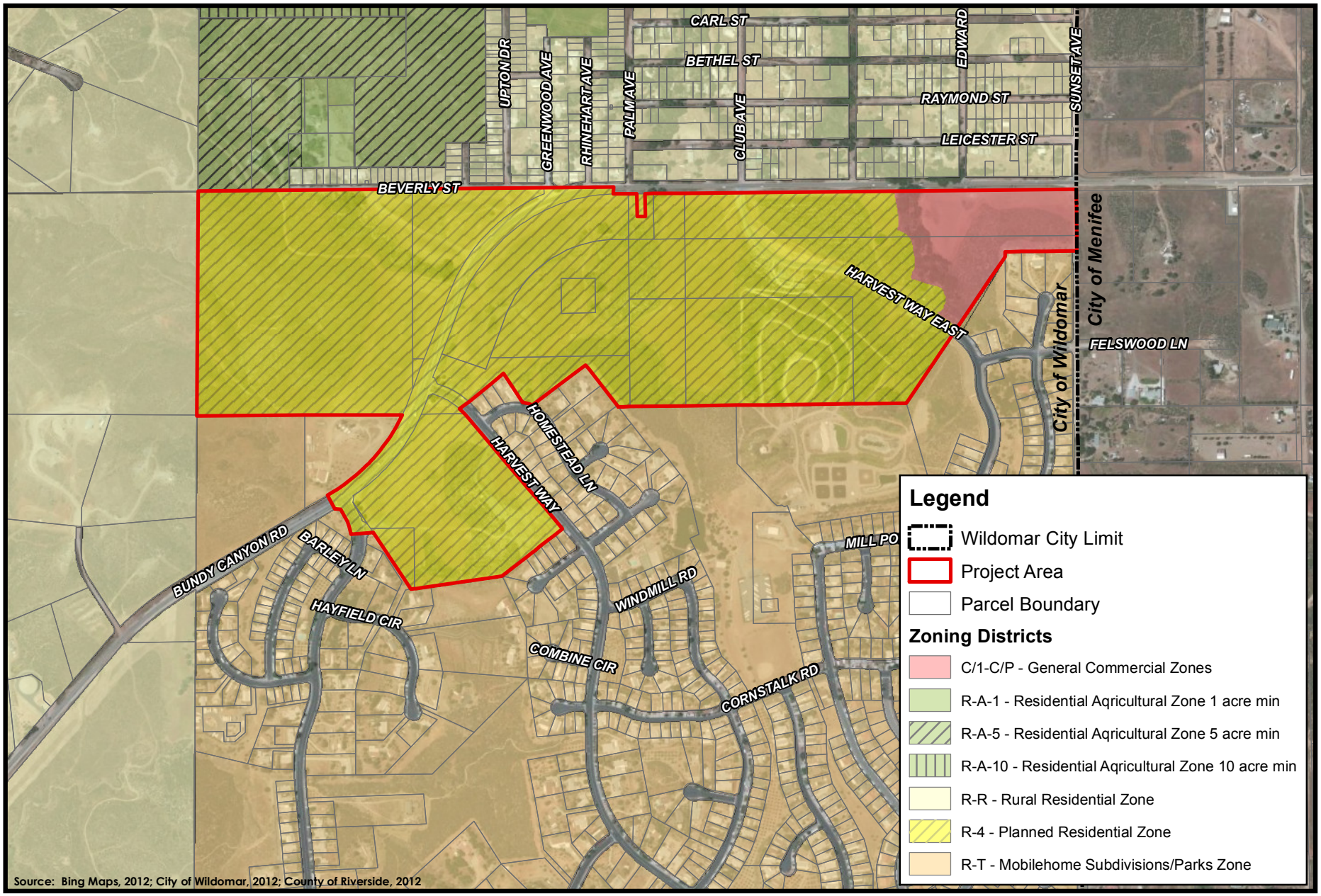


Figure 2.0-1
Land Use Designations



T:_GIS\RIVERSIDE_COUNTY\MXDS\WILDOMAR\OAK_CREEK\FIGURE 2.0-4.1 EXISTING ZONING.MXD - 8/1/2012 @ 3:51:20 PM

Figure 2.0-2
Existing Zoning

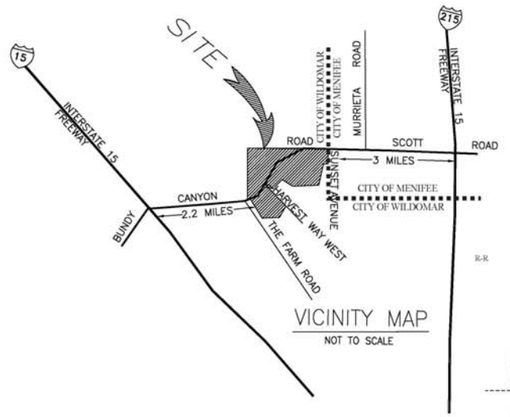


T:_GIS\RIVERSIDE_COUNTY\MXDS\WILDOMAR\OAK_CREEK\FIGURE 2.0-4.2 PROPOSED ZONING.MXD - 8/2/2012 @ 9:29:45 AM

Figure 2.0-3
Proposed Zoning

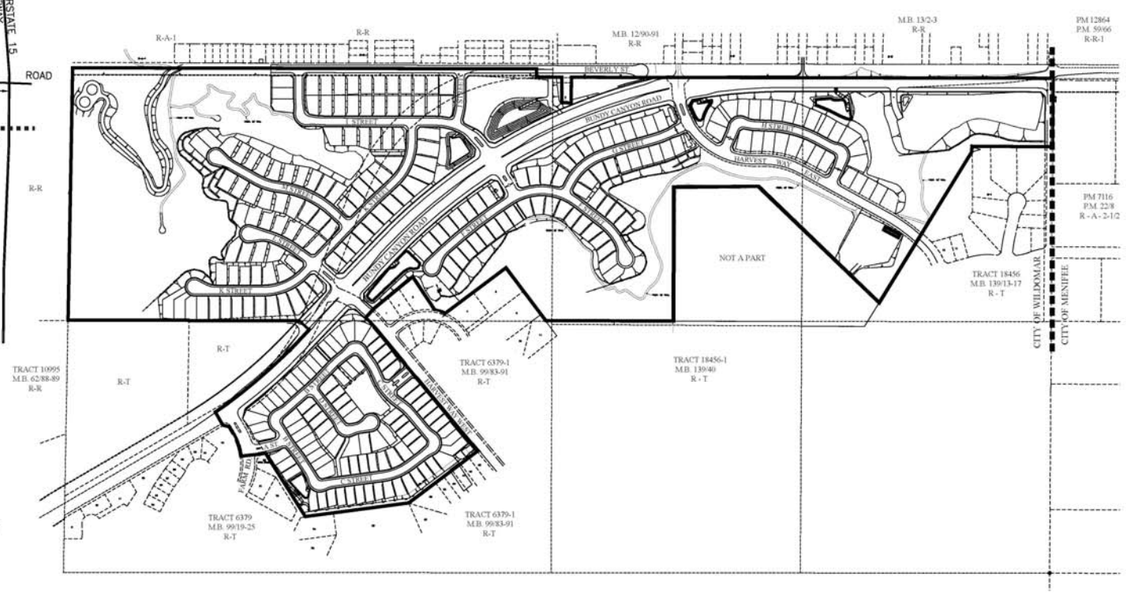
T:_CS\Work\Wildomar, City of\Figures for Oak Creek Canyon EIR 28-0047A-11-0261

CITY OF WILDOMAR



VICINITY MAP

NOT TO SCALE



INDEX MAP

SCALE: 1" = 300'

LEGAL DESCRIPTION:

PARCEL 1: THE WEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER OF THE NORTHEAST ONE QUARTER OF SECTION 19, TOWNSHIP 6 SOUTH, RANGE 3 WEST, SAN BERNARDINO BASE AND MERIDIAN;
EXCEPTING THERE FROM THAT PORTION THEREOF CONVEYED TO THE COUNTY OF RIVERSIDE BY DEED RECORDED SEPTEMBER 12, 1960 AS INSTRUMENT NO. 79587 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.
ALSO EXCEPTING THEREFROM THAT PORTION THEREOF CONVEYED TO THE COUNTY WATER COMPANY, INC., A CALIFORNIA CORPORATION BY DEED RECORDED JULY 9, 1986 AS INSTRUMENT NO. 159570 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.
(ASSESSOR'S PARCEL NO'S: 362-070-021-1; 362-080-008-0; 362-080-08-1; 362-080-009-2)

PARCEL 2: THE WEST HALF OF THE NORTHWEST QUARTER (BEING ALSO DESIGNATED AS GOVERNMENT LOT 2); THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER; THE NORTH HALF OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER; THE EAST HALF OF THE NORTHEAST QUARTER; ALL OF THE ABOVE BEING IN SECTION 19, TOWNSHIP 6 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN; ALSO EXCEPTING THEREFROM THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 19; EXCEPTING THERTHEREFROM TRACT NO. 6378 AS SHOWN BY MAP ON FILE IN BOOK 91 PAGES 19 TO 25 OF MAPS RECEORDS OF RIVERSIDE COUNTY, CALIFORNIA; ALSO EXCEPTING THAT PORTION THEREOF CONTAINED IN BUNDY CANYON ROAD; ALSO EXCEPTING THAT PORTION CONVEYED TOT HE COUNTY OF RIVERSIDE BY DEED RECORDED SEPTEMBER 12, 1960 AS INSTRUMENT NO. 79587 OF OFFICAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; ALSO EXCEPTING THEREFROM THOSE PORTIONS CONVEYED TOT HE FARM, A CALIFORNIA CORPORATION BY DOCUMENTS RECORDED JULY 16, 1976 AS INSTRUMENT NO. 103640 AND APRIL 20, 1979 AS INSTRUMNET NO. 79615 BOTH OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; ALSO EXCEPTING THEREFROM THE FOLLOWING; THAT PORTION OF THE NORTHEAST QUEARTER OF THE NORTHWEST QUARTER OF SECTION 19, TOWNSHIP 6 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN, BOUNDED BY THE FOLLOWING DESCRIBED LINE; BEGINNING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 19; THENCE SOUTH 89°42'40" WEST, ALONG THE NORTHERLY LINE OF SAID SECTION 19. 85.55 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE SOUTH, AND HAVING A RADIUS OF 1000.00 FEET; THENCE WESTERLY, ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 8°54'50", AN ARC DISTANCE OF 155.58 FEET; THENCE SOUTH 9°12'10" EAST, RADIAL TO SAID CURVE, 44.00 FEET; THENCE SOUTH 7°24'16" EAST, 270.19 FEET; THENCE SOUTH 0°17'20" EAST, 222.94 FEET TO THE TRUE POINT OF BEGINNING OF THE DESCRIPTION; THENCE SOUTH 89°42'40" WEST PARALLEL WITH SAID NORTHERLY LINE OF SECTION 19, 200.00 FEET; THENCE SOUTH 0°17'20" EAST, 200.00 FEET; THENCE NORTH 89°42'40" EAST PARALLEL WITH SAID NORTHERLY LINE 200.00 FEET; THENCE NORTH 0°17'20" WEST 200.00 FEET TO THE TRUE POINT OF BEGINNING; ALSO EXCEPTING THEREFROM THAT PORTION THEREOF LYING WITH TRACT NO. 18456-1, AS SHOWN BY MAP ON FILE IN BOOK 131 PAGES 40 THROUGH 46, INCLUSIVE, OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA, AND WITH TRACT NO. 18456, AS SHOWN BY MAP ON FILE IN BOOK 139 PAGES 13 THROUGH 17, INCLUSIVE OF MAPS RECORS OF RIVERSIDE COUNTY, CALIFORNIA; ALSO EXCEPTING THEREFROM THE SOUTH 1/4 OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4, OF SAID SECTION 19. ALSO EXCEPTING THEREFROM THE SOUTH 1/2 OF THE NORTHWEST 1/4 OF SAID SECTION 19. (ASSESSORS PARCEL NO.'S 362-070-001-3; 362-070-013-4; 362-070-018-9; 362-070-023-3; 362-080-004-7; 362-080-012-4; 362-090-004-8)

PARCEL 3: THAT PORTION OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 19, TOWNSHIP 6 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN, BOUNDED BY THE FOLLOWING DESCRIBED LINE: BEGINNING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 19; THENCE SOUTH 89°42'40" WEST, ALONG THE NORTHERLINE OF SAID SECTION19, 85.55 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE SOUTH, AND HAVING A RADIUS OF 1000.00 FEET; THENCE WESTERLY, ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 8°54'50", AND ARC DISTANCE OF 155.58 FEET; THENCE SOUTH 9°112'10" EAST, RADIAL TO SAID CURVE, 44.00 FEET; THENCE SOUTH 7°24'16" EAST, 270.19 FEET; THENCE SOUTH 0°17'20" EAST, 222.94 FEET TO THE TRUE POINT OF BEGINNING OF THIS DESCRIPTION; THENCE SOUTH 89°42'40" WEST, PARALLEL WITH SAID NORTHERLY LINE OF SAID SECTION 19, 200.00 FEET; THENCE SOUTH 0°17'20" EAST, 200.00 FEET; THENCE NORTH 89°42'40" EAST, PARALLEL WITH SAID NORTHERLY LINE, 200.00 FEET; THENCE NORTH 0°17'20" WEST, 200.00 FEET TO THE TRUE POINT OF BEGINNING. (ASSESSORS PARCEL NO. 362-070-003-5

PARCEL 4: THE SOUTH HALF OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 19, TOWNSHIP 6 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN; (ASSESSORS PARCEL NO. 362-080-005-8)

LEGAL DESCRIPTION (CONT.):

PARCEL 5: THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 19, TOWNSHIP 6 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN; EXCEPTING THEREFROM TRACT NO. 6378 AS SHOWN MY MAP ON FILE IN BOOK 91 PAGES 19 TO 25 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA TRACT NO. 6379 AS SHOWN BY MAPON FILE BOOK 104 PAGES 92 TO 96, OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA, AND TRACT NO. 6379-1 AS SHOWN BY MAP ON FILE IN BOOK 99 PAGES 83 TO 90 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE COUNTY OF RIVERSIDE BY DOCUMNET RECORDED JUNE 26, 1975 AS INSTRUMENT NO. 75704 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA. (A PORTION OF ASSESSORS PARCEL NO. 362-090-015-8)

PARCEL 6: THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 19, TOWNSHIP 6 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN; EXCEPTING FROM THE ABOVE DESCRIBED PROPERTY, THAT PORTION OF THE SOUTHWEST 1/4 AND THE EAST 1/2 OF THE NORTHWEST 1/4 AND THE NORTHEAST 1/4 OF SECTION 19, TOWNSHIP 6 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN, LYING WITHIN AN 88 FOOT WIDE STRIP OF LAND, 44 FEET IN RIGHT ANGLE WIDTH ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE: BEGINNING AT THE NORTHEAST CORNER OF SAID SECTION 19; THENCE WESTERLY, ALONG THE NORTH LINE OF SAID SECTION 19, A DISTANCE OF 2719.57 FEET TO THE BEGINNING OF A 1000 FOOT RADIUS CURVE, CONCAVE TO THE SOUTHEAST; THENCE SOUTH WESTERLY ALONG THE ARC OF SAID 1000 FOOT RADIUS CURVE, THROUGH AN ANGLE OF 69°07'30", A DISTANCE OF 1206.45 FEET; THENCE SOUTH 20°25' WEST, A DISTANCE OF 687.91 FEET TO THE BEGINNING OF 1000 FOOT RADIUS CURVE, CONCAVE TO THE NORTHWEST; THENCE SOUTHWESTERLY ALONG SAID 1000 FOOT RADIUS CURVE, THROUGH AN ANGLE OF 38°45', A DISTANCE OF 676.31 FEET; THENCE SOUTH 59°10' WEST, A DISTANCE OF 1356.05 FEET TO A POINT WHICH BEARS NORTH 59°15' WEST, A DISTANCE OF 341.42 FEET FROM THE WEST QUARTER CORNER OF SAID SECTION 19; ALSO EXCEPTING ALL THAT PORTION OF THE ABOVE DESCRIBED PROPERTY LYING NORTH WESTERLY OF THE ABOVE DESCRIBED 88 FOOT WIDE STRIP OF LAND; ALSO EXCEPTING THEREFROM TRACT NO. 6378 AS SHOWN BY MAP ON FILE IN BOOK 91 PAGES 19 TO 25 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE COUNTY OF RIVERSIDE BY DOCUMENT RECORDED JUNE 26, 1975 AS INSTRUMNET NO 75704 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA. (A PORTION OF ASSESSORS PARCEL NO. 362-090-015-8)

PARCEL 7: THE SOUTH 1/2 OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 19, TOWNSHIP 6 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN; EXCEPTING THEREFROM TRACT NO. 6378 AS SHOWN BY MAP ON FILE IN BOOK 91 PAGES 19 TO 25 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA. ALSO EXCEPTING THEREFROM THAT PORTION LYING WITHIN BUNDY CANYON ROAD AND THAT PORTION LYING NORTHERLY OF THE NORTHWESTERLY LINE OF SAID BUNDY CANYON ROAD. (ASSESSORS PARCEL NO. 362-090-009-3)

PARCEL 8: THE SOUTH 1/4 OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 19, TOWNSHIP 6 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN; EXCEPTING THEREFROM TRACT NO. 6379-1 AS SHOWN BY MAP ON FILE IN BOOK 99 PAGES 83 TO 90 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; ALSO EXCEPTING THEREFROM THAT PORTION LYING WITH BUNDY CANYON. (ASSESSORS PARCEL NO. 362-070-006-8; 362-070-010-1; 362-070-024-4)

NOTES

1) ALL IMPROVEMENTS SHALL BE PER SCHEDULE "A" SUBDIVISION OF CITY OF WILDOMAR GUIDELINES.
2) 2010 THOMAS BROS. MAP BOOK PAGE 897, GRIDS G-1, H-1, G-2, & H-2.
3) THIS MAP DOES NOT INCLUDE THE ENTIRE CONTIGUOUS OWNERSHIP OF THE LAND OWNER.
4) ALL SLOPES ARE 2:1 RATIO UNLESS OTHERWISE NOTED.
5) THIS MAP IS NOT SUBJECT TO FLOODING PER FEMA MAP DESIGNATION ZONE "C".
6) SETBACKS OF SLOPES TO PROPERTY LINES SHALL CONFORM TO ORDINANCE OF CITY OF WILDOMAR.
7) NO EXISTING STRUCTURES ON PROJECT SITE.
8) THIS MAP IS NOT WITHIN THE ALQUIST PRIOLO SPECIAL STUDIES ZONE AND DESERT BLOWSAND AREAS.
9) THIS MAP LIES WITHIN THE LAKE ELSINORE UNIFIED SCHOOL DISTRICT.
10) THE PROJECT SITE IS NOT IN WITHIN A LIQUEFACTION OR OTHER GEOLOGIC HAZARD AREA PER THE RIVERSIDE COUTNY ENVIRONMENTAL HAZARD MAP.
11) RETAINING WALLS SHALL BE VERDURA OR SIMILAR PLANTABLE WALL.
12) AVERAGE LOT SIZE IS GREATER THAN 6,000 SQUARE FEET.
13) PLANNING DEVIATIONS REQUESTED:
    - MINIMUM 30' LOT FRONTAGE LOTS 47, 48, 222, 223, 224.
    - MINIMUM 55' LOT FRONTAGE LOTS 212, 213, 214.
14) NO ENGINEERING DEVIATIONS REQUESTED.

LEGEND

	TRACT BOUNDARY		PROPOSED 2:1 SLOPE UNLESS NOTED ON PLANS
27	PROPOSED LOT NUMBER	1120	EXISTING CONTOUR
25.0	PROPOSED PAD ELEVATION		DECORATIVE PAVEMENT (PRIVATE STREETS ONLY)
S	PROPOSED SEWER LINE		
	PROPOSED STORM DRAIN LINE		
	FIRE HYDRANT		

GENERAL NOTES

THOMAS BROS. COORD'S:	PAGE 897, G-1 AND G-2
PROPOSED USE:	RESIDENTIAL (S.F.)
EXISTING ZONING:	SPECIFIC PLAN 116 (THE FARM) AMD. #4
PROPOSED ZONING:	SPECIFIC PLAN 116 (THE FARM) AMD. #4
EXISTING USE:	VACANT
TOTAL SINGLE FAMILY LOTS:	275
TOTAL OPEN SPACE LOTS:	17
LIFT/PUMP STA.	3
TOTAL ACRES:	137.82 AC. GROSS 111.67 AC. NET
MINIMUM LOT SIZE:	4500 S.F.
AVERAGE LOT SIZE:	6,730 S.F.
DENSITY:	1.8 UNIT/AC. (OVERALL) 3.2 UNIT/AC. (DEVELOPED)
PROPOSED IMPROVEMENT SCHEDULE:	SCHEDULE "A"
SCHOOL:	LAKE ELSINORE UNIFIED SCHOOL DISTRICT

UTILITIES

SEWER:	ELSINORE VALLEY MUNICIPAL WATER DISTRICT
WATER:	ELSINORE VALLEY MUNICIPAL WATER DISTRICT
GAS:	SOUTHERN CALIF. GAS CO.
ELECTRIC:	SOUTHERN CALIF. EDISON
TELEPHONE:	VERIZON
CATV:	TIME WARNER

ASSESSOR PARCEL NUMBERS

362-070-001, 362-070-003, 362-070-006, 362-070-010, 362-070-013, 362-070-018, 362-070-021, 362-070-023, 362-070-024, 362-080-004, 362-080-005, 362-080-007, 362-070-008, 362-080-009, 362-080-012, 362-090-009, 362-090-015

DEVELOPER

BILL LO
SUNBELT COMMUNITIES
27127 CALLE ARROYO, SUITE 1920
SAN JUAN CAPISTRANO, CA. 92675
949-218-6023

OWNER

SUNBELT COMMUNITIES
27127 CALLE ARROYO, SUITE 1920
SAN JUAN CAPISTRANO, CA. 92675
949-218-6023

REPRESENTATIVE

MARKHAM DEVELOPMENT MANAGEMENT GROUP, INC.
41635 ENTERPRISE CIRCLE NORTH, SUITE B
TEMECULA, CA 92590-5614
PHONE: (951) 296-3466
FAX: (951) 296-3476

EXHIBIT PREPARED BY

VSL ENGINEERING
31805 TEMECULA PARKWAY, SUITE 129,
TEMECULA, CA. 92591
PHONE: (951) 296-3930

SITE DATA & DENSITY CALCULATIONS

SEE SHEET 6

SOURCE OF TOPOGRAPHY

FLOWN AERIAL TOPOGRAPHY BY M.C. SPIRO LAND SURVEYING ON SEPTEMBER 1, 2010.

PRELIMINARY EARTHWORK QUANTITIES

CUT: 700,000 CUBIC YARDS
FILL: 700,000 CUBIC YARDS

NOTE

I HEREBY STATE THAT ALL EASEMENTS AS INDICATED IN ORANGE COAST TITLE COMPANY PRELIMINARY REPORT NO. 1189468-10 DATED AS OF AUGUST 25, 2010, HAVE BEEN SHOWN HEREON AND/OR HAVE BEEN ACCOUNTED FOR IN NOTE PLACE HEREON. ALL EASEMENTS PROPOSED TO BE ABANDONED OR QUIT CLAIMED AND/OR ALL EASEMENTS THAT CAN NOT BE LOCATED ARE NOT HEREON.

William Tim Smith, L.S. 7910
Exp. 12/31/2013

CITY OF WILDOMAR
TENTATIVE TRACT NO. 36388

DATE PREPARED: NOVEMBER, 2011

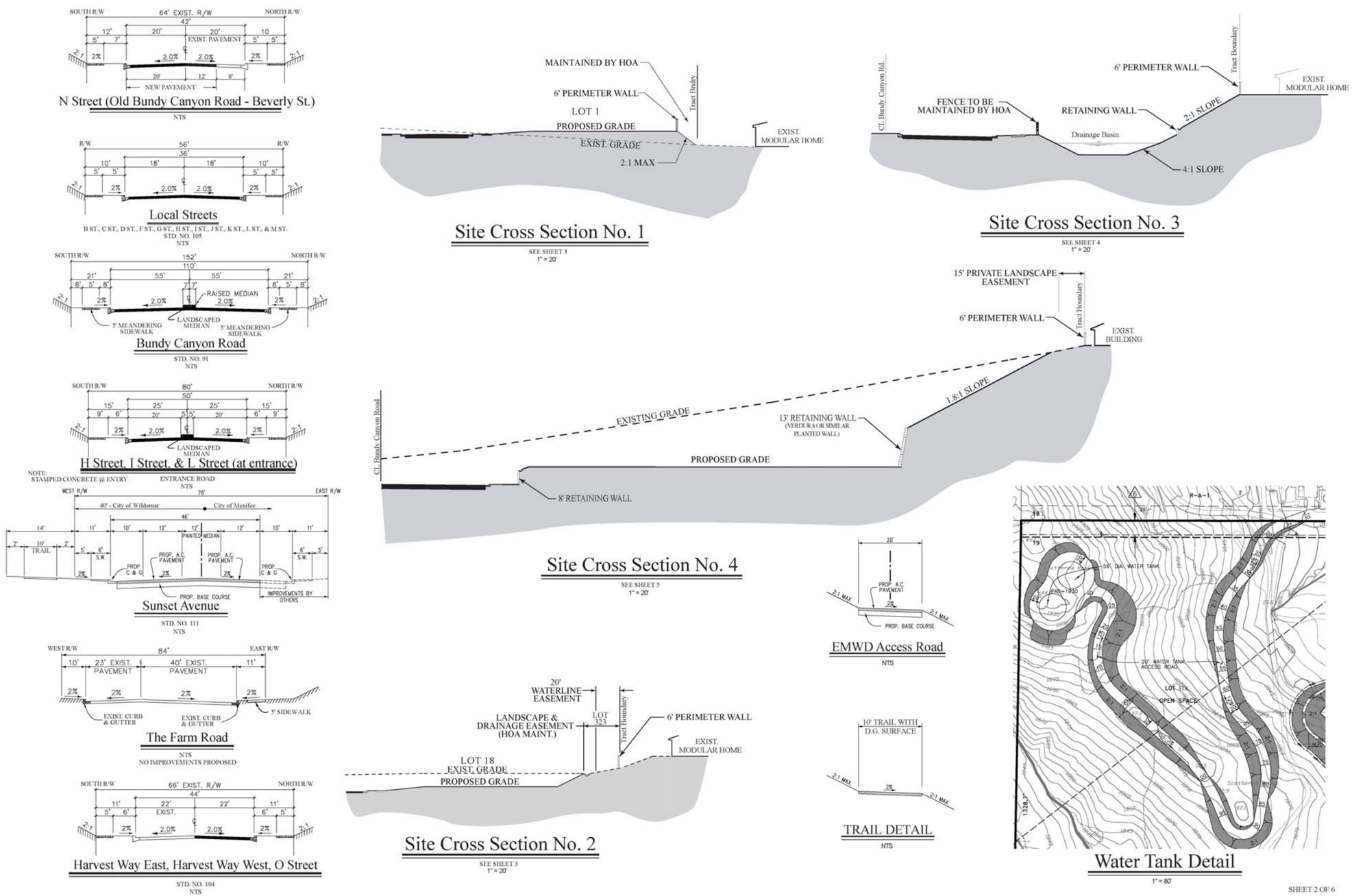
SHEET 1 OF 6

Source: City of Wildomar

Figure 2.0-4a

PMC

T:_CS\Work\Wildomar, City of\Figures for Oak Creek Canyon EIR 28-0047A-11-0261



Source: City of Wildomar

Figure 2.0-4b

PMC

T:_CS\Work\Wildomar, City of\Figures for Oak Creek Canyon EIR 28-0047A-11-0261

SEE SHEET NO. 4

LOT DEDICATION AREA TABLE							
Lot Letter	Lot Area	Maintained by	Lot Use	Lot Letter	Lot Area	Maintained by	Lot Use
300	17050	HOA	DET. BASIN	313	212147	OWNER	COMMERCIAL SITE
301	5450	FMWC	PUMP STA.	314	5300	EVMWD	PUMP STA.
302	47100	HOA	PARK	315	24781	HOA	O.S.
304	4881	HOA	O.S	316	60003	HOA	DET. BASIN, O.S.
305	69600	HOA	DET. BASIN, O.S.	317	70900	HOA	PARK
306	8841	HOA	O.S	318	1179200	HOA	O.S.
307	34861	HOA	O.S	319	13271	HOA	O.S.
308	118731	HOA	O.S	320	36900	HOA	DET. BASIN, O.S.
309	31700	HOA	DET. BASIN, O.S.	321	113282	HOA	PARK
310	2320	HOA/EVMWD	SD/SEW. ESTM.	322	2940	HOA	S.D. EASEMENT
311	5367	FMWC	WELL	323	21766	HOA	O.S./WAT. EASEMENT
312	278380	HOA	DET. BASIN, O.S.	324	4425	HOA	PASEO

LOT AREA TABLE– PHASE 18 PLANNING AREA																													
Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area
1	6947	4500	11	5270	4500	21	4940	4500	31	5214	4500	41	4616	4500	51	6147	4500	61	5000	4500	71	4500	4500	81	6673	4500			
2	5625	4500	12	6139	4500	22	5386	4500	32	5785	4500	42	4658	4500	52	5052	4500	62	5000	4500	72	4501	4500	82	7730	4500			
3	5734	4500	13	6850	4500	23	5603	4500	33	6802	4500	43	4809	4500	53	5289	4500	63	5910	4500	73	5089	4500	83	6643	4500			
4	5079	4500	14	6741	4500	24	5600	4500	34	6334	4500	44	4903	4500	54	5189	4500	64	6442	4500	74	6219	4500	84	5479	4500			
5	4740	4500	15	5927	4500	25	5659	4500	35	5166	4500	45	4867	4500	55	4960	4500	65	5631	4500	75	5000	4500	85	5240	4500			
6	5194	4500	16	5489	4500	26	5933	4500	36	4677	4500	46	4504	4500	56	5139	4500	66	5396	4500	76	5000	4500	86	5057	4500			
7	5271	4500	17	5447	4500	27	6896	4500	37	6421	4500	47	5870	4500	57	5441	4500	67	5000	4500	77	5000	4500	87	5007	4500			
8	5271	4500	18	7515	4500	28	6770	4500	38	4851	4500	48	7317	4500	58	7991	4500	68	5000	4500	78	5862	4500	88	5383	4500			
9	5269	4500	19	7940	4500	29	5712	4500	39	4632	4500	49	4825	4500	59	4898	4500	69	4978	4500	79	8437	4500						
10	5271	4500	20	5592	4500	30	5343	4500	40	4627	4500	50	5769	4500	60	5000	4500	70	5003	4500	80	8892	4500						

INDICATES SLOPE

INDICATES EXISTING PAVEMENT

INDICATES JURISDICTIONAL DELINEATION.

EASEMENT NOTES:

8 AN EASEMENT FOR SEWER AND INCIDENTAL PURPOSES, GRANTED TO THE FARM, A CALIFORNIA CORPORATION, RECORDED SEPTEMBER 18, 1978 AS INSTRUMENT NO. 196924 OF O.R.

12 AN EASEMENT FOR PIPELINE OR PIPELINES, INGRESS, EGRESS AND INCIDENTAL PURPOSES, GRANTED TO FARM MUTUAL WATER COMPANY, ITS SUCCESSORS AND ASSIGNS, RECORDED APRIL 27, 2000 AS INSTRUMENT NO. 00-156981 OF O.R.

13 AN EASEMENT FOR PIPELINES, EASEMENT ROADS AND APPURTENANCES WITHIN THE EASEMENT AND FOR INGRESS AND EGRESS AND INCIDENTAL PURPOSES, GRANTED TO FARM MUTUAL WATER COMPANY, ITS SUCCESSORS AND ASSIGNS, RECORDED APRIL 27, 2000 AS INSTRUMENT NO. 00-156982 OF O.R.

SHEET 3 OF 6

Source: City of Wildomar

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Figure 2.0-4c

PMC

T:_CS\Work\Wildomar, City of\Figures for Oak Creek Canyon EIR 28-0047A-11-0261

LOT AREA TABLE PHASE 9 – PLANNING AREA					
Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area
89	6442	6000	103	6118	6000
90	6408	6000	104	6121	6000
91	6412	6000	105	6029	6000
92	6408	6000	106	8307	6000
93	6415	6000	107	6577	6000
94	6408	6000	108	6659	6000
95	6408	6000	109	6778	6000
96	6654	6000	110	6000	6000
97	6216	6000	111	6322	6000
98	6845	6000	112	6576	6000
99	6566	6000	113	6017	6000
100	6312	6000	114	6538	6000
101	6001	6000	115	6668	6000
102	6224	6000	116	6414	6000

LOT AREA TABLE – PHASE 17A PLANNING AREA																													
Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area
173	9280	7200	186	9049	7200	199	9655	7200	212	9125	7200	225	7200	7200	238	7340	7200	251	7350	7200	264	7300	7200						
174	7350	7200	187	7276	7200	200	8060	7200	213	10749	7200	226	7200	7200	239	7891	7200	252	8400	7200	265	7200	7200						
175	7350	7200	188	7700	7200	201	8888	7200	214	9949	7200	227	7200	7200	240	7822	7200	253	8281	7200	266	7200	7200						
176	7350	7200	189	7700	7200	202	8786	7200	215	7800	7200	228	7200	7200	241	7899	7200	254	7603	7200	267	7200	7200						
177	7350	7200	190	7700	7200	203	7200	7200	216	7800	7200	229	8519	7200	242	7799	7200	255	7200	7200	268	7200	7200						
178	7350	7200	191	7700	7200	204	7200	7200	217	7800	7200	230	8254	7200	243	7550	7200	256	7200	7200	269	9375	7200						
179	7350	7200	192	7700	7200	205	7200	7200	218	7800	7200	231	8140	7200	244	8773	7200	257	7484	7200	270	8281	7200						
180	7350	7200	193	7700	7200	206	7200	7200	219	7800	7200	232	7920	7200	245	8813	7200	258	7522	7200	271	7800	7200						
181	7350	7200	194	7700	7200	207	7200	7200	220	7800	7200	233	8311	7200	246	8350	7200	259	7523	7200	272	7562	7200						
182	7350	7200	195	7700	7200	208	7200	7200	221	7800	7200	234	7607	7200	247	8655	7200	260	7600	7200	273	7500	7200						
183	7962	7200	196	7700	7200	209	7200	7200	222	7860	7200	235	7711	7200	248	7800	7200	261	7608	7200	274	7500	7200						
184	7962	7200	197	9406	7200	210	7671	7200	223	8335	7200	236	8606	7200	249	7900	7200	262	7685	7200	275	7680	7200						
185	7500	7200	198	9011	7200	211	8056	7200	224	9945	7200	237	7437	7200	250	7350	7200	263	7688	7200									

SEE SHEET NO. 3

- INDICATES SLOPE
- INDICATES EXISTING PAVEMENT
- INDICATES RIPARIAN HABITAT
- INDICATES JURISDICTIONAL DELINEATION.

EASEMENT NOTES:

1. AN EASEMENT FOR EITHER OR BOTH POLE LINES, CONDUITS OR UNDERGROUND FACILITIES, GRANTED TO CALIFORNIA ELECTRIC POWER COMPANY, RECORDED FEBRUARY 13, 1948, BOOK 891 PAGE 387, OF O.R.
4. AN EASEMENT FOR EITHER OR BOTH POLE LINES, CONDUITS OR UNDERGROUND FACILITIES AND INCIDENTAL PURPOSES, GRANTED TO CALIFORNIA ELECTRIC POWER COMPANY, RECORDED MAY 29, 1959, AS INSTRUMENT NO. 47084 OF O.R.
5. AN EASEMENT FOR ROAD PURPOSED, AS SHOWN ON THE MAP OF SAID RECORD OF SURVEY ON FILE IN BOOK 32 PAGE 59 OF RECORDS OF SURVEY, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.
6. AN EASEMENT FOR EITHER OR BOTH POLE LINES, CONDUITS OR UNDERGROUND FACILITIES AND INCIDENTAL PURPOSES, GRANTED TO CALIFORNIA WATER AND TELEPHONE COMPANY, RECORDED JUNE 7, 1961 AS INSTRUMENT NO. 48434 OF O.R.
7. AN EASEMENT FOR STREET, INGRESS, EGRESS AND INCIDENTAL PURPOSES, GRANTED TO TITLE INSURANCE AND TRUST COMPANY, A CALIFORNIA CORPORATION, RECORDED APRIL 9, 1962 AS INSTRUMENT NO. 32229 OF O.R.
9. AN EASEMENT FOR ROAD, DRAINAGE, INCLUDING PUBLIC UTILITY AND PUBLIC SERVICES AND INCIDENTAL PURPOSES, GRANTED TO THE COUNTY OF RIVERSIDE, RECORDED SEPTEMBER 15, 1983 AS INSTRUMENT NO. 189325 AND REFERENCED IN DOCUMENT RECORDED SEPTEMBER 12, 1960 AS INSTRUMENT NO. 79587, BOTH OF O.R.

SHEET 4 OF 6

SEE SHEET NO. 5

Source: City of Wildomar

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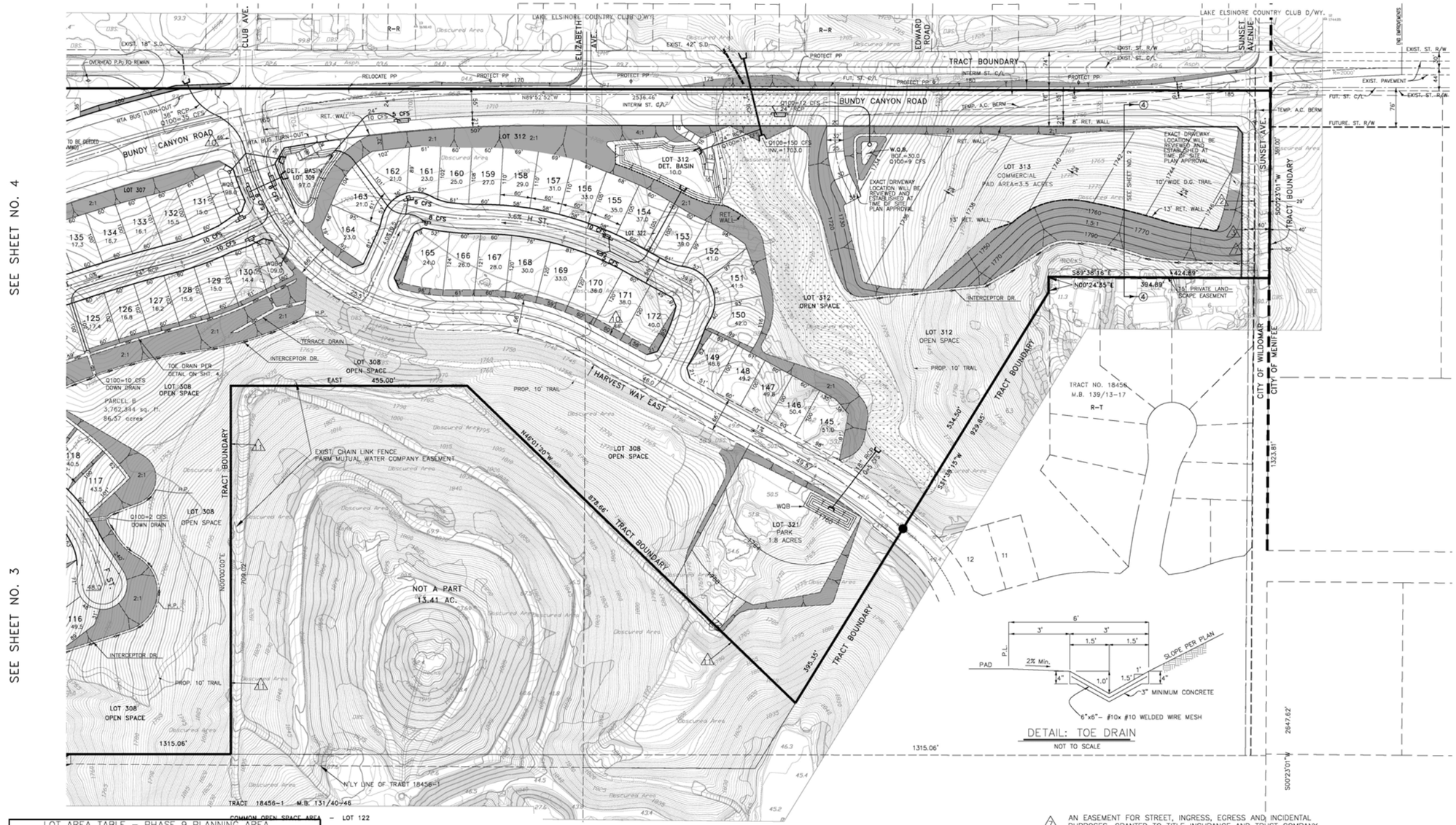
Figure 2.0-4d

PMC

T:_CS\Work\Wildomar, City of\Figures for Oak Creek Canyon EIR 28-0047A-11-0261



LOT AREA TABLE – PHASE 9 PLANNING AREA																							
Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area	Lot No.	Lot Area	Min. Lot Area
117	6081	6000	129	6093	6000	141	6529	6000	153	6143	6000	165	10100	6000									
118	6387	6000	130	6063	6000	142	8212	6000	154	6271	6000	166	7302	6000									
119	6000	6000	131	6014	6000	143	6363	6000	155	6604	6000	167	7226	6000									
120	6155	6000	132	6013	6000	144	7243	6000	156	6807	6000	168	8120	6000									
121	7061	6000	133	6014	6000	145	8002	6000	157	6934	6000	169	8401	6000									
122	7677	6000	134	6003	6000	146	6000	6000	158	6995	6000	170	7757	6000									
123	7176	6000	135	6000	6000	147	6000	6000	159	6585	6000	171	7200	6000									
124	6219	6000	136	6000	6000	148	6000	6000	160	6422	6000	172	8204	6000									
125	6101	6000	137	6161	6000	149	6467	6000	161	5538	6000												
126	6102	6000	138	6166	6000	150	8135	6000	162	6357	6000												
127	6125	6000	139	6172	6000	151	6698	6000	163	7730	6000												
128	6139	6000	140	6389	6000	152	7251	6000	164	7161	6000												

INDICATES SLOPE

INDICATES EXISTING PAVEMENT

INDICATES RIPARIAN HABITAT

INDICATES JURISDICTIONAL DELINEATION.

EASEMENT NOTES:

(2) AN EASEMENT FOR EITHER OR BOTH POLE LINES, CONDUITS OR UNDERGROUND FACILITIES, GRANTED TO CALIFORNIA ELECTRIC POWER COMPANY, RECORDED OCTOBER 3, 1958, BOOK 2342 PAGE 449 OF O.R.

(3) AN EASEMENT FOR INGRESS, EGRESS, PIPELINES AND INCIDENTAL PURPOSES, GRANTED TO M.H. ARMSTRONG, A MARRIED MAN, AS TO AN UNDIVIDED 2/5 INTEREST AND J.A. ERICKSEN, A MARRIED MAN, AS TO AN UNDIVIDED 3/5 INTEREST, RECORDED MARCH 12, 1959 AS INSTRUMENT NO. 20551 OF O.R. EXACT LOCATION AND EXTENT IS NOT DISCLOSED OF RECORD.

(7) AN EASEMENT FOR STREET, INGRESS, EGRESS AND INCIDENTAL PURPOSES, GRANTED TO TITLE INSURANCE AND TRUST COMPANY, A CALIFORNIA CORPORATION, RECORDED APRIL 9, 1962 AS INSTRUMENT NO. 32229 OF O.R.

(10) AN EASEMENT FOR POLE LINES, CONDUITS OR UNDERGROUND FACILITIES AND INCIDENTAL PURPOSES, GRANTED TO GENERAL TELEPHONE COMPANY OF CALIFORNIA, RECORDED JANUARY 17, 1984 AS INSTRUMENT NO. 9854 OF O.R.

(11) AN EASEMENT FOR A SEWAGE DISPOSAL FIELD AND INCIDENTAL PURPOSES, GRANTED TO THE FARM MUTUAL WATER COMPANY, A CORPORATION, ITS SUCCESSORS AND ASSIGNS, RECORDED APRIL 25, 1986 AS INSTRUMENT NO. 95022 OF O.R. THE LOCATION OF SAID EASEMENT CANNOT BE DETERMINED FROM PUBLIC RECORDS.

SHEET 5 OF 6

Source: City of Wildomar

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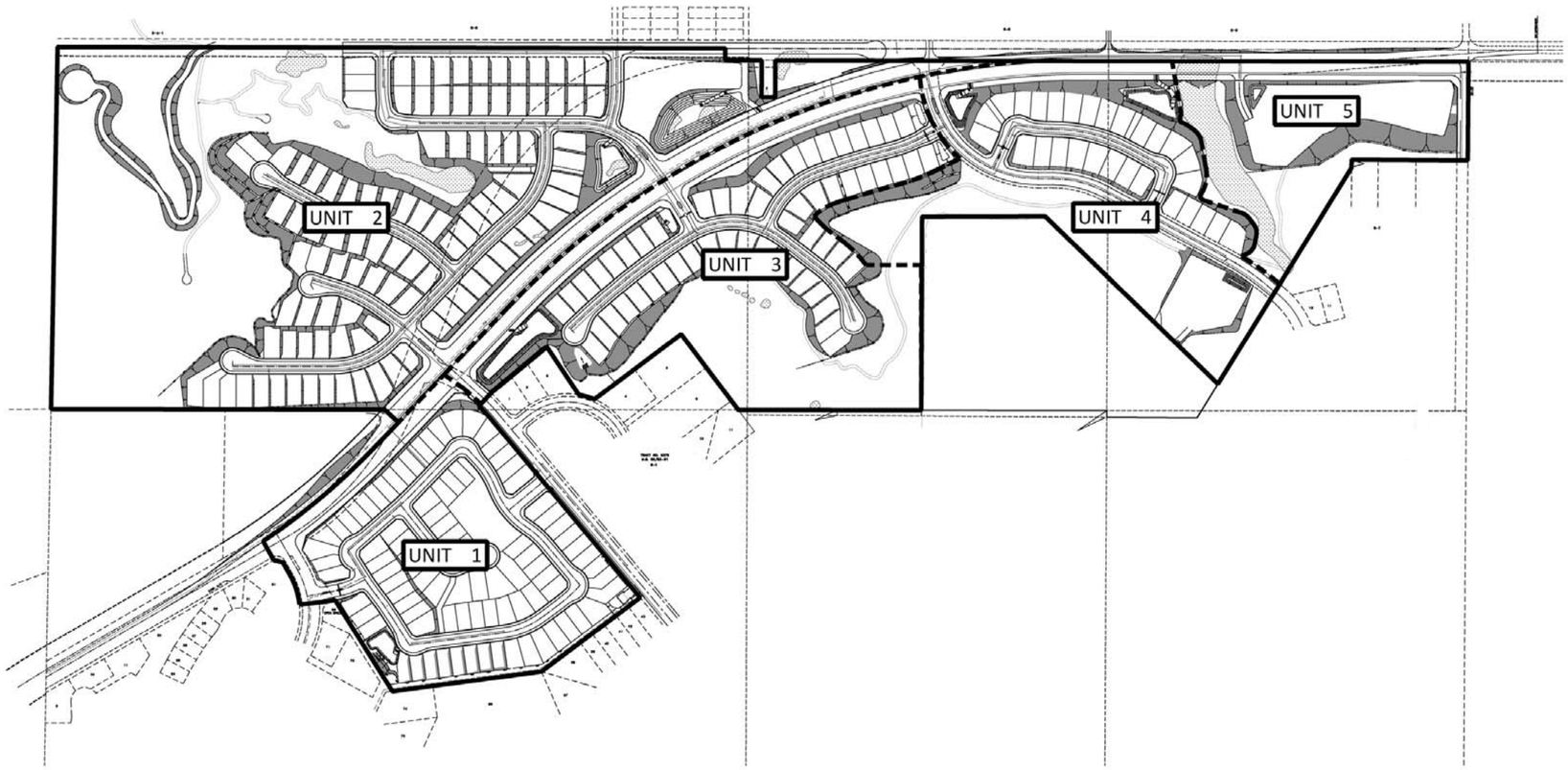
Figure 2.0-4e

PMC

T:_CS\Work\Wildomar, City of\Figures for Oak Creek Canyon EIR 28-0047A-11-0261

PHASING MAP



PHASE NO.	DESCRIPTION	PRODUCT	DU'S	GROSS AREA (AC)	DEVELOPMENT AREA (AC) (Includes Parks, Basins & Parkways)	OPEN SPACE (AC)	DENSITY (DU/AC) (Not Including Open Space)	GROSS DENSITY (DU/AC) (Including Open Space)	AVERAGE LOT SIZE (Square Feet)
18	UNIT 1	4500 SF LOTS (MIN.)	88	20.11	20.11	0	4.38	4.38	5623
17A	UNIT 2	7200 SF LOTS (MIN.)	103	74.34	35.86	38.48	2.87	1.39	7875
9	UNIT 3	6000 SF LOTS (MIN.)	56	21.05	10.84	10.21	5.16	2.66	6641
9	UNIT 4	6000 SF LOTS (MIN.)	28	27.35	19.78	20.98	1.41	0.68	
	TOTAL RESIDENTIAL		275	142.85	86.59	69.67	3.64	2.02	
19	UNIT 5	COMMERCIAL	0	11.69	3.5	6.48	0.00	0.00	
	PROJECT TOTALS			167.95	90.09	76.15			

NOTE: PROJECT PHASE / NOT DEVELOP
IN NUMERICAL ( ).

R-4 OVERALL AREA COMPUTATION
UNIT #1

TOTAL AREA	20.5 ACRES	MIN. OVERALL AREA PER R-4 ZONE 6,000 SF PER DWELLING UNIT
- STREET R/W	6.6 ACRES	
	13.9 ACRES	

13.9 ACRES ÷ 88 DWELLING UNITS = 0.15 ACRES PER DWELLING UNIT
= 6,534 SF PER DWELLING UNIT

R-4 OVERALL AREA COMPUTATION
UNITS #3 & #4

TOTAL AREA	48.4 ACRES	MIN. OVERALL AREA PER R-4 ZONE 6,000 SF PER DWELLING UNIT
- STREET R/W	22.2 ACRES	
	26.2 ACRES	

26.2 ACRES ÷ 84 DWELLING UNITS =0.31 ACRES PER DWELLING UNIT
=13,504 SF PER DWELLING UNIT

SHEET 6 OF 6

Source: City of Wildomar

0 300 600
FEET

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Figure 2.0-4f

PMC

T:_CS\Work\Wildomar, City of\Figures for Oak Creek Canyon EIR 28-0047A-11-0261

Source: City of Wildomar

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Figure 2.0-5
Proposed Site Plan

PMC®

PHASING OF CONSTRUCTION

Development of the proposed project will occur in at least five development units as shown in **Figure 2.0-6.** While the development units are numbered 1 through 5, there is no requirement for them to be developed consecutively or in phases and the entire project could be developed as a single unit. The first phase of construction will focus on Bundy Canyon Road and the extension of utilities (water, sewer, power, etc.) necessary to provide for the entire development. Grading of one or more of the units will likely occur concurrently with or immediately after construction of Bundy Canyon Road. The two 500,000-gallon water tanks and 20-foot-wide access road leading from Scott Road will also be constructed as part of the first phase of construction activity.

Grading

Grading will occur in each development unit to accommodate the roadways, utilities, trails, proposed homes, and other improvements. As shown in **Figure 2.0-4d**, the most substantial change will be grading to accommodate a realignment of Bundy Canyon Road. The realigned roadway will move south from the current alignment and eliminate a curve that occurs in the approximate middle of the property. Grading will also occur to create the roadways, open space, drainage basins, and buildable parcels for each unit. Proposed slopes will be 2:1 or less, and approximately 700,000 cubic yards of material will be moved during the grading process. The maps and application materials indicate that all of the material will remain within the project boundaries and that no import of export of soil is anticipated.

Residential Units

The full buildout of the project proposes to construct 275 residential single-family residential units. The proposed residential units will occur on residential lots that will feature a minimum size of 4,500 square feet and an average size of 6,730 square feet. Development units 1, 3, and 4 are located south of Bundy Canyon Road, and development unit 2 is located north of Bundy Canyon Road. See **Table 2.0-1** for a summary of each residential development unit.

Private Park Sites and Open Space

The project also includes the development of three private parks and the creation of approximately 76 acres of open space. Development units 1, 2, and 4 include parks. Units 2, 3, and 4 also include trails leading from the housing units to the park and development unit 5. While no specific park design is proposed, the intended improvements will include swings, slides, a climbing apparatus, benches, sidewalks, a dog park, and similar amenities suitable for small children and families. The parks are small and designed to serve the neighborhood and do not have ball fields or other amenities designed to encourage community or regional use. In addition to the three park sites, the approximate 76 acres of open space will feature trails for recreational use. While **Figure 2.0-5** shows the approximate location of the trails located in the open space area, the precise location of the trails has not yet been determined.

Commercial/Retail Development

The project has set aside approximately 5.2 acres, shown as development unit 5, for a future commercial/retail development. The intent of this commercial area as described in the specific plan amendment text is to establish a "neighborhood-serving" retail center for local residents living within and around the Farm Community. Site planning and architectural design guidelines that will ensure future development of this site will be compatible with the Farm Community and surrounding area have been included in the specific plan amendment.

TABLE 2.0-1
PROPOSED OAK CREEK CANYON RESIDENTIAL DEVELOPMENT OVERVIEW OF PROGRAM AND PLANNING UNITS

Description	Construction Unit	Product	Dwelling Units	Gross Area (ac)	Development Area (ac)	Open Space (ac)	Density (DU/Ac)	Gross Density (DU/Ac)
Phase 18	1	4,500 sf lots (min.)	88	20.11	20.11	0	4.38	4.38
Phase 17A	2	7,200 sf lots (min.)	103	74.34	35.86	38.48	2.87	1.39
Phase 9	3 & 4	6,000 sf lots (min.)	84	48.40	30.62	31.19	2.74	1.74
Total Residential			275	142.85	86.59	69.67	3.64	2.02
Phase 19	5	Commercial/Retail	0	11.69	3.5	6.48	0.00	0.00
Project Totals				167.95	90.09	76.15		

Source: Project Application Materials and Draft EIR Figure 2.0-6
Notes:
Development area acreage includes parks, basins, and parkways.
Density measures do not include open space.
Project phases may not develop in numerical order.

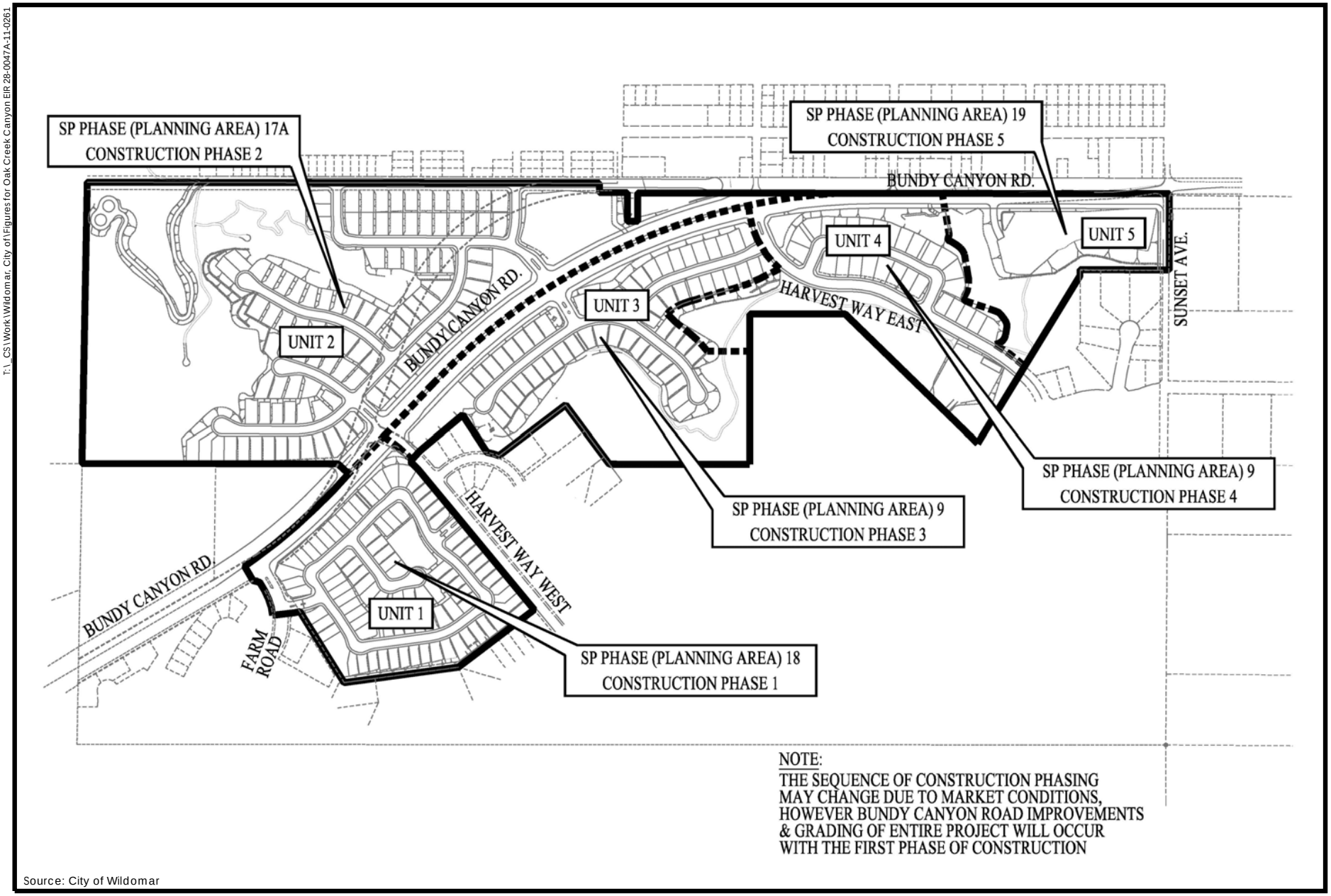
Infrastructure

Circulation

The proposed Oak Creek Canyon Residential Development will occur along one principal arterial roadway, three major collector roadways, and one minor collector roadway. The development of the project will include the creation of 12 local roadways. **Figure 2.0-5** demonstrates the location of vehicular entrances to the proposed project and the surrounding roadways, while **Figure 2.0-4b** illustrates the street section proposed for each of the project's roadways.

Development unit 1 will include entrances from the existing Farm Road and Harvest Way West. Unit 2 will be accessed from Bundy Canyon Road at the proposed I and L streets, and from Beverly Street at the proposed J Street. Units 3 and 4 will have an entrance from Bundy Canyon Road at the proposed I Street and entrances from Harvest Way East at the proposed G and H streets. Unit 5, the commercial/retail component of the proposed project, will have entrance points from Bundy Canyon Road and Sunset Avenue.

As the principal arterial roadway providing access to the project location, Bundy Canyon Road will intersect with Harvest Way West, the proposed I Street, Harvest Way East, and Sunset Avenue. The alignment of Bundy Canyon Road will be moved as a result of this project to be consistent with plans for the roadway adopted by the Riverside County Transportation Department (see **Figure 2.0-4d**). Bundy Canyon Road will serve as the overall primary arterial of the proposed project, with all of the project's access points originating from it. At full buildout of Bundy Canyon Road, the roadway will have six lanes travel; however, as part of the proposed project, only four lanes of travel with a center turn lane within the 152 feet of right-of-way will be constructed. Vehicular traffic lanes would be approximately 12.5 feet wide. Traffic signals will be installed at the intersections of Bundy Canyon Road with Harvest Way West, the proposed I Street, Harvest Way East, and Sunset Avenue. **Figure 2.0-7** shows the proposed parkland and open space proposed with the project.



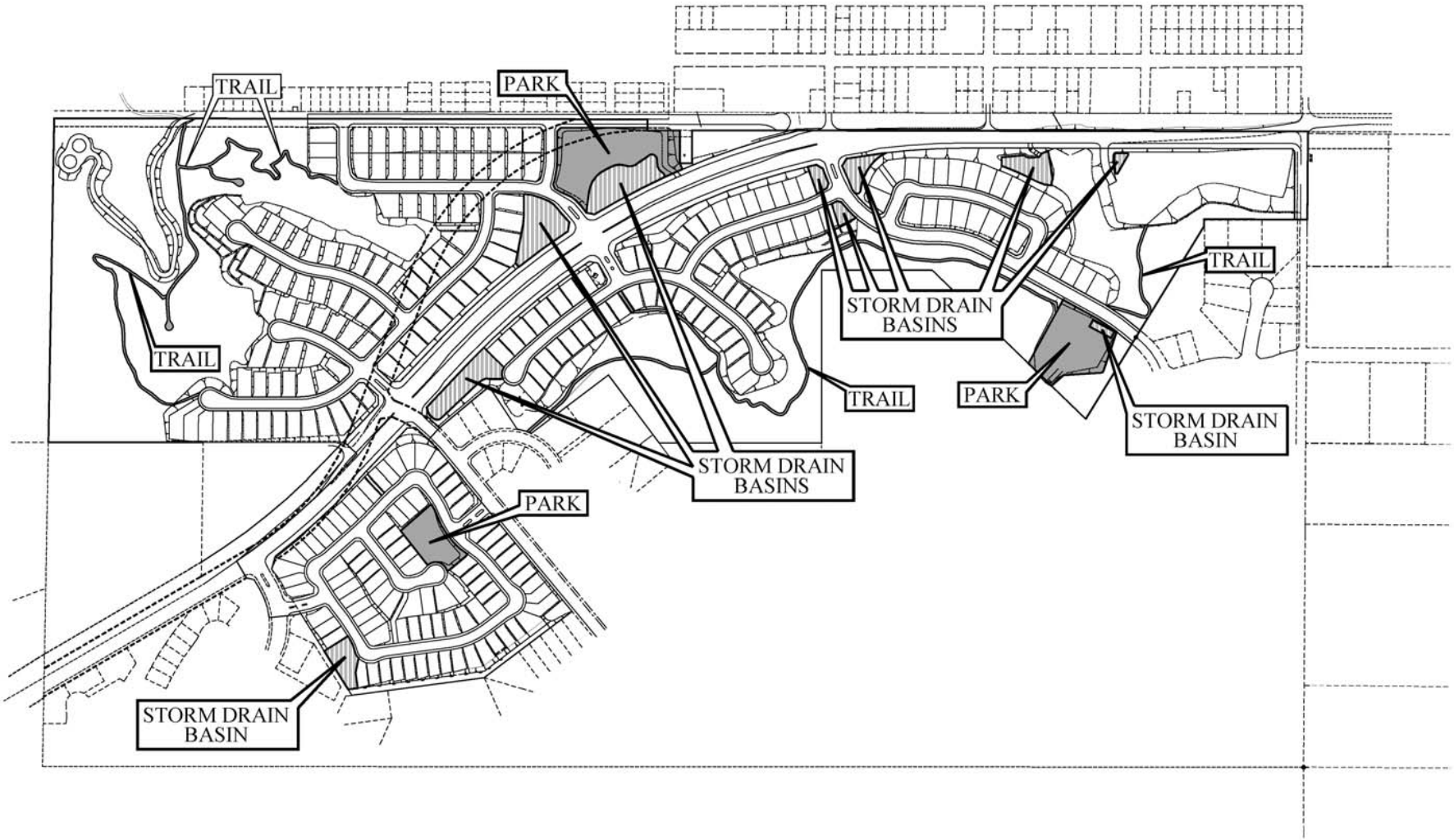
Source: City of Wildomar

T:_CS\Work\Wildomar, City of\Figures for Oak Creek Canyon EIR 28-0047A-11-0261

Figure 2.0-6

Phasing Map

PMC®



PROPOSED PARKS, TRAILS, & STORM DRAIN BASINS

Source: City of Wildomar

T:_CS\Work\Wildomar, City of\Figures for Oak Creek Canyon EIR 28-0047A-11-0261

Figure 2.0-7

Park Trails and Basins

PMC®

On-Site Roadway Facilities

With the exception of the 20-foot maintenance access road to the two 500,000-gallon water storage tanks, all roadways within the project will be public roads. The roadways will be built to City of Wildomar standards, as shown in **Figure 2.0-4b** and **Figure 2.0-5**, and will be publicly maintained. The maintenance access road connecting to Scott Road will be dedicated to the Elsinore Valley Municipal Water District, which will maintain the access roadway as part of the water system. All of the roadways will be paved and will include drainage improvements needed to direct stormwater runoff into the project's stormwater collection system.

Public Utilities

Water and wastewater services will be provided by the Elsinore Valley Municipal Water District (EVMWD). Both water and sewer lines, currently in Bundy Canyon Road, will be extended through the site along the realigned Bundy Canyon Road and will be located both in new roadways and in utility easements as shown in **Figure 2.0-4a** through **2.0-4f**. With the exception of the two 500,000-gallon water tanks at the northwest corner of the project site (See **Figure 2.0-4b**), and the storm drainage basins, the utilities will be belowground and out of view.

To take advantage of gravity, the water storage tanks will be located on a hill in the northwest corner of the site at approximately 1,930 feet. This location places the tanks approximately 200 feet above the rest of the project. The water tanks will be constructed and maintained via a new 20-foot-wide maintenance access road extending from Scott Road.

The proposed project includes eight drainage basins and an above- and belowground collection system. The basins are generally located along the realigned Bundy Canyon Road (see **Figure 2.0-7**).

Grading and Retaining Walls

The project site is in a hilly portion of the city and will require grading to support the proposed project. The largest grading activity will be related to the realignment of Bundy Canyon Road consistent with the Riverside County Transportation Commission design for the facility. The realigned Bundy Canyon Road will generally be lower than the surrounding development. Where possible, grading results in slopes that do not require a retaining wall. Along Bundy Canyon, there are locations where retaining walls are necessary to allow for a more productive use of the area occupied by the slope. Retaining walls, and walls needed for mitigation of traffic noise are shown in **Figure 2.0-8**.

CONSTRUCTION

Details regarding the composition of construction crews and equipment will be determined by the construction contractor as well as by market conditions. However, construction equipment is anticipated to include, but is not limited to, dozers, backhoes, dump trucks, graders, service vehicles, and trenchers. The construction of the project, anticipated to start in 2013, will begin with the realignment of Bundy Canyon Road.

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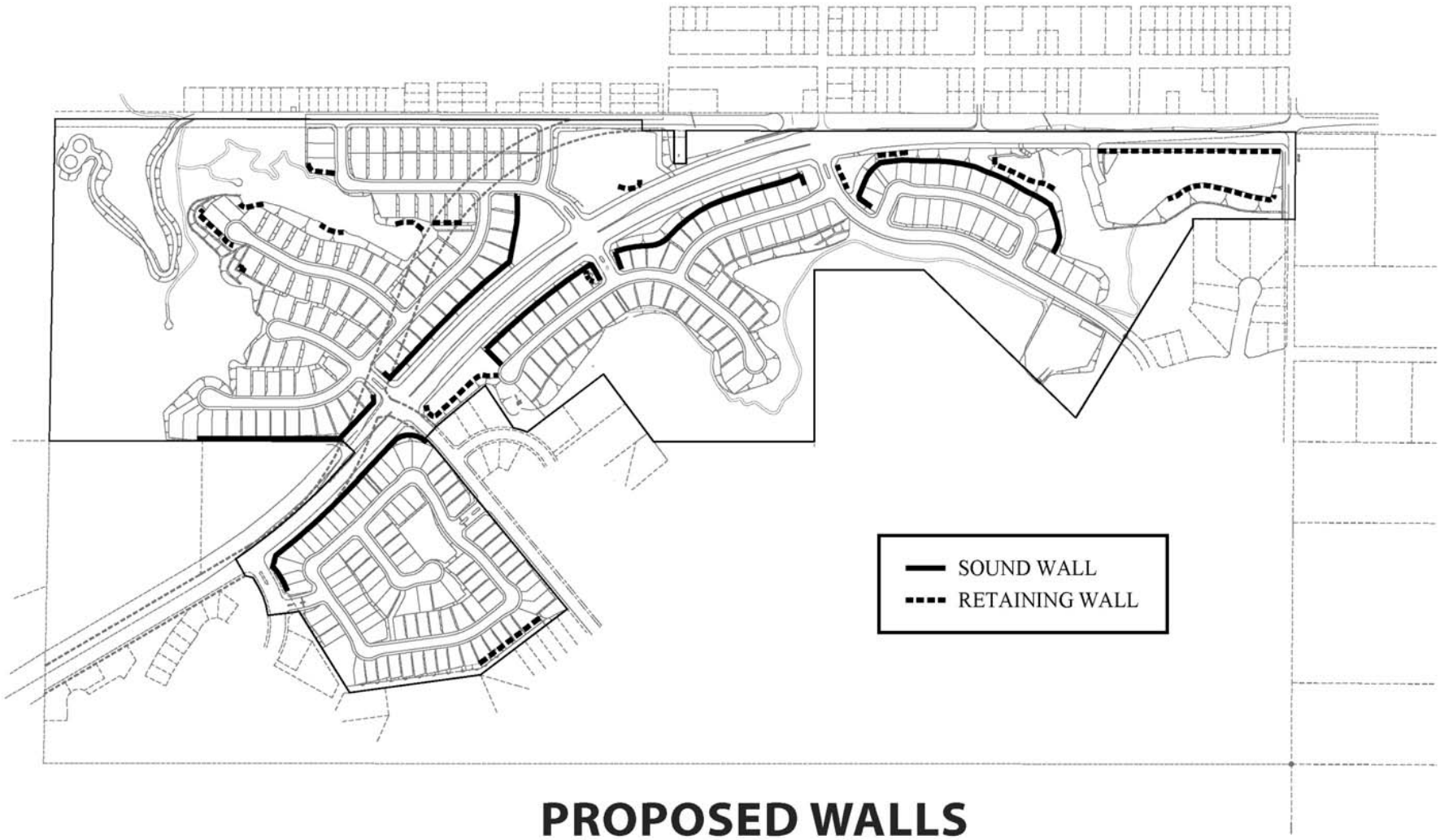
T:_CS\Work\Wildomar, City of\Figures for Oak Creek Canyon EIR 28-0047A-11-0261



Source: City of Wildomar

Figure 2.0-8

Sound and Retaining Walls

PMC®

2.4 REGULATORY REQUIREMENTS, PERMITS, AND APPROVALS POTENTIALLY REQUIRED FROM OTHER PUBLIC AGENCIES

Actions by other public agencies associated with the project include, but are not limited to, the following:

- *US Army Corps of Engineers (USACE):* A disturbance to jurisdictional waters of the United States, such as through grading or filling, could potentially trigger the need for a Section 404 permit from the USACE.
- *California Department of Fish and Game (CDFG):* A 1603 Streambed Alteration Agreement may be required.
- *State Water Resources Control Board:* A Notice of Intent will be filed to obtain coverage under the General Construction Activity Storm Water Permit prior to project construction.
- *Regional Water Quality Control Board (RWQCB):* Section 401 Water Quality Certification may be required as well as permitting associated with potential recycled water for irrigation use.

3.0 – Environmental Setting, Impacts, and Mitigation Measures

The following is an introduction to the environmental analysis for the proposed project, including a cumulative analysis and a discussion of general assumptions used in the environmental analysis. The reader is referred to the individual technical sections of the Draft Environmental Impact Report (Draft EIR or DEIR) (Sections 3.1 through 3.12) for further information on the specific assumptions and methodologies used in the analysis for each particular technical subject.

3.1 ANALYSIS ASSUMPTIONS USED TO EVALUATE THE PROPOSED PROJECT

BASELINE ENVIRONMENTAL CONDITIONS ASSUMED IN THE DRAFT EIR

Section 15125(a) of the California Environmental Quality Act (CEQA) Guidelines requires that an environmental impact report (EIR) include a description of the physical environmental conditions in the vicinity of a project as they exist at the time the Notice of Preparation (NOP) is published and the environmental analysis is begun. The CEQA Guidelines also specify that this description of the physical environmental conditions is to normally serve as the baseline physical conditions by which a lead agency determines whether impacts of a project are considered significant.

The environmental setting of the proposed project is described in detail in the individual technical sections of the Draft EIR (see Sections 3.1 through 3.12). In general, these sections describe the setting of the City of Wildomar as it existed when the NOP for the proposed project was filed on March 19, 2012.

STRUCTURE OF THE ENVIRONMENTAL IMPACT ANALYSIS

The individual technical sections of the Draft EIR include the following information:

Existing Setting

This subsection includes a description of the physical environmental conditions associated with the technical area of discussion, consistent with CEQA Guidelines Section 15125. As previously identified, the existing setting is based on conditions as they existed when the NOP for the proposed project was released.

Regulatory Framework

This subsection identifies applicable federal, state, regional, and local plans, policies, laws, and regulations that apply to the technical area of discussion.

Impacts and Mitigation Measures

This subsection identifies direct and indirect environmental effects associated with implementation of the proposed project. Thresholds of significance are identified and used to determine whether the environmental effects are considered significant and require the application of mitigation measures. Each environmental impact analysis is identified numerically.

Mitigation measures were developed through a review of the environmental effects of the proposed project by consultants with technical expertise as well as by environmental professionals. When a precise mitigation measure was not possible, or if the extent of the mitigation is dependent upon future action(s), the measure identifies performance standards that identify clear requirements that would avoid or minimize significant environmental effects. The use of performance standard mitigation is allowed under CEQA Guidelines Section 15126.4(a). It is also important to note that mitigation strategy deals only with the impacts associated with the proposed project. Mitigation measures cannot be used to address existing system deficiencies.

APPROACH TO THE CUMULATIVE IMPACT ANALYSIS

CEQA Guidelines Section 15130 requires that EIRs include an analysis of the cumulative impacts of a project when the project's effect is considered cumulatively considerable. Each technical section in the Draft EIR considers whether the project's effect on anticipated cumulative setting conditions is cumulatively considerable (i.e., a significant effect). "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (CEQA Guidelines, Section 15065(a)(3)). The determination of whether the project's impact on cumulative conditions is considerable is based on a number of factors, including consideration of applicable public agency standards, consultation with public agencies, and expert opinion. The environmental effects of the proposed project are incorporated in the cumulative impact analysis contained within each technical section. In addition, Section 4.0, Cumulative Impacts Summary, provides a summary of the cumulative impacts.

Definition of Cumulative Setting

The cumulative setting conditions considered in this Draft EIR are based on:

- **Local Adopted General Plans.** These are the existing land use plans in the region, consisting of the cities of Wildomar and Menifee and Riverside County.
- **Large-Scale Development Projects.** This includes current large-scale proposed and approved development projects in the region.
- **Effect of Regional Conditions.** The cumulative setting considers background traffic volumes and patterns on regional and state roadways.

Each technical section of the Draft EIR includes a description of the cumulative setting's geographic extent based on the characteristics of the environmental issue under consideration as set forth in Section 15130(b) of the CEQA Guidelines.

3.2 COMMON TERMINOLOGY USED IN THE DRAFT EIR

This Draft EIR uses the following terminology to describe the environmental effects of the proposed Project:

Less Than Significant Impact: A less than significant impact would cause no substantial change in the physical condition of the environment (no mitigation would be required for project effects found to be less than significant).

Significant Impact and Potentially Significant Impact: A significant impact would cause (or would potentially cause) a substantial adverse change in the physical conditions of the environment. Significant impacts are identified through the evaluation of project effects using specified standards of significance provided in each technical section of the DEIR. Identified significant impacts are those where the project would result in an impact that can be measured or quantified, while identified potentially significant impacts are those impacts where an exact measurement of the project's effects cannot be made but substantial evidence indicates that the impact would exceed applicable standards of significance. A potentially significant impact may also be an impact that may or may not occur and where a definite determination cannot be foreseen. Mitigation measures and/or project alternatives are identified to avoid or reduce project effects to the environment to a less than significant level.

Significant and Unavoidable Impact: A significant and unavoidable impact would result in a substantial negative change in the environment that cannot be avoided or mitigated to a less than significant level if the project is implemented.

Less Than Cumulatively Considerable Impact: A less than cumulatively considerable impact would cause no substantial change in the physical condition of the environment under cumulative conditions.

Cumulatively Considerable Impact: A cumulatively considerable impact would result when the incremental effects of an individual project result in a significant adverse physical impact on the environment under cumulative conditions.

Project Site: The proposed project boundaries as shown in **Figure 1.0-2** constitute the project site.

Project Area: The project area includes the project site and off-site improvements necessary to for the proposed project as shown in **Figure 2.0-5**.

Planning Area: The planning area may vary, depending on the topic being discussed. For example, a traffic planning area may include the City of Wildomar, Interstate 15 (I-15) and adjacent cities and unincorporated areas. Other planning areas may include existing upstream or downstream water or wastewater distribution, collection, or treatment systems. The boundaries of the planning area will be described in the context of each topic.

Standards of Significance: A set of significance criteria to determine at what level or "threshold" an impact would be considered significant. Significance criteria used in this DEIR include the CEQA Guidelines; factual or scientific information; regulatory performance standards of local, state, and federal agencies; and City goals, objectives, and policies. These are noted in each section and referred to in the analysis.

3.3 ENVIRONMENTAL IMPACT REPORTS UTILIZED IN THIS DRAFT EIR

This Draft EIR utilizes technical information and analyses from previously prepared EIRs that are relevant to the consideration of environmental effects of the proposed project, which is supported by the CEQA Guidelines (see Sections 15148 [Citation] and 15150 [Incorporation by Reference]). In addition to materials cited, the following EIRs have been utilized in this Draft EIR:

- Riverside County Integrated Project Final Program Environmental Impact Report (EIR) (State Clearinghouse No. 2002051143)

By utilizing provisions of the CEQA Guidelines, the City, in preparing this Draft EIR, has been able to make maximum feasible and appropriate use of the technical information in the EIR. This Draft EIR and other referenced materials are available for review upon request at the City Wildomar Planning Department:

23873 Clinton Keith Road, Suite 201
Wildomar, CA 92595
Phone: 951-677-7751
Fax: 951-698-1463

Business hours: Monday – Thursday, 8:00 a.m. – 5:00 p.m.
(closed Fridays)

3.1 LAND USE

This section discusses the potential environmental impacts of the proposed project associated with land use. Existing land uses in the proposed Oak Creek Canyon Development project area are characterized in the context of the City of Wildomar General Plan and The Farm Specific Plan, as well as other adopted plans and policies. This analysis focuses on land use compatibility, General Plan consistency, and the implications of the proposed project on existing and surrounding land uses. Information for this section was obtained primarily from public documents, public and agency contacts, site reconnaissance, and the proposed Oak Creek Canyon Development project.

3.1.1 EXISTING SETTING

OAK CREEK CANYON PROJECT SITE

While the proposed project area is within The Farm Specific Plan adopted by Riverside County in 1974, the project site was not developed with the remainder of the Farm project and is currently vacant. The elevation at the project site ranges from approximately 1,700 feet (518 meters) to 1,950 feet (594 meters) above sea level. The project area has moderate to steeply sloping terrain, with natural drainage channels in the canyon areas. The site contains a sparse cover of annual weeds and grasses, some small to large trees, and moderate to dense brush areas.

Access to the site is available from Bundy Canyon Road, which runs through the center of the site. Interstate 15 and Interstate 215 connect to Bundy Canyon Road, allowing regional access to the project site.

SURROUNDING EXISTING LAND USES

Land use in the project area has historically been rural, with single-family residential and commercial uses gradually developing over time. New development trends in the area have led to higher-density single-family residences with smaller lot sizes in the vicinity of the proposed project site.

GENERAL PLAN DESIGNATIONS

Figure 2.0-1 presents the land use designations within and surrounding the proposed project site according to the Wildomar General Plan. The General Plan designates the proposed project site for predominantly Medium Density Residential (MDR) use, with a small area designated for Commercial Retail (CR) use as shown in **Figure 2.0-1**. Surrounding land use designations include Rural Mountainous and Low Density Residential to the north and west, Medium Density Residential and Open Space and Recreation to the south, and a small area of High Density Residential to the southwest. The portion of land to the east of the proposed project that is in the City of Menifee is designated Low Density Residential (LDR).

ZONING DESIGNATIONS

Figure 2.0-2 shows the existing zoning for the project site, which is governed by the City of Wildomar Zoning Ordinance and Zoning Map. The existing zoning for the project area includes R-1 (Section 17.24, One-Family Dwelling Zone, of the Wildomar Municipal Code) and C-P-S (Section 17.76, Scenic Highway Commercial Zone, of the Wildomar Municipal Code).

Of the land surrounding the project site that is in the City of Wildomar, lands are zoned R-A-1 (Residential Agricultural 1-acre minimum) to the west, R-A-5 (Residential Agricultural 5-acre minimum) and R-R (Rural Residential) to the north, and R-T (Mobile Home Subdivisions and

Mobile Home Park) to the south (the existing Farm community). The portion of land adjacent to the proposed project site that is in the City of Menifee is zoned Residential Agricultural (R-A-2½). Zoning designations are shown in **Figure 2.0-2**.

3.1.2 REGULATORY FRAMEWORK

The land use designations and policies for the proposed project site are provided in the applicable land use plans, including the City of Wildomar General Plan and Zoning Ordinance, the Western Riverside County Multiple Species Habitat Conservation Plan, and The Farm Specific Plan. These plans and their relevant policy provisions are described below.

LOCAL

City of Wildomar General Plan

Upon incorporation in 2008, the City of Wildomar adopted the Riverside County General Plan. The adopted General Plan, which was drafted in 2003, is a unit of the Riverside County Integrated Project and aims to manage the overall pattern of development in the county. In 2012, the City updated the Housing Element of the General Plan by identifying and establishing Wildomar's policies with respect to meeting the needs of existing and future residents in the city.

The first goal of the recently adopted Housing Element of the Wildomar General Plan is to assist in the development of adequate housing to meet the city's fair share of the region's housing needs for all economic segments of the population. The Housing Element identifies the following policies that are relevant to the proposed project:

- Policy H-1: Ensure there is a sufficient supply of multi-family and single-family zoned land to meet the housing needs identified in the Regional Housing Needs Allocation (RHNA).

- Policy H-2: Maintain land use policies that allow residential growth consistent with the availability of adequate infrastructure and public services.

The General Plan focuses on community development to concentrate development to achieve community focal points, stimulate a mix of activities, promote economic development, achieve more efficient use of land, create a transit-friendly and walkable environment, and offer a broader mix of housing choices for implementing its vision.

Western Riverside County Multiple Species Habitat Conservation Plan

The entire project area is located within the planning area covered by the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), which was formally adopted in 2003 as part of the Riverside County Integrated Project. The planning area encompasses all of western Riverside County. The MSHCP has the overall goal of maintaining biological and ecological diversity within the rapidly urbanizing western portion of the county. The MSHCP is intended to serve as a habitat conservation plan pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act of 1973, as well as a natural community conservation plan (NCCP) under the NCCP Act of 1991. It allows the incidental "take" of plant and animal species identified within the proposed MSHCP for deemed "covered activities." The proposed MSHCP allows wildlife agencies to grant "take authorization" for otherwise lawful actions that may incidentally take or harm individuals of a species outside of preserve areas in exchange for supporting assembly of a coordinated reserve system. For further information, refer to Section 3.8, Biological and Natural Resources.

The Farm Specific Plan

Specific plans are highly customized policy or regulatory tools that provide a bridge between the General Plan and individual development projects in a more area-specific manner than is possible with community-wide plans. The Farm (Specific Plan #No. 116) is located in an area south of Bundy Canyon Road, east of The Farm Road, and west of Sunset Avenue.

The Farm Specific Plan is a 1,520-acre master-planned community with policies that aim to provide affordable housing with a rural atmosphere while still offering urban amenities. The Farm Specific Plan was adopted Riverside County in 1974 as the Bundy Canyon Mobile Home Community, and it initially developed mobile home subdivisions with related recreation and open space uses. More recently, traditional single-family home subdivisions have been planned. Residential uses are assigned to 743 acres (49 percent) of the Specific Plan area with 2,016 units; open space and recreation areas encompass 602 acres (40 percent); streets total 165 acres (11 percent); and the remaining acreage is split between public facilities (10 acres, 0.6 percent) and commercial use (1 acre, 0.1 percent). Current residential development is a mix of manufactured and conventional housing, with 988 of the 2,016 units developed. Acreage was retained for open space and recreational use, and open space is proposed to be used for orange groves as soil conditions and topography will allow. Various recreational facilities have been built, and acreage has been set aside for future use by the Lake Elsinore Unified School District. Commercial uses are not planned for development until the surrounding development is at a level that supports such use. The proposed project is located in Phases 9, 17A, 18, and 19 of The Farm Specific Plan, which the Specific Plan projected to allow for 246 residential parcels (Appendix Table 2 of **Appendix 2.0-6**).

Mount Palomar Mountain Nighttime Lighting Policy Area

The Mount Palomar Observatory, which is located just outside of Riverside County in San Diego County, requires unique nighttime lighting standards to allow the night sky to be viewed clearly. The Mount Palomar Mountain Nighttime Lighting policy area was established through Riverside County Ordinance 655 in 1988 and was adopted as Chapter 8.64 in the Wildomar Municipal Code. The intent of the ordinance is to limit light leakage and spillage that may obstruct or hinder the observatory's view of the night sky. The project area is also depicted in Figure 5 of the City's General Plan, which shows that the proposed project is in Zone B of the Mount Palomar Nighttime Lighting Policy Area. Zone B is defined as the zone 15–45 miles away from the observatory. The City of Wildomar ensures that development within the city limits complies with the lighting policy. Compliance with this provision is discussed in Section 3.11, Aesthetics and Visual Resources, of this Draft EIR.

City of Wildomar Zoning Regulations

The Zoning Ordinance and Zoning Map of the City of Wildomar, found in the City's Municipal Code (Chapter 17), provide specific development and land use regulations for Wildomar. Zoning regulations are designed to protect and promote the health, safety, and general welfare of residents, as well as preserve the character and integrity of neighborhoods.

The proposed project site is currently zoned R-1 (One-Family Dwelling) and C-P-S (Scenic Highway Commercial). The proposal to change the zoning designations for three Farm Specific Plan phasing/planning areas is as follows:

- Rezone all of the Phase 9 Planning Area from the current specific plan designation of R-1 (One-Family Dwelling) to R-4 (Planned Residential Zone) to allow for single-family residential development with a minimum lot size of 6,000 square feet;

- Rezone all of the Phase 18 Planning Area from the current specific plan designation of R-1 (One-Family Dwelling) and small portion zoned C-P-S to R-4 (Planned Residential Zone) to allow for single-family residential development with a minimum lot size of 4,500 square feet; and

- Rezone all of the Phase 19 Planning Area from the current specific plan designation of R-1 (One-family Dwelling) to C-1/C-P (General Commercial). The applicant is also proposing to increase the size of Phase 19 from 1.1 acres to approximately 5.2 acres and relocate it from its current location to the southwest corner of Sunset Avenue and Bundy Canyon Road. (See **Figure 2.0-2**, Existing Zoning, and **Figure 2.0-3,** Proposed Zoning.)

The project site is surrounded by lands zoned by the City of Wildomar as Mobile Home Subdivision and Mobile Home Park (R-T) to the east and south, One-Family Dwelling (R-1) to the west, and Rural Residential (R-R) to the north. Lands to the east of the proposed project site in the City of Menifee are zoned Residential Agricultural (R-A-2 ½).

The following zone districts are defined in Chapter 17 of the City of Wildomar Municipal Code (WMC). See http://qcode.us/codes/wildomar/ for a complete listing of all of Wildomar's zone districts.

C-P-S (Scenic Highway Commercial). WMC Section 17.76 allows specific wholesale, retail, commercial, and professional office uses with an approved plot plan and only in enclosed buildings. Only 200 square feet of outside storage or display of materials is allowed. Permitted uses are listed in WMC Section 17.76.010. Limited commercial uses are permitted with an approved conditional use permit. An on-site operator's residence is allowed with plot plan approval. There is no minimum parcel size or yard area (setback) for buildings that are 35 feet or less in height. For buildings greater than 35 feet in height, a ratio of 2 feet of setback for every 1 foot in height greater than 35 feet is required (Section 17.76.030B).

R-1 (One-Family Dwelling). WMC Section 17.24 allows for one-family dwellings, including mobile homes on permanent foundations, and the noncommercial keeping of horses, small farm animals, etc. See **Table 3.3-1** for a summary of development standards.

R-4 (Planned Residential). WMC Section 17.60 allows for one-family and multiple-family dwellings and mobile home parks. Multiple-family dwellings are permitted following the requirements of the R-3 zone district (subject to the provisions of the R-34 zone and plot plan approval). A minimum lot area of 6,000 square feet per dwelling units is required exclusive of streets and commercial areas. Mobile home parks are permitted with an approved conditional use permit. See **Table 3.3-1** for a summary of development standards.

R-R (Rural Residential). WMC Section 17.16 allows for one-family dwellings, mobile homes, light agriculture, animal husbandry, and farm animals (maximum five animals per acre), with kennels/catteries permitted pursuant to specific provisions. A variety of nonresidential uses are allowed with a plot plan or conditional use permit. See **Table 3.3-1** for a summary of development standards.

R-T (Mobile Home Subdivision). WMC Section 17.52 allows for one-family mobile homes and/or conventional/manufactured homes. Commercial recreational facilities and home occupations are permitted. See **Table 3.3-1** for a summary of development standards.

The following zone district is defined in the City of Menifee Zoning Ordinance:

R-A (Residential Agricultural). Section VIb of the Menifee Zoning Ordinance permits one-family dwellings and mobile homes on permanent foundations on lots of less than 2.5 acres. Noncommercial keeping of horses, cattle, sheep, and goats on lots over 20,000 square feet and 100 feet in width is permitted. Two such animals on each 20,000 square feet up to 1 acre, and two such animals on each additional acre are permitted. Some agricultural uses, limited noncommercial animal husbandry, and 4-H projects are permitted. Agricultural mobile homes are permitted for owner/farmworker for each 10 acres being farmed. Mobile home parks are permitted with an approved conditional use permit. Churches are permitted with an approved public use permit. See **Table 3.3-1** for a summary of development standards.

TABLE 3.1-1
SUMMARY OF RESIDENTIAL ZONE DISTRICTS

City of Wildomar						
Zone	Min. Lot Size Sq. Ft.	Coverage	Max. Height	Setbacks		
				Front	Rear	Side/Exterior
R-R	20,000	*	40′	20′	20′	5′/10′
R-1	7,200	50%	40′	20′	10′	3′/10′
R-4	6,000	*	40′	20′	10′	5′/10′
R-T	3,600/7,200	*	40′	20′	5′	5

Source: City of Wildomar Municipal Code, Chapter 17
**Not specified in the Municipal Code*

City of Menifee						
Zone	Min. Lot Size	Coverage	Max. Height	Setbacks		
				Front	Rear	Side/Exterior
R-A	20,000		40′	20′	*	*

Source: City of Menifee Municipal Code, Article VIb
**Not specified in the Municipal Code*

3.1.3 PROJECT IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

According to CEQA Guidelines Appendix G, impacts to land use are considered significant if implementation of the project would result in any of the following conditions:

1) Physically divide an established community.

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 and zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

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

METHODOLOGY

Evaluation of potential land use impacts of the proposed Oak Creek Canyon Development project was based on review of planning documents pertaining to the project site, including the City of Wildomar General Plan and Zoning Ordinance, consultation with appropriate agencies, and field review of the project site and surroundings.

The focus of this land use analysis is on the proposed project's consistency with applicable City of Wildomar land use policies, particularly those contained within The Farm Specific Plan, as well as compatibility with surrounding land uses.

IMPACTS AND MITIGATION MEASURES

Physically Divide an Established Community (Standard of Significance 1)

Impact 3.1.1 The proposed project will occur within an area that is currently vacant and surrounded by separate single-family communities. The proposed project will be an infill project and will not physically divide an established community. **No impact** will occur.

The proposed project will be located on various vacant parcels in the northeastern portion of the city. While Interstate 15 currently divides the city from west to east, the proposed project site does not physically divide the city or any of its neighborhood areas. The proposed Oak Creek Canyon Development will provide housing opportunities consisting of a mixture of lot sizes and open space that will be able to be used for passive recreation and preservation of scenic and habitat values. The proposed project will complement the existing development that occurs to the north, east, and south of the project site and provide a new neighborhood commercial center to this portion of the city in the future. The proposed project will result in **no impact**.

Mitigation Measures

None required.

Conflict with General Plan, Zoning Code, or Specific Plan (Standard of Significance 2)

Impact 3.1.2 The proposed project has been prepared to be consistent with the Wildomar General Plan and Zoning Ordinance as well as with The Farm Specific Plan. Therefore, the proposed project will result in a **less than significant** impact.

As explained in Section 2.0 Project Description, and summarized above, the proposed project will allow the subdivision of land for single-family residential parcels and creates a small commercial site. The City's General Plan and The Farm Specific Plan have designated this area for similar development.

The proposed project reflects lot sizes that were adopted with the initial Farm Specific Plan in 1974. As shown in the plan, the initial range of lots included 900 lots on 98.3 acres averaging 4,500 square feet in size. Over time as expectations of land changed, the Specific Plan was amended to increase the average parcel size to 7,200 square feet; however, the total number of 1,800 lots was not increased (County of Riverside 1974, p. I-4).

The proposed project would allow for 4,500-square-foot minimum lot sizes in Phase 18 (see **Figure 2.0-4**). The area will total 88 lots for a net density of 4.38 dwelling units per acre, with parcels ranging

from 4,500 square feet to 8,892 square feet for an average parcel size of 5,632 square feet. This change results in 34 more units than were initially anticipated in The Farm Specific Plan for Phase 18. While the parcel sizes are smaller in this phase, the intent and design of the proposed project is similar to the original Farm Specific Plan in that all of the homes will be single-family, amenities such as open space and trails are included, and a sizable percentage of the overall project site will remain in open space.

Because of the large amount of open space, the overall density of the site has not changed significantly. As shown in Table 2 of The Farm Specific Plan, a net density of 2.6 units per acre was approved via adoption of the Specific Plan. The proposed project results in a net density of 2.7 units per acre, a difference of approximately 0.10 unit per acre. This small increment of change in units is not considered a significant impact.

The commercial site has been relocated and enlarged from 1.1 acres to 5.2 acres. The 5.2-acre site has a net usable area of approximately 3.5 acres due to slopes and access. The change in location from The Farm Road to Sunset Avenue is necessary to accommodate more traffic and provide better access for both new and current residents in the area. While the commercial uses have not been identified as part of this project, the design and size of the site is anticipated to provide for local-serving retail and service commercial or professional office uses. Local-serving retail and professional land uses are designed for the convenience of the local residents and are similar to the intent of the commercial site. The Specific Plan notes that it is not anticipated that commercial development will occur until more of the homes are developed (County of Riverside 1974, p. III-35).

The proposed project will occur within The Farm Specific Plan, which has been designated for residential development since 1974. The Farm Specific Plan is consistent with the City of Wildomar's General Plan.

The proposed project results in single-family homes on individual lots similar to the surrounding Farm Specific Plan area development, the lot sizes are similar to those approved for the original Specific Plan in 1974, and the net density per acre increases by 0.10 unit per acre. The proposed project is considered consistent with the Wildomar General Plan and Zoning Ordinance and The Farm Specific Plan. This impact is considered **less than significant**.

Mitigation Measures

None required.

Conflict with Applicable Habitat Conservation Plan or Natural Community Conservation Plan (Standard of Significance 3)

Impact 3.1.3 The proposed project will occur within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). **No impact** will occur relative to conflicts between the proposed project and the MSHCP.

The reader is directed to Section 3.8, Biological and Natural Resources, for a discussion of the MSHCP and project impacts.

Mitigation Measures

None required.

3.1.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The City of Wildomar General Plan and The Farm Specific Plan constitute the setting for the cumulative analysis.

CUMULATIVE IMPACTS

Cumulative Impacts to Land Use

Impact 3.1.4 Development of the proposed project will be consistent with the planning policies of the City of Wildomar General Plan while also being consistent with the surrounding land uses. **No impact** will occur.

The City of Wildomar General Plan and The Farm Specific Plan will be affected by the proposed project. While the proposed project would increase the number of anticipated housing units by 29 (275 proposed vs. 246 existing), the large amount of open space and overall density of the project (2.7 units per acre) make it similar to the existing 2.6 units per acre in The Farm Specific Plan. The amenities included with the proposed project, such as parks, trails, storm drainage basins, and open space, are consistent with other development in the vicinity and with the intent of The Farm Specific Plan. The project would have the cumulative effect of reinforcing and supporting adopted residential land uses planned for the area since 1974. The proposed project also has the effect of enhancing the development of the surrounding community by providing better access to these related projects and existing developments and reducing congestion and traffic in the community. This is considered a beneficial cumulative effect.

The changes to the General Plan and The Farm Specific Plan limit the impact of the change to the area encompassed by the proposed project. The reduction in lot sizes is specific to Phase 18 of The Farm Specific Plan and would not be applicable anywhere else in Wildomar. The proposed project would have **no impact** to the General Plan or to The Farm Specific Plan.

Mitigation Measures

None required.

REFERENCES

City of Menifee. 2006. Municipal Code.

City of Wildomar. 2008a. *City of Wildomar General Plan.*

———. 2008b. Municipal Code.

County of Riverside. 1974. *The Farm Specific Plan.*

3.2 Population, Housing, and Employment

This section discusses the potential environmental impacts of the proposed project associated with population, housing, and employment. Current and projected population trends and demographics are provided in this section as well as characteristics and current conditions of the area's housing stock, labor force, and major industries.

3.2.1 EXISTING SETTING

REGIONAL SETTING

The City of Wildomar is located in Riverside County, the fourth most populated county in California. In addition to this distinction, **Table 3.2-1** demonstrates that of the 10 largest counties in the state, Riverside County experienced the highest rate of growth from 2000 to 2010. Most of this growth has been focused in the far western quarter of the county, which comprises the subregion of western Riverside County.

Located along the Interstate 15 (I-15) corridor south of the City of Lake Elsinore and north of the City of Menifee, the City of Wildomar was incorporated in 2008. Prior to incorporation, Wildomar was one of the fastest growing communities in the county. **Table 3.2-2** demonstrates that Wildomar's growth rate of nearly 129 percent from 2000 to 2010 trailed only the 133.7 percent growth rate of Murrieta and the 223.9 percent growth rate of Beaumont.

TABLE 3.2-1
GROWTH OF THE 10 MOST POPULATED COUNTIES IN CALIFORNIA

County	2000	2010	Population	
			Increase	Percentage Change
Los Angeles	9,519,338	9,818,605	299,267	3.10
San Diego	2,813,833	3,095,313	281,480	10.00
Orange	2,846,289	3,010,232	163,943	5.80
Riverside	**1,545,387**	**2,189,641**	**646,254**	**41.70**
San Bernardino	1,709,434	2,035,210	325,776	19.10
Santa Clara	1,682,585	1,781,642	99,057	5.90
Alameda	1,443,741	1,513,493	67,752	4.83
Sacramento	1,223,499	1,418,788	195,289	16.00
Contra Costa	948,816	1,049,025	100,209	10.60
Fresno	799,407	933,450	131,043	16.40

Source: DOF 2011

POPULATION GROWTH TRENDS

There are several methods of estimating population growth and demographic information for communities. Most of these methods rely on an analysis of historic population levels and projections based on assumptions of the future growth potential of the community. These projections are based on availability of vacant land, knowledge of building permit activity, and an understanding of the region within which the community is located.

The California Department of Finance (DOF) develops estimations of state, regional, and local populations each year based on the number of building permits issued, residential units, requests for new electrical connections, and other similar statistical indicators. These estimates are published annually each May.

TABLE 3.2-2
REGIONAL POPULATION

City	Total Population		Change in Population	
	2000	2010	Number	Percentage
Banning	23,562	29,603	6,041	25.6
Beaumont	11,384	36,877	25,493	223.9
Blythe	20,463	20,817	354	1.7
Calimesa	7,139	7,879	740	10.4
Canyon Lake	9,952	10,561	609	6.1
Cathedral City	42,647	51,200	8,553	20.1
Coachella	22,724	40,704	17,980	79.1
Corona	124,966	152,374	27,408	21.9
Desert Hot Springs	16,582	25,938	9,356	56.4
Hemet	58,812	78,657	19,845	33.7
Indian Wells	3,816	4,958	1,142	29.9
Indio	49,116	76,036	26,920	54.8
Lake Elsinore	28,928	51,821	22,893	79.1
La Quinta	23,694	37,467	13,773	58.1
Menifee	72,494[1]	77,519	5,025[1]	6.9[1]
Moreno Valley	142,381	193,365	50,984	35.8
Murrieta	44,282	103,466	59,184	133.7
Norco	24,157	27,063	2,906	12.0
Palm Desert	41,155	48,445	7,290	17.7
Palm Springs	42,807	44,552	1,745	4.1
Perris	36,189	68,386	32,197	89.0
Rancho Mirage	13,249	17,218	3,969	30.0
Riverside	255,166	303,871	48,705	19.1
San Jacinto	23,779	44,199	20,420	85.9
Temecula	57,716	100,097	42,381	73.4
Wildomar	**14,064[1]**	**32,176**	**18,112[1]**	**128.8[1]**
Unincorporated Communities[2]	420,721	504,392	83,671	19.8
Riverside County Total	1,545,387	2,189,641	644,254	41.7

Sources: DOF 2011; US Bureau of the Census, 2006–2008 American Community Survey 3-Year Estimates (used for populations of unincorporated communities)
[1] Population or result of population prior to incorporation.
[2] Includes the populations of then-unincorporated Menifee and Wildomar for the year 2000 results.

Population and housing estimates are validated against United States decennial census data every ten years.

In addition to California DOF estimates, the US Census Bureau administers the American Community Survey, which provides ongoing demographic reports and statistical data about communities in the United States. The American Community Survey compiles its data thorough ongoing statistical surveys that sample a small percentage of the population each year.

For this document, both resources were used to present historic, current, and forecast data. In instances where both resources were used to populate a table, annotations have been included to indicate the source of the data.

Prior to the 2008–2012 economic downturn, the City of Wildomar experienced growth that was due to both the rising cost of development in the region and the strong housing market that affected much of the nation. The areas of the city that have experienced, and which are projected to continue to experience, the most growth are located adjacent to the transportation corridors leading to Interstate 15.

However, even as population growth in Wildomar slowed during the economic downturn, it did not stop. As **Table 3.2-3** shows, the city did not see a net loss of population, keeping pace with the growth of the county as a whole.

TABLE 3.2-3
RIVERSIDE COUNTY/CITY OF WILDOMAR POPULATION GROWTH

Year	Riverside County				City of Wildomar			
	Population	Percentage Growth	Dwelling Units	Percentage Growth	Population	Percentage Change	Dwelling Units	Percentage Growth
2007	2,030,054	–	753,286	–	23,554[1]	–	7,232[1]	–
2008	2,077,183	2.32	772,480	2.55	24,447[1]	3.79	7,455[1]	3.08
2009	2,109,882	1.57	779,077	0.85	31,374	28.33	10,630	42.59
2010	2,189,641	3.78	800,707	2.78	32,176	2.56	10,806	1.66
2011	2,205,731	0.73	804,913	0.53	32,414	0.74	10,840	0.31
2012	2,227,577	0.99	807,970	0.38	32,719	0.94	10,847	0.06

Sources: DOF 2012; US Bureau of the Census, 2006–2008 American Community Survey 3-Year Estimates

[1] Prior to incorporation

In Riverside County, forecasting of population and demographic trends is performed by the local council of governments, the Southern California Association of Governments (SCAG). For the specific subregion in which the proposed project site is located, Western Riverside County, SCAG administers a subregional council of governments, the Western Riverside Council of Governments (WRCOG). As a component of its long-term planning responsibilities, the WRCOG publishes forecast demographic and population data for the subregion.

This forecast data, which is included in **Table 3.2-4**, is derived from methods that consider past population and birthrate patterns, as well as instances of building permit issuance and income reporting, among many other factors.

Table 3.2-4 indicates that while growth for both the subregion and the city will exceed the current economically depressed figures, they are not predicted to reach the historic growth levels of the past decade. However, it is also important to note that the growth of Wildomar is still predicted to outpace the growth of the subregion as a whole.

TABLE 3.2-4
FORECAST POPULATIONS – WESTERN RIVERSIDE COUNTY AND CITY OF WILDOMAR

Year	Western Riverside County[1]		City of Wildomar	
	Population	Percentage Growth	Population	Percentage Growth
2000	1,236,309	–	14,064	–
2010	1,733,694	40.23%	32,176	128.78%
2020	2,003,412	15.56%	42,475	32.01%
2035	2,466,332	23.11%	53,664	26.34%

Source: WRCOG 2012

[1] *Population of the Western Riverside subregion, defined by the WRCOG as 80% of the unincorporated population and 81% of the incorporated population of Riverside County as a whole.*

POPULATION CHARACTERISTICS

Housing

Table 3.2-5 summarizes the estimated characteristics of the existing regional and local housing in 2012. According to May 2012 California Department of Finance estimates, there are currently 807,970 housing units in Riverside County. Single-family housing units account for just over 72 percent of all housing units. Comparatively, of the total 10,857 housing units located in the City of Wildomar, 69 percent are single-family homes. In 2012, approximately 86 percent of the housing units in the county were occupied, leaving approximately 14 percent vacant. In Wildomar, approximately 92 percent of the housing units were occupied, with less than 8 percent of the city's housing inventory vacant. Slightly more than three persons on average resided in each occupied housing unit in both Riverside County and the City of Wildomar; the average is slightly higher in Wildomar.

Containing the results of the 2010 US Census, **Table 3.2-6** provides the tenure characteristics of housing in both Riverside County and the City of Wildomar. Of the total 686,260 occupied housing units in the county in 2010, approximately 67 percent were owner-occupied and the remaining 33 percent were renter-occupied. At the same time, of the total 9,992 occupied housing units in the city in 2010, just over 73 percent were owner-occupied, while nearly 27 percent were occupied by renters.

TABLE 3.2-5
EXISTING REGIONAL AND LOCAL HOUSING CHARACTERISTICS – OCCUPANCY/TYPE (YEAR 2010)

Area	Total Units	Occupied Units	Vacant Units	Persons per Household	Single-Family Units[1]	Multi-Family Units[2]	Mobile Homes
City of Wildomar	10,857	10,039	818	3.255	7,492	513	2,852
Riverside County	807,970	692,520	115,450	3.165	599,723	129,326	78,921

Source: DOF 2012

[1] *Single-Family includes Single Detached and Single Attached categories.*

[2] *Multi-Family contains Two to Four and Five Plus categories.*

TABLE 3.2-6
EXISTING REGIONAL AND LOCAL HOUSING CHARACTERISTICS – TENURE (YEAR 2010)

Area	Total Occupied Units	Owner-Occupied	Renter-Occupied
City of Wildomar	9,992	7,329	2,663
Riverside County	686,260	462,212	224,048

Source: DOF 2012; US Bureau of the Census 2010

Employment

The City of Wildomar is adjacent to the many larger population and employment centers of western Riverside, Los Angeles, San Diego, and Orange counties, allowing many residents to commute for diverse employment opportunities. The diversity of the Wildomar workforce is outlined in **Table 3.2-7**. The California Employment Development Department (EDD) estimates that unemployment in the Riverside-San Bernardino-Ontario Metropolitan Statistical Area (MSA) was 12.6 percent in June of 2012, which was the same as the Riverside County percentage for the same period.

TABLE 3.2-7
WILDOMAR OCCUPATIONS IN 2010

Employment	Number	Percentage of Workforce
Agriculture, forestry, fishing and hunting, mining	76	0.5
Construction	1,516	10.8
Manufacturing	1,522	10.8
Wholesale trade	446	3.2
Retail trade	1,418	10.1
Transportation and warehousing, utilities	675	4.8
Information	147	1.0
Finance, insurance, real estate	557	4.0
Professional, scientific, management, administrative, and waste management services	1,937	13.8
Educational, health and social services	2,499	17.8
Arts, entertainment, recreation, accommodation and food services	1,657	11.8
Other services except public administration	802	5.7
Public Administration	823	5.8
Total civilian employed population 16 years and over	14,075	100

Source: US Bureau of the Census 2010

3.2.2 REGULATORY FRAMEWORK

LOCAL

City of Wildomar Housing Element and General Plan

Upon incorporation, the City of Wildomar adopted the Riverside County General Plan. This General Plan provides goals and policies related to population, housing, and employment. In 2012, the City also updated the Housing Element to tailor the element to the needs of Wildomar. While this DEIR analyzes the project's consistency with the General Plan and Housing Element pursuant to California Environmental Quality Act (CEQA) Section 15125(d), it is the City of Wildomar City Council that will make the determination of the project's consistency with the identified General Plan policies.

The Farm Specific Plan

The Farm Specific Plan provides design standards for development within the Specific Plan project area. Table 2 of The Farm Specific Plan shows that the project area was estimated to result in 275 single-family lots (see **Appendix 2.0-6**).

3.2.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the State CEQA Guidelines Appendix G thresholds of significance, which indicate that the proposed project would have a significant impact if it would:

1) Induce substantial growth or concentration of population in an area, either directly or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure).

2) Displace substantial numbers of existing housing, necessitating the construction or replacement housing elsewhere.

3) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

METHODOLOGY

Evaluation of potential population/housing/employment impacts was based on research of demographic and housing conditions utilizing existing documents and other information sources. Information was obtained from governmental agencies through their websites. Among these agencies were the US Bureau of the Census, the California Department of Finance, and the California Employment Development Department. The General Plan and Housing Element of Riverside County were additional sources of information on housing and socioeconomic conditions as well as on housing policy.

For the purposes of determining population and housing impacts, a factor of 3.255 persons per household, as established by the DOF as the average for the City of Wildomar in 2012, was used to determine the potential growth in population as a result of the proposed project. Growth

inducement and its associated environmental effects are discussed in Section 6.0, Long-Term Implications of the Project.

The proposed project will occur on a site that is currently undeveloped. The project would have no impact on existing housing stock and result in no loss of regional housing or displacement of people; therefore, impacts of this nature will not be discussed further in this Draft EIR.

IMPACTS AND MITIGATION MEASURES

Population and Employment Growth (Standard of Significance 1)

Impact 3.2.1 Buildout of the proposed project would result in population growth and the generation of employment. This impact is considered to be **less than significant**.

Assuming an average of 3.255 persons per household, the existing Farm Specific Plan would allow for 246 single-family lots, resulting in approximately 801 new residents. The proposed project would increase the number of allowable lots to 275, resulting in an additional 94 new residents at buildout for a potential of 895 new residents.

TABLE 3.2-8
COMPARISON OF POPULATION CHANGE FROM THE PROPOSED PROJECT TO EXISTING FARM SPECIFIC PLAN

	Lots	New Residents	Percentage Change from Existing		Percentage Increase from Current Population
			Lots	Population	
Existing	246	801			2.49%
Proposed	275	895			2.78%
Difference	29	94	11.79%	11.74%	0.29%

Source: County of Riverside 1974, Phases 9, 17A, and 18, Table 2, Appendix 2.0-6

The proposed project represents an 11.7 percent increase in population that The Farm Specific Plan assumed and a 0.29 percent increase in the city's overall population.

While the proposed commercial property could be developed with uses that would encourage employees to relocate to Wildomar, the size and location of the commercial land suggests that the uses will be small retail and service uses serving the local population. As a smaller retail use, it is likely that employees will come from the local area and will not need to relocate. The California Economic Development Department reported a 12 percent unemployment rate in the City of Wildomar, which suggests there is an ample labor pool for retail and service uses within the proposed project. Because of the small 0.29 percent increase in total population represented by the proposed project, and the availability of labor for jobs likely to be created on the future commercial site, impacts to population growth are therefore a **less than significant** impact.

Mitigation Measures

None required.

3.2.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The City of Wildomar is located in the highly developed corridor of I-15 in the Western Riverside County subregion, historically one of the fastest growing regions in the state. The entire project site is located on currently undeveloped land. The cumulative setting for population, housing, and employment includes approved and proposed development in the region (see Section 6.0, Long-Term Implications of the Project) as well as development anticipated in Wildomar. **Table 3.2-4** provides population projections for the City of Wildomar through the year 2035. Regional population, housing, and employment demographics are detailed in subsection 3.2.1, Existing Setting.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Population Growth

Impact 3.2.2 Development of the proposed project would result in a slight increase in the population of the City of Wildomar. This impact is considered **less than cumulatively considerable.**

Cumulative development in the vicinity of the project would increase the population and number of housing units in Wildomar and Riverside County. However, development at the proposed project site is consistent with the land use designations and growth assumed in the Land Use Element of the General Plan. The cumulative environmental and growth inducement effects are evaluated in the technical sections of this DEIR. Given that this growth is anticipated under in the General Plan, this impact is considered **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

DOF (California Department of Finance). 2010. *Interim Population Projections for California and Its Counties 2010–2050.*

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This section represents the results of the traffic impact analysis (TIA) prepared by Urban Crossroads (2012) for the proposed project. The traffic impact analysis evaluated the potential impacts to traffic and circulation associated with the development of the proposed project and recommended improvements to mitigate impacts considered significant in comparison to established regulatory thresholds.

3.3.1 EXISTING SETTING

The 13 study area intersection locations listed on **Table 3.3-1** were selected for the TIA analysis based on the following: (1) Riverside County TIA guidelines that require analysis of intersection locations in which a proposed project is anticipated to contribute 50 or more peak-hour trips and (2) input from the City of Wildomar. Of these 13 intersections, the existing study area circulation network includes the 11 intersection analysis locations shown on **Table 3.3-1**. The other two intersections in the study area are future planned intersections within the project site that do not currently exist. **Figure 3.3-1** illustrates the intersections in the study area.

TABLE 3.3-1
INTERSECTION ANALYSIS LOCATIONS

ID	Intersection Location	Jurisdiction
1	I-15 Southbound Ramps/Bundy Canyon Road	Caltrans
2	I-15 Northbound Ramps/Bundy Canyon Road	Caltrans
3	Sellers Road/Bundy Canyon Road	Wildomar
4	Monte Vista Drive/Bundy Canyon Road	Wildomar
5	The Farm Road/Bundy Canyon Road	Wildomar
6	Harvest Way-West/Bundy Canyon Road	Wildomar
7	*"I" Street/Bundy Canyon Road – Future Intersection*	*Wildomar*
8	Harvest Way East/Bundy Canyon Road	Wildomar
9	*Commercial Access/Bundy Canyon Road – Future Intersection*	*Wildomar*
10	Sunset Avenue/Bundy Canyon Road	Wildomar/Menifee
11	Murrieta Road/Scott Road	Menifee
12	I-215 Southbound Ramps/Scott Road	Caltrans
13	I-215 Northbound Ramps/Scott Road	Caltrans

Source: Urban Crossroads 2012

The 50 peak-hour trip criterion utilized by the City of Wildomar and the County of Riverside is consistent with the methodology employed by other jurisdictions throughout Southern California, and generally represents a threshold of trips at which an intersection would have the potential to be impacted. Although each intersection may have unique operating characteristics, this traffic engineering rule of thumb is a valid and proven way to establish a study area.

TRANSIT SYSTEM

The study area is currently served by the Riverside Transit Authority (RTA), a public transit agency serving the unincorporated Riverside County region near the City of Wildomar, with bus service along Mission Trail immediately west of Interstate 15 (I-15) and along Scott Road immediately east of Interstate 215 (I-215) on various routes (Routes 7, 8, and 61). Transit service is reviewed

and updated by RTA periodically to address ridership, budget, and community demand needs. Changes in land use can affect these periodic adjustments, which may lead to either enhanced or reduced service where appropriate.

EXISTING TRAFFIC COUNTS

Manual AM and PM peak-hour turning movement counts were conducted on Wednesday, December 15, and Thursday, December 16, 2010. Counts are taken during the day to capture the morning (AM) and afternoon (PM) periods that typically represent the heaviest traffic. The December 2010 count data was adjusted with a background growth of 1 percent to represent December 2011 conditions.

Existing (2011) average daily traffic (ADT) volumes on arterial highways throughout the study area are shown on **Figure 3.3-2**. Existing (2011) ADT volumes are based on factored intersection peak-hour counts collected by Urban Crossroads using the following formula for each intersection leg, except for those roadway segments that have 24-hour tube count data available.

PM Peak Hour (Approach Volume + Exit Volume) x 12 = Leg Volume

EXISTING TRAFFIC CONDITIONS

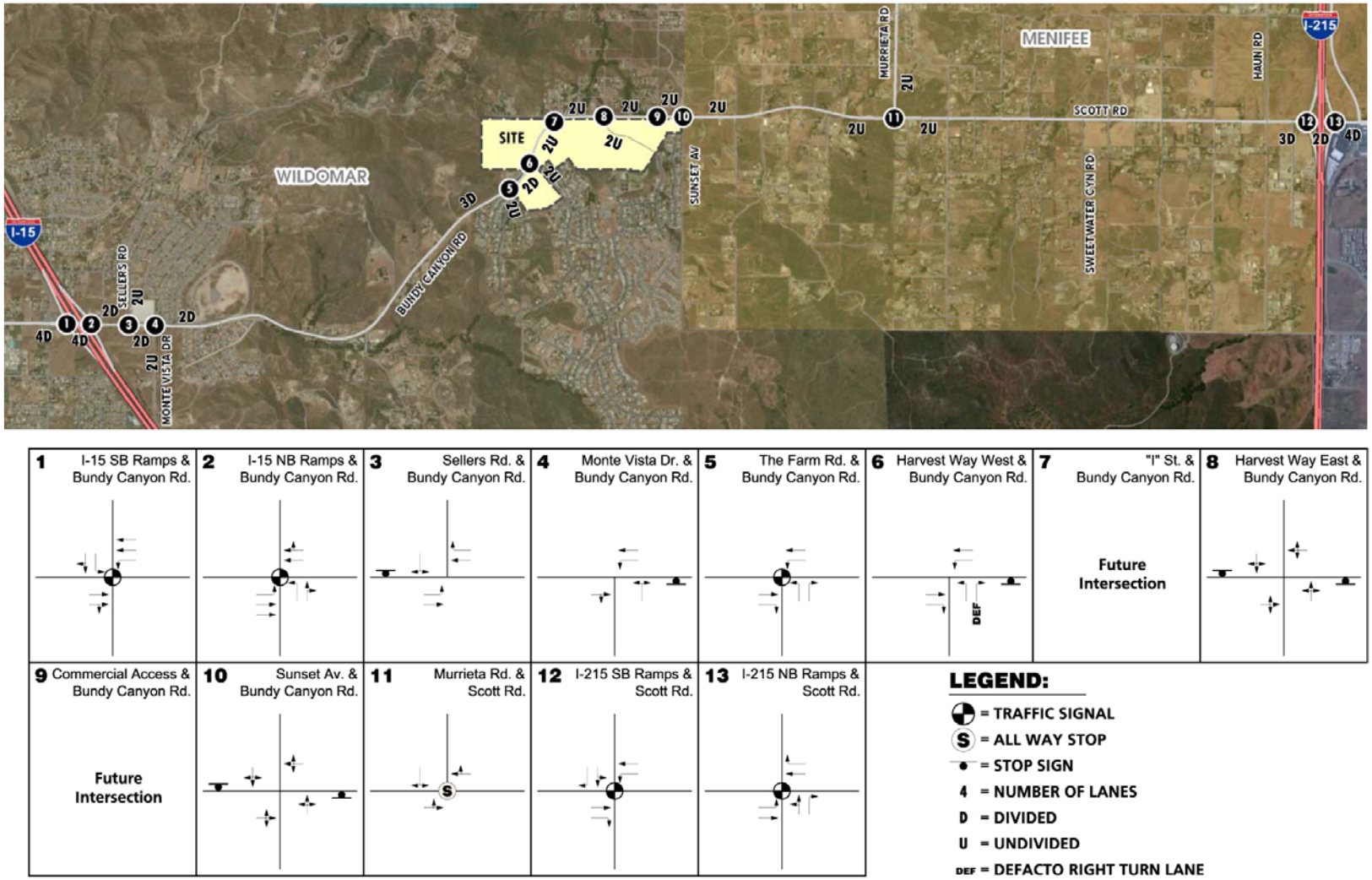
Existing (2011) peak-hour traffic operations were evaluated for the study area intersections based on the analysis methodologies presented in the Methodology subsection below. The intersection operation analysis results are summarized in **Table 3.3-2,** which indicates that the 11 existing study area intersections are currently operating at acceptable level of service (LOS) during the peak hours, with the exception of the intersections of Monte Vista Drive at Bundy Canyon Road and Murrieta Road at Scott Road.

Traffic signal warrants for existing traffic conditions are based on existing peak-hour intersection volumes. For existing conditions, the following study area intersections currently appear to warrant a traffic signal:

- Sellers Road/Bundy Canyon Road
- Monte Vista Drive/Bundy Canyon Road
- Harvest Way West/Bundy Canyon Road
- Murrieta Road/Scott Road

T:_CS\Work\Wildomar, City of\Figures for Oak Creek Canyon EIR 28-0047A-11-0261

EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS



Source: City of Wildomar

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Figure 3.3-1
Study Area Intersections

PMC®

T:_CS\Work\Wildomar, City of\Figures for Oak Creek Canyon EIR 28-0047A-11-0261

EXISTING (2011) AVERAGE DAILY TRAFFIC (ADT)

LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

Source: City of Wildomar

N

Figure 3.3-2

Existing ADT Volumes

PMC®

TABLE 3.3-2
INTERSECTION ANALYSIS FOR EXISTING (2011) CONDITIONS

#	Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
				Northbound			Southbound			Eastbound			Westbound						
				L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	I-15 SB Ramps/Bundy Canyon Rd.	Caltrans	TS	0	0	0	1	1	0	0	2	0	1	2	0	23.0	18.9	C	B
2	I-15 NB Ramps/Bundy Canyon Rd.	Caltrans	TS	1	1	0	0	0	0	1	2	0	0	2	0	18.9	19.3	B	B
3	Sellers Rd./Bundy Canyon Rd.	Wildomar	CSS	0	0	0	0	1	0	1	1	0	0	1	1	24.2	31.1	C	D
4	Monte Vista Dr./Bundy Canyon Rd.	Wildomar	CSS	0	1	0	0	0	0	0	1	0	1	1	0	21.4	***62.2***	C	***F***
5	The Farm Rd./Bundy Canyon Rd.	Wildomar	TS	1	0	1	0	0	0	0	1	1	1	1	0	9.3	11.1	A	B
6	Harvest Way West/Bundy Canyon Rd.	Wildomar	CSS	1	0	d	0	1	0	0	1	1	1	1	0	27.5	30.6	D	D
7	"I" Street/Bundy Canyon Rd.	Wildomar		Future Intersection															
8	Harvest Way East/Bundy Canyon Rd.	Wildomar	CSS	0	1	0	0	1	0	0	1	0	0	1	0	26.6	24.5	D	C
9	Commercial Access/Bundy Canyon Rd.	Wildomar		Future Intersection															
10	Sunset Ave./Bundy Canyon Rd.	Wildomar/Menifee	CSS	0	1	0	0	1	0	0	1	0	0	1	0	21.3	23.3	C	C
11	Murrieta Rd./Scott Rd.	Menifee	AWS	0	0	0	0	1	0	0	1	0	0	1	0	18.7	***39.4***	C	***F***[4]
12	I-215 SB Ramps/Scott Rd.	Caltrans	TS	0	0	0	0	1	1	0	1	1	1	1	0	24.6	30.8	C	C
13	I-215 NB Ramps/Scott Rd.	Caltrans	TS	0	1	1	0	0	0	1	1	0	0	1	1	26.6	32.3	C	C

1. *When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes. (L = Left; T = Through; R = Right; ≥ Right-Turn Overlap Phasing; d= De Facto Right Turn Lane)*
2. *Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.*
3. *CSS = cross-street stop; AWS = all-way stop; TS = traffic signal*
4. *Volume-to-capacity ratio is greater than 1.00; intersection unstable; Level of Service F.*

ROADWAY SEGMENTS AND INTERSECTIONS

Analysis Methodology

Traffic operations of roadway facilities are described using the term "level of service" (LOS). LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined, ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

3.3.2 REGULATORY FRAMEWORK

STATE

Caltrans Traffic Operation Standards

The California Department of Transportation (Caltrans) *Guide for the Preparation of Traffic Impact Studies* (2002) includes criteria for evaluating the effects of land use development and changes to the circulation system on state highways. Caltrans maintains a target level of service at the transition between LOS C and LOS D for freeway facilities.

REGIONAL

Riverside Transit Agency

The Riverside Transit Agency (RTA) was established as a Joint Powers Agency on August 15, 1975, and began operating bus service on March 16, 1977. RTA is the Consolidated Transportation Service Agency for western Riverside County and is responsible for coordinating transit services throughout the approximate 2,500-square-mile service area, providing driver training, assistance with grant applications, and development of Short Range Transit Plans (SRTPs).

RTA provides both local and regional services throughout the region with 36 fixed routes, eight CommuterLink routes, and Dial-A-Ride services using 261 vehicles. The City of Wildomar is served by Route 7, which heads north to the City of Lake Elsinore, Route 8, which heads around Lake Elsinore, and Route 23, which heads toward the City of Murrieta. The routes include connections to other routes into and beyond Riverside County.

Riverside County Congestion Management Program

The passage of Proposition 111 in June 1990 established a process for each metropolitan county in California, including Riverside County, to prepare a Congestion Management Plan (CMP). The CMP, which was prepared by the Riverside County Transportation Commission (RCTC) in consultation with the County and the cities in Riverside County, is an effort to more directly align land use, transportation, and air quality management efforts and to promote reasonable growth management programs that effectively use statewide transportation funds, while ensuring that new development pays its fair share of needed transportation improvements.

The focus of the CMP is the development of an Enhanced Traffic Monitoring System in which real-time traffic count data can be accessed by the RCTC to evaluate the condition of the Congestion Management System (CMS) as well as meet other monitoring requirements at the state and federal levels. Per the adopted level of service standard of E, when a CMS segment

falls to LOS F, a deficiency plan must be required. Preparation of a deficiency plan will be the responsibility of the local agency where the deficiency is located. Other agencies identified as contributors to the deficiency will also be required to coordinate with the development of the plan. The plan must contain mitigation measures, including Transportation Demand Management (TDM) strategies and transit alternatives, and a schedule for mitigating the deficiency. To ensure that the CMS is appropriately monitored to reduce the occurrence of Congestion Management Plan deficiencies, it is the responsibility of local agencies, when reviewing and approving development proposals, to consider the traffic impacts on the CMS.

Non-Motorized Transportation

Bicycling occurs throughout the county but is more concentrated in the cities and urbanized portions of unincorporated areas, and is more recreational than commute-oriented. Although the County's current bicycle plan provides for connections between major urban and recreational facilities within the county, implementation of the plan has occurred only to a limited extent. There is no comprehensive bicycle or trail system that links Wildomar to the rest of Riverside County.

LOCAL

City of Wildomar General Plan

The City's General Plan establishes LOS C as a target for all City-maintained roadways and conventional state highways, except that LOS D could be allowed in urban areas at intersections of any combination of major streets, arterials, expressways, or conventional state highways within 1 mile of a freeway interchange and also at freeway ramp intersections. Current policy requires development projects to mitigate impacts on roadways based on the LOS C standard. Current General Plan policy also permits allowing development projects to mitigate to LOS D, subject to City Council approval, in those instances where mitigation to LOS C is deemed to be impractical.

3.3.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. Transportation impacts are considered significant when the project would:

1) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections).

2) Conflict with an applicable congestion management program, including, but not limited to level of service standard and travel demand measure, or other standards established by the county congestion management agency for designated roads or highways.

3) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

4) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

5) Result in inadequate emergency access.

6) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

Based on Riverside County traffic study guidelines, a significant impact occurs when the addition of project traffic as defined by any "with project" scenario causes an intersection that operates at an acceptable level of service under the "without project" traffic condition (i.e., LOS D or better) to fall to an unacceptable level of service (i.e., LOS E or F). Therefore, the following criteria were utilized to identify significant project-related traffic impacts:

- If an intersection is projected to operate at an acceptable level of service (i.e., LOS D or better) without the project and the addition of project traffic, as measured by 50 or more peak-hour trips, is expected to cause the intersection to operate at an unacceptable level of service (i.e., LOS E or F), the impact is considered significant.

In addition, for intersections within the jurisdictional authority of the City of Wildomar, the City requires that an additional test be performed for intersection locations found to operate at a deficient level of service (i.e., LOS E or F) under pre-project conditions:

- If an intersection is projected to operate at an unacceptable level of service (i.e., LOS E or F) without the project, and the addition of project traffic (as measured by 50 peak-hour trips or more) results in an increase of more than 5.0 seconds to the peak-hour delay, the impact is considered significant. Mitigation is then required to bring the "with project" scenario delay to within 5.0 seconds of the pre-project condition. It should be noted that this criteria applies only to those intersections within Wildomar.

A significant cumulative impact has been identified when an intersection is projected to operate below the requisite level of service standard under pre-project conditions AND the project's measurable increase in traffic, as defined by 50 or more peak-hour trips, contributes to the deficiency. Cumulative traffic impacts are created as a result of a combination of the proposed project together with other future developments contributing to the overall traffic impacts and requiring additional improvements to maintain acceptable level of service operations with or without the project. For the purposes of the TIA, mitigation measures have been recommended for cumulatively impacted intersections to bring the "with project" delay and associated level of service back to acceptable peak-hour operations at intersections located within the City of Menifee.

A project's contribution to a cumulatively significant impact can be reduced to less than significant if the project is required to implement or fund its fair share of improvements designed to alleviate the potential cumulative impact. If full funding of future cumulative improvements is not reasonably assured, a temporary unmitigated cumulative impact would be identified and would exist until the needed improvement is fully funded and constructed.

ASSUMPTIONS

All project access points along Bundy Canyon Road were assumed to allow full access, with the exception of the following:

- "I" Street on Bundy Canyon Road – right-in/right-out/left-in access only (no left turns out)

- Commercial Access on Bundy Canyon Road – right-in/right-out access only (no left turns in/out)

Because of the proposed intersection spacing between The Farm Road and Harvest Way West on Bundy Canyon Road, an alternative analysis was conducted that assumed access restrictions on the intersection of Harvest Way West at Bundy Canyon Road. In the event that a traffic signal is not installed at the intersection of Harvest Way West at Bundy Canyon Road and full access could not be accommodated, the intersection of Harvest Way West at Bundy Canyon Road was analyzed assuming access would be restricted to right-in/right-out/left-in access only (no left turns out). This access alternative would affect project travel patterns at The Farm Road and at Harvest Way West on Bundy Canyon Road.

A specific development proposal for the retail component is not proposed as part of this project. The traffic analysis assumes a 14,469-square-foot pharmacy with drive-through window, 2,550 square feet of specialty retail uses, and an eight-vehicle fueling position gas station with convenience market and car wash, as these uses represent a likely scenario that could be developed in light of the site's location and physical constraints. The trip generation associated with a specific commercial design, as detailed above, is seen as more realistic than a simple application of the Institute of Transportation of Engineers (ITE) general commercial (ITE 820) land use category. Because it is unlikely that all of the assumed uses would occur on the commercial site, the assumptions used in the TIA would overstate as opposed to understate the traffic generated by any future development that could potentially occur.

For the purposes of the traffic impact analysis, it was assumed that the project will be constructed and at full occupancy by 2015.

METHODOLOGY

Trips generated by the project's proposed land uses were estimated using traffic counts taken of existing traffic and based on trip generation rates collected by the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 8th Edition (2008). The proposed project is estimated to generate a net total of approximately 3,933 net trip-ends per day on a typical weekday with approximately 284 net AM peak-hour trips and 410 net PM peak-hour trips.

Intersection Capacity Analysis

The intersection LOS analysis is based on the traffic volumes observed during the peak-hour conditions using traffic count data collected in December 2010. The following peak hours were selected for analysis:

- Weekday AM peak hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM peak hour (peak hour between 4:00 PM and 6:00 PM)

Traffic counts were originally conducted in December 2010. In an effort to more accurately reflect December 2011 conditions, the count data was adjusted with a background growth of 1 percent. The volume development worksheets are provided in **Appendix 3.3-2**.

Signalized Intersections

Consistent with Section 5.0, Required Methodology, of the Riverside County traffic analysis guidelines, signalized intersection operations analysis was based on the methodology described

in Chapter 16 of the *Highway Capacity Manual* (HCM). Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections, level of service is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in **Table 3.3-3**. All signalized study area intersections were analyzed using the software package Traffix (Version 8.0 R1, 2008).

TABLE 3.3-3
SIGNALIZED INTERSECTION LOS THRESHOLDS

Level of Service	Description	Average Control Delay (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths	80.01 and up

Source: TRB 2000

As recommended in the Riverside County Transportation Department *Traffic Impact Analysis Preparation Guide* (2008), the peak-hour traffic volumes were adjusted using a peak-hour factor (PHF) to reflect peak 15-minute volumes. Common practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g., PHF = [Hourly Volume]/[4 x Peak 15-minute Flow Rate]). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs were used for existing (2011) and Existing plus Project traffic conditions. A PHF of 0.95 (or higher depending on the existing PHF) was utilized for Opening Year (2015) without and with project traffic conditions. Lastly, a PHF of 1.00 was used for all intersections for Horizon Year (2035) without and with project traffic conditions.

Unsignalized Intersections

The operations of unsignalized intersections were evaluated using the methodology described in Chapter 17 of the HCM (also consistent with Riverside County traffic study guidelines). The level of service rating is based on the weighted average control delay expressed in seconds per vehicle (see **Table 3.3-4**).

TABLE 3.3-4
UNSIGNALIZED INTERSECTION LOS THRESHOLDS

Level of Service	Description	Average Control per Vehicle (Seconds)
A	Little or no delays	0 to 10.00
B	Short traffic delays	10.01 to 15.00
C	Average traffic delays	15.01 to 25.00
D	Long traffic delays	25.01 to 35.00
E	Very long traffic delays	35.01 to 50.00
F	Extreme traffic delays with intersection capacity exceeded	> 50.00

Source: TRB 2000

At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. For all-way stop-controlled intersections, LOS is computed for the intersection as a whole. All unsignalized study area intersections were analyzed using the software package Traffix (Version 8.0 R1, 2008).

Traffic Signal Warrant Analysis Methodology

The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an otherwise unsignalized intersection. The TIA used the signal warrant criteria presented in the latest edition of the Federal Highway Administration's (FHWA) *Manual on Uniform Traffic Control Devices (MUTCD)* (2009), as amended by *the MUTCD 2010 California Supplement*, for all study area intersections.

The signal warrant criteria for existing (2011) conditions are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. Both the FHWA's *MUTCD* and the *MUTCD 2010 California Supplement* indicate that the installation of a traffic signal should be considered if one or more of the signal warrants are met. Specifically, the TIA utilized Peak Hour Volume-Based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing traffic conditions. Warrant 3 criteria are basically identical for both the FHWA's *MUTCD* and the *MUTCD 2010 California Supplement*. Warrant 3 was deemed appropriate to use for the TIA because it provides specialized warrant criteria for intersections with rural characteristics (e.g., located in communities with populations of less than 10,000 or with adjacent major streets operating at or above 40 miles per hour). For the purposes of the TIA, the 45 mile per hour (mph) speed limit on Bundy Canyon Road was the basis for determining whether urban or rural warrants were used for a given intersection.

Future unsignalized intersections were assessed regarding the potential need for new traffic signals based on future average daily traffic (ADT) volumes, using the Caltrans planning-level ADT-based signal warrant analysis worksheets.

Traffic signal warrant analyses were performed for all of the study area intersections with the exception of the following locations, which are either currently signalized or are proposed to have restricted access:

- I-15 Southbound Ramps/Bundy Canyon Road (currently signalized)
- I-15 Northbound Ramps/Bundy Canyon Road (currently signalized)
- The Farm Road/Bundy Canyon Road (currently signalized)
- "I" Street/Bundy Canyon Road – proposed right-in/right-out/left-in access only (no left turns out)
- Commercial Access/Bundy Canyon Road – proposed right-in/right-out access only (no left turns in/out)
- I-215 Southbound Ramps/Scott Road (currently signalized)
- I-215 Northbound Ramps/Scott Road (currently signalized)

It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with level of service. An intersection may satisfy a signal warrant condition and operate at or above LOS C or operate below LOS C and not meet a signal warrant.

LOS Criteria/Threshold of Significance

The definition of an intersection deficiency in Wildomar is based on General Plan Circulation Element Policy C 2.1, which establishes a target level of service of LOS C on all City-maintained roads and conventional state highways. As an exception, LOS D may be allowed in community development areas at intersections of any combination of secondary highways, major highways, arterial highways, urban arterial highways, expressways, or conventional state highways. LOS E may be allowed in designated community centers to the extent that it would support transit-oriented development and pedestrian communities. Because Bundy Canyon Road is a designated urban arterial in the Circulation Element of the General Plan, LOS D is considered acceptable at any intersection along Bundy Canyon Road in the City of Wildomar.

The City of Menifee has established a level of service standard of D. Therefore, LOS D is acceptable at any intersection included in the analysis that is wholly or partially within the City of Menifee.

Regarding Caltrans' ramps to arterial intersections and other Caltrans-maintained facilities, the published Caltrans traffic study guidelines (December 2002) state, "Caltrans endeavors to maintain a target LOS at the transition between LOS 'C' and LOS 'D' on state highway facilities; however, Caltrans acknowledges that this may not be always feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS."

As such, LOS D is considered to be the limit of acceptable traffic operations during the peak hour at intersections maintained by Caltrans.

If an intersection is already operating at an unacceptable level of service, the City determines that there is significant impact if the project will increase delay by 5.0 seconds or more. If project delay is increased by 5.0 seconds or more, the project must mitigate for its impact at that intersection.

Traffic Operations Analysis Methodology

For the purpose of the TIA, potential impacts to traffic and circulation were assessed for each of the following conditions:

Existing (2011) Conditions (1 scenario)

Information for existing year (2011) is disclosed to represent the baseline traffic conditions as they existed at the time the Notice of Preparation was released.

Existing plus Project Conditions (1 scenario)

The existing year (2011) plus project analysis determined direct project-related traffic impacts that would occur on the existing roadway system in the theoretical scenario of the project being placed on existing conditions. Based on discussions with City staff, project impacts were determined through a comparison of the existing (2011) versus Existing plus Project traffic conditions, Opening Year (2015) without versus with Project conditions, and Horizon Year (2035) without versus with Project conditions. As such, the Existing plus Project scenario is provided to assess direct project impacts and to identify the associated mitigation measures.

Opening Year (2015) without and with Project (2 scenarios) – ambient growth and cumulative development projects

The anticipated Opening Year is 2015, and both without and with project conditions analyses were utilized to determine both direct project-related and cumulative traffic impacts. To account for background traffic, 43 other known cumulative development projects in the study area were included in addition to 8.24 percent ambient growth. This comprehensive list was compiled from information provided by the City of Wildomar and the City of Menifee in December 2011 in an effort to identify pending development projects and development applications on file with adjacent jurisdictions (see **Table 3.3-8**).

Horizon Year (2035) without and with Project (2 scenarios)

Traffic projections for Horizon Year (2035) with Project conditions were derived from the Riverside County Transportation Analysis Model (RivTAM) using accepted procedures for model forecast refinement and smoothing. The traffic forecasts reflect the area-wide growth anticipated between existing conditions and Horizon Year (2035) conditions. In most instances the traffic model zone structure is not designed to provide accurate turning movements along arterial roadways unless refinement and reasonableness checking is performed. Therefore, the Horizon Year (2035) peak-hour forecasts were refined using the model-derived long-range forecasts, along with Opening Year (2015) with Project peak-hour turning movement volumes. Future estimated peak-hour traffic data was used for new intersections and intersections with an anticipated change in travel patterns to further refine the Horizon Year (2035) peak-hour forecasts. Lastly, Horizon Year (2035) turning volumes were compared to Opening Year (2015) with Project volumes in order to ensure a minimum growth of 10 percent as a part of the refinement process. The minimum 10 percent growth includes any additional growth between Opening Year (2015) with Project and Horizon Year (2035) traffic conditions that is not accounted for by the traffic generated by cumulative development projects and the ambient growth between existing and Opening Year (2015) with Project traffic conditions.

Projected Future Traffic

Project Trip Generation

Trip generation represents the amount of traffic that is both attracted to and produced by a development. Determining traffic generation for a specific project is therefore based on forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development.

Trip generation rates used to estimate project traffic are shown in **Table 3.3-5,** and a summary of the project's trip generation is shown in **Table 3.3-6**. The trip generation rates are based on data collected in the ITE *Trip Generation Manual*, 8th Edition (2008).

Pass-by trips are defined as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the generator. These types of trips are many times associated with retail uses such as gas stations, convenience stores, and pharmacies, to name a few. As the project is proposed to include some of these specific uses, pass-by reductions were taken for the estimated commercial project uses. The ITE *Trip Generation Handbook,* 2nd Edition (2004) indicates that pass-by trip reductions can vary between 49 percent and 62 percent for these uses. Specifically, the *Trip Generation Handbook* includes multiple sources for each land use, with the following average pass-by trip percentages:

- 49 percent for the pharmacy with drive-through window land use (ITE LU 881) during the weekday PM peak period
- 62 percent for the gas station with convenience market and car wash land use (ITE LU 946) during the weekday AM peak period
- 56 percent for the gas station with convenience market and car wash land use (ITE LU 946) during the PM peak period

The PM peak period pass-by trip reductions were applied to the daily trip generation. The use of the pass-by trip reductions as shown in **Table 3.3-6** was reviewed and approved by City staff.

The proposed development is projected to generate a total of approximately 3,933 net trip-ends per day on a typical weekday. The project is anticipated to generate a total of approximately 284 net weekday AM peak-hour trips and 410 net weekday PM peak-hour trips.

TABLE 3.3-5
PROJECT TRIP GENERATION RATES

Land Use[1]	Units[2]	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Single-Family Detached	DU	210	0.19	0.56	0.75	0.64	0.37	1.01	9.57
Pharmacy with Drive-Through	TSF	881	1.52	1.14	2.66	5.18	5.18	10.36	88.16
Gas Station w/Market & Car Wash	VFP	946	6.08	5.85	11.93	7.11	6.83	13.94	152.84
Specialty Retail[3]	TSF	820/814	0.61	0.39	1.00	1.19	1.52	2.71	44.32

[1] Trip Generation Source: ITE 2008

[2] DU = dwelling units; TSF = thousand square feet; VFP = vehicle fueling position

[3] AM peak-hour rates are unavailable for ITE Land Use 814. As such, the weekday AM peak-hour rates for ITE Land Use 820 were utilized.

TABLE 3.3-6
PROJECT TRIP GENERATION SUMMARY

Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Single-Family Detached Residential	275	DU	52	154	206	176	102	278	2,632
Pharmacy with Drive-Through	14.469	TSF	22	16	38	75	75	150	1,276
Pass-by Reduction (49% PM & Daily)[2]			*0*	*0*	*0*	*-37*	*-37*	*-73*	*-625*
Gas Station with Market and Car Wash	8	VFP	49	47	95	57	55	112	1,223
Pass-by Reduction (62% AM; 56% PM & Daily)[3]			*-30*	*-29*	*-59*	*-32*	*-31*	*-62*	*-685*
Specialty Retail	2.550	TSF	2	1	3	3	4	7	113
TOTAL			**94**	**189**	**284**	**242**	**168**	**410**	**3,933**

[1] DU = dwelling units; TSF = thousand square feet; VFP = vehicle fueling position

[2] Pass-by reduction percentages are from the ITE Trip Generation Handbook, 2nd Edition (2004), Table 5.18.

[3] Pass-by reduction percentages are from the ITE Trip Generation Handbook, 2nd Edition (2004), Tables 5.29 and 5.30.

Project Trip Distribution

Trip distribution is the process of identifying the probable destinations, directions, or traffic routes that will be utilized by project traffic. The potential interaction between the planned land uses and surrounding regional access routes were considered to identify the route where the project traffic would distribute. The project trip distributions were developed based on anticipated travel patterns to and from the project site for the traffic associated with both the residential and commercial uses.

The total volume on each roadway was divided by the total site traffic generation to indicate the percentage of project traffic that would use each component of the regional roadway system in each relevant direction.

It should be noted that the trip distribution patterns for both the proposed residential and commercial uses reflect full access at all project access points along Bundy Canyon Road, with the exception of the following:

- "I" Street on Bundy Canyon Road – right-in/right-out/left-in access only (no left turns out)
- Commercial Access on Bundy Canyon Road – right-in/right-out access only (no left turns in/out)

Modal Split

The traffic-reducing potential of public transit, walking, or bicycling was not considered in the TIA. Essentially, the traffic projections are conservative in that these alternative travel modes might be able to reduce the forecast traffic volumes.

Project Trip Assignment

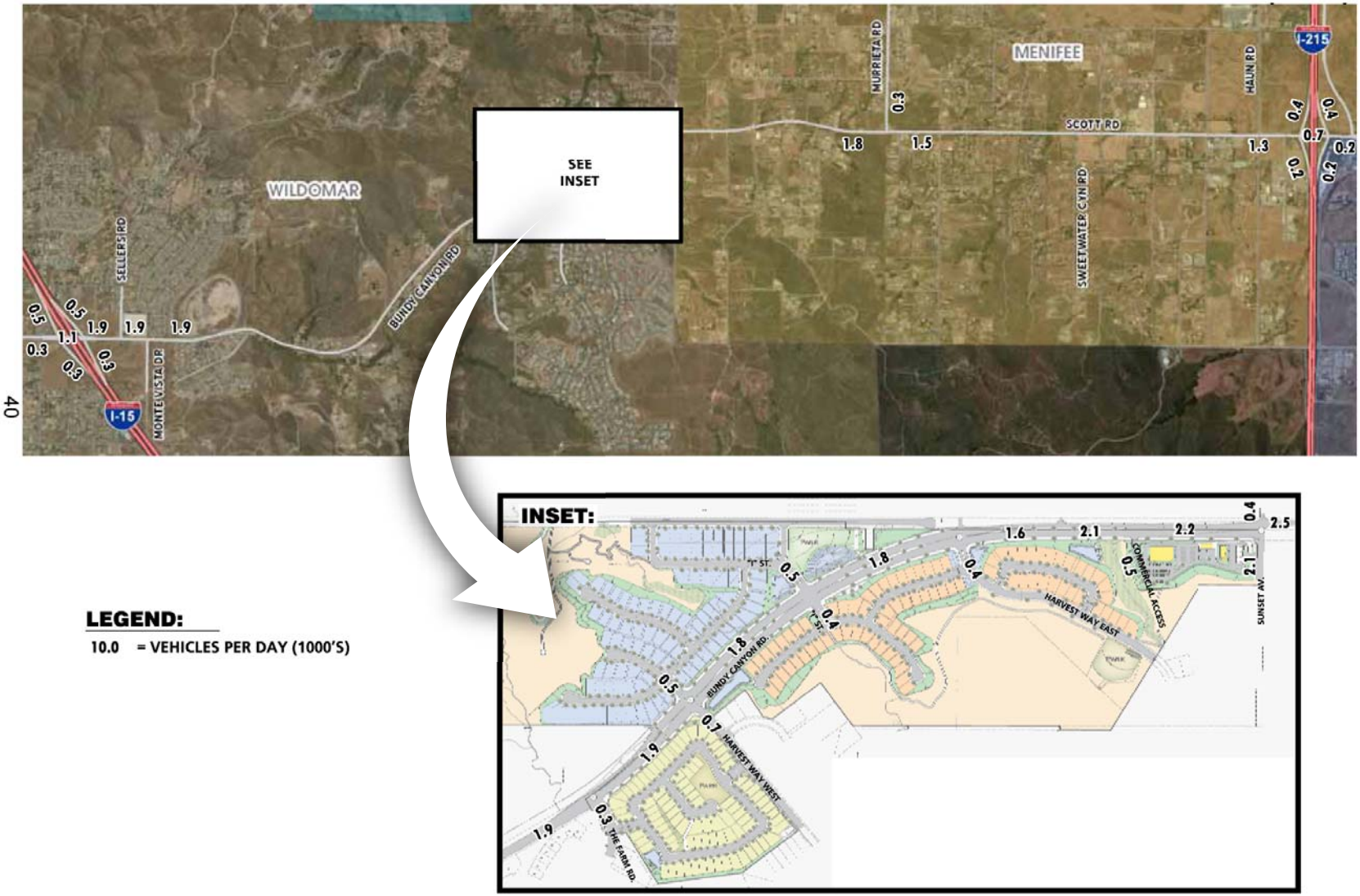
The assignment of traffic from the project area to the adjoining roadway system is based on the project trip generation, the trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the project. Based on the identified project traffic generation and trip distribution patterns, project average daily traffic (ADT) volumes for the weekday are shown on **Figure 3.3-3**.

Background Traffic

Future year traffic forecasts were based on four years of background (ambient) growth at 2 percent per year for 2015 traffic conditions. This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth was added to daily and peak-hour traffic volumes on surrounding roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies.

T:_CS\Work\Wildomar, City of\Figures for Oak Creek Canyon EIR 28-0047A-11-0261

PROJECT ONLY AVERAGE DAILY TRAFFIC (ADT)



Source: City of Wildomar

N

Figure 3.3-3
Project ADT

PMC®

Cumulative Development Traffic

The CEQA Guidelines require that other reasonably foreseeable development projects that are either approved or being processed concurrently in the study area also be included as part of a cumulative analysis scenario. A cumulative project list was developed for the purposes of the TIA through consultation with the City of Wildomar and the City of Menifee. **Figure 3.3-4** illustrates the cumulative development location map.

Cumulative Development Trip Generation

Cumulative development trip generation rates and associated trip generation are shown on **Tables 3.3-7** and **3.3-8**. The cumulative development projects assumed in the traffic impact analysis were estimated to generate 168,987 net trip-ends per day during a typical weekday, with approximately 10,911 net vehicle trips during the AM peak hour and 16,113 net vehicle trips during the PM peak hour.

TABLE 3.3-7
CUMULATIVE DEVELOPMENT TRIP GENERATION RATES[1]

Land Use	ITE Code	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
General Light Industrial	110	TSF	0.81	0.11	0.92	0.12	0.85	0.97	6.97
Warehousing	150	TSF	0.24	0.06	0.30	0.08	0.24	0.32	3.56
Mini-Warehouse (Storage)	151	Units	0.01	0.01	0.02	0.01	0.01	0.02	0.25
Mini-Warehouse	151	TSF	0.09	0.06	0.15	0.13	0.13	0.26	2.50
Single Family Dwelling	210	DU	0.19	0.56	0.75	0.64	0.37	1.01	9.57
Apartments	220	DU	0.10	0.41	0.51	0.40	0.22	0.62	6.65
Condo/Townhomes	230	DU	0.07	0.37	0.44	0.35	0.17	0.52	5.81
Senior Adult Housing – Detached	221	DU	0.08	0.14	0.22	0.16	0.11	0.27	3.71
Hotel	310	Room	0.34	0.22	0.56	0.31	0.28	0.59	8.17
Private School (K–12)	536	STU	0.49	0.32	0.81	0.07	0.10	0.17	2.48
Office	710	TSF	1.36	0.19	1.55	0.25	1.24	1.49	11.01
Free-Standing Discount Superstore	813	TSF	0.94	0.73	1.67	2.26	2.35	4.61	53.13
Specialty Retail[3]	814	TSF	0.61	0.39	1.00	1.19	1.52	2.71	44.32
Wholesale Nursery	818	TSF	1.20	1.20	2.40	2.59	2.58	5.17	39.00
Commercial Retail	820	TSF	0.61	0.39	1.00	1.83	1.90	3.73	42.94
Discount Club	857	TSF	0.40	0.16	0.56	2.12	2.12	4.24	41.80
Home Improvement Store	862	TSF	0.72	0.54	1.26	1.14	1.23	2.37	29.80
Pharmacy w/Drive-Through	881	TSF	1.52	1.14	2.66	5.18	5.18	10.36	88.16
Sit-Down Restaurant	932	TSF	5.99	5.53	11.52	6.58	4.57	11.15	127.15
Fast Food w/Drive-Through	934	TSF	25.17	24.18	49.35	17.60	16.24	33.84	496.12
Auto Care Center[4]	942	TSF	1.91	1.03	2.94	1.69	1.69	3.38	20.00
Gas Station w/Market	945	VFP	5.08	5.08	10.16	6.69	6.69	13.38	162.78
Gas Station w/Market & Car Wash	946	VFP	6.08	5.85	11.93	7.11	6.83	13.94	152.84

[1] *Source: ITE 2008*

[2] *DU = Dwelling Units; TSF = Thousand Square Feet; VFP = Vehicle Fueling Positions; STU = Students*

[3] *AM peak-hour rates are not available in the ITE Trip Generation Manual. As such, the AM peak-hour average rates for ITE LU 820 were utilized.*

[4] *Daily Trip Generation Rate Source: SANDAG Land Development Code Trip Generation Manual, May 2003. ITE does not provide a weekday rate for Land Use 942.*

TABLE 3.3-8
CUMULATIVE DEVELOPMENT TRIP GENERATION SUMMARY

Traffic Allocation Zone (TAZ)	Project Name	Land Use[1]	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
					In	Out	Total	In	Out	Total	
City of Wildomar											
1	Tulip Lane (08-0147)	SFDR	60	DU	**11**	**34**	**45**	**38**	**22**	**61**	**574**
2	Canyon Plaza/JR Oil (08-179)	Retail	33.800	TSF	51	33	84	147	160	307	3,394
		Pass-by Reduction (40%)			-20	-13	-34	-59	-64	-123	-1,358
		Fast Food w/Drive-Thro	6.200	TSF	173	167	340	149	138	287	3,076
		Pass-by Reduction (45%)			-78	-75	-153	-67	-62	-129	-1,384
		Gas Station w/Market	12	VFP	63	64	127	82	81	163	1,953
		Pass-by Reduction (60%)			-38	-38	-76	-49	-49	-98	-1,172
	Subtotal TAZ 2[3]				**151**	**137**	**288**	**203**	**204**	**407**	**4,509**
3	DL Almond (09-0265)	Wholesale Nursery	5.040	TSF	**6**	**6**	**12**	**13**	**13**	**26**	**197**
4	Baxter Crossing (10-0064)	Condo/Townhomes	265	DU	19	98	117	93	45	138	1,540
		Apartments	110	DU	11	45	56	44	24	68	732
		Retail	130.600	TSF	110	71	181	372	388	760	8,078
		Internal Trips (10% Residential)			-3	-14	-17	-14	-7	-21	-227
		Internal Trips (Retail)			-14	-3	-17	-7	-14	-21	-227
		Pass-by Reduction (25% Retail Only)			0	0	0	-91	-94	-185	-1,963
	Subtotal TAZ 4[4]				**123**	**197**	**320**	**397**	**342**	**739**	**7,932**
5	Subway (10-0222)	Specialty Retail	10.500	TSF	**6**	**4**	**11**	**12**	**16**	**28**	**465**

Traffic Allocation Zone (TAZ)	Project Name	Land Use[1]	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
					In	Out	Total	In	Out	Total	
6	Tentative Map No. 30522 (10/0301)	Retail	79.497	TSF	48	31	79	145	151	297	3,414
		Fast Food w/Drive-Thru	1.500	TSF	38	36	74	26	24	51	744
		Pass-by Reduction (25% Retail Only)									
		Gas Station w/Market	6	VFP	30	30	61	40	40	80	977
		Pass-by Reduction (62% AM; 56% PM & Daily)			-19	-19	-38	-22	-22	-45	-547
	Subtotal TAZ 6				**98**	**79**	**177**	**190**	**193**	**383**	**4,588**
7	Richland Planned Community (11-0137)	SFDR	105	DU	**20**	**59**	**79**	**67**	**39**	**106**	**1,005**
City of Wildomar Total					**415**	**516**	**931**	**920**	**830**	**1,750**	**19,270**
City of Menifee											
8	Menifee Town Center Specific Plan	Retail[5]	150.000	TSF	92	59	150	275	285	560	6,441
		Retail	359.370	TSF	219	140	359	658	683	1,340	15,431
		Hotel	200	Room	68	44	112	62	56	118	1,634
		Office	65.340	TSF	89	12	101	16	81	97	719
		SFDR	577	DU	110	323	433	369	213	583	5,522
		Condo/Townhomes	475	DU	33	176	209	166	81	247	2,760
		Internal Capture			-8	-8	-16	-28	-28	-56	-524
		Pass-by Reduction (25% Retail Only)			0	0	0	-230	-238	-468	-5,403
	Subtotal TAZ 8				**602**	**746**	**1,348**	**1,288**	**1,133**	**2,421**	**26,581**

Traffic Allocation Zone (TAZ)	Project Name	Land Use[1]	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
					In	Out	Total	In	Out	Total	
9	Santa Rosa Charter School[6]	Elementary School	363	STU	178	116	294	25	36	62	900
		Middle School	338	STU	166	108	274	24	34	57	166
		High School	400	STU	196	128	324	28	40	68	196
		Internal Capture			0	0	0	0	0	0	0
	Subtotal TAZ 9				**539**	**352**	**892**	**77**	**110**	**187**	**1,262**
10	PP 2010-123	Retail	263.160	TSF	161	103	263	482	500	982	11,300
		Pass-by Reduction (25% Retail Only)			0	0	0	-120	-125	-245	-2,825
	Subtotal TAZ 10				**161**	**103**	**263**	**361**	**375**	**736**	**8,475**
11	The Lakes TR 30422 (SP 247 Amendment 1)	SFDR	992	DU	**188**	**556**	**744**	**635**	**367**	**1,002**	**9,493**
12	TR 29636	SFDR	75	DU	**14**	**42**	**56**	**48**	**28**	**76**	**718**
13	TR 30142	SFDR	537	DU	**102**	**301**	**403**	**344**	**199**	**542**	**5,139**
14	Antelope Square	Retail	93.250	TSF	57	36	93	171	177	348	4,004
		Fast Food w/Drive-Thru	2.000	TSF	50	48	99	35	32	68	992
		Pharmacy w/Drive-Thru	14.000	TSF	21	16	37	73	73	145	1,234
		Gas Station w/ Market	16	VFP	81	81	163	107	107	214	2,604
		Self Storage	250	Units	3	3	5	3	3	5	63
		Pass-by Reduction (25% Retail Only)			0	0	0	-97	-98	-195	-2,224
	Subtotal TAZ 14				**212**	**184**	**397**	**291**	**294**	**585**	**6,673**
15	TR 31217	SFDR	1,200	DU	**228**	**672**	**900**	**768**	**444**	**1,212**	**11,484**
16	TR 30465	SFDR	8	DU	**2**	**4**	**6**	**5**	**3**	**8**	**77**

Traffic Allocation Zone (TAZ)	Project Name	Land Use[1]	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
					In	Out	Total	In	Out	Total	
17	TR 31724	SFDR	15	DU	3	8	11	10	6	15	144
	TR 33883	SFDR	51	DU	10	29	38	33	19	52	488
	TR 31831	SFDR	110	DU	21	62	83	70	41	111	1,053
	Subtotal TAZ 17				**33**	**99**	**132**	**113**	**65**	**178**	**1,684**
18	PP 18014	Mini-Warehouse	191.263	TSF	**17**	**11**	**29**	**25**	**25**	**50**	**478**
19	TR 31194	SFDR	483	DU	92	270	362	309	179	488	4,622
	TR 33511	SFDR	71	DU	13	40	53	45	26	72	679
	Subtotal TAZ 19				**105**	**310**	**416**	**355**	**205**	**560**	**5,302**
20	TR 33371	Condo/Townhomes	229	DU	**16**	**85**	**101**	**80**	**39**	**119**	**1,330**
21	PP 22279	Discount Club	148.663	TSF	59	24	83	315	315	630	6,214
		Home Improvement	140.760	TSF	101	76	177	160	173	334	4,195
		Retail	237.377	TSF	145	93	237	434	451	885	10,193
		Pass-by Reduction (25%)			0	0	0	-228	-235	-462	-5,150
	Subtotal TAZ 21				**306**	**192**	**498**	**683**	**704**	**1,387**	**15,451**
22	Shops at Scott	Retail	82.000	TSF	50	32	82	150	156	306	3,521
		Fast Food w/Drive-Thru	9.000	TSF	227	218	444	158	146	305	4,465
		Pass-by Reduction (25%)			0	0	0	-77	-75	-153	-1,997
	Subtotal TAZ 22				**227**	**218**	**444**	**81**	**71**	**152**	**2,469**
23	PP 21452 & PP 22280	General Light Industrial	872.347	TSF	707	96	803	105	741	846	6,080
	PP 18570	Warehousing	109.935	TSF	26	7	33	9	26	35	391
	PP 20021	Warehousing	4.500	TSF	1	0	1	0	1	1	16
	Subtotal TAZ 23				**734**	**103**	**837**	**114**	**769**	**883**	**6,488**

Traffic Allocation Zone (TAZ)	Project Name	Land Use[1]	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
					In	Out	Total	In	Out	Total	
24	Cantalena	SFDR	353	DU	67	198	265	226	131	357	3,378
		Apartments	851	DU	85	349	434	340	187	528	5,659
	Subtotal TAZ 24				**152**	**547**	**699**	**566**	**318**	**884**	**9,037**
25	TR 31229	SFDR	242	DU	46	136	182	155	90	244	2,316
	TR 32277	SFDR	411	DU	78	230	308	263	152	415	3,933
	Subtotal TAZ 25				**124**	**366**	**490**	**418**	**242**	**660**	**6,249**
26	TR 30433	SFDR	498	DU	**95**	**279**	**374**	**319**	**184**	**503**	**4,766**
27	TR 32628	SFDR	364	DU	69	204	273	233	135	368	3,483
	TR 28206	SFDR	148	DU	28	83	111	95	55	149	1,416
	Subtotal TAZ 27				**97**	**287**	**384**	**328**	**189**	**517**	**4,900**
28	Murrieta Fields II	SFDR	10	DU	2	6	8	6	4	10	96
	Sepulveda Bldg.	General Light Industrial	2.500	TSF	2	0	2	0	2	2	17
	Golden City SP	SFDR	502	DU	95	281	377	321	186	507	4,804
		Retail	23.340	TSF	14	9	23	43	44	87	1,002
		Pass-by Reduction (25%)			0	0	0	-11	-11	-22	-251
	Keller Commercial	Retail	5.875	TSF	4	2	6	11	11	22	252
		Pass-by Reduction (25%)			0	0	0	-3	-3	-5	-63
	Subtotal TAZ 28				**117**	**298**	**416**	**368**	**233**	**601**	**5,858**
29	Murrieta Hills	Senior Adult Housing	1,012	DU	**81**	**142**	**223**	**162**	**111**	**273**	**3,755**
30	TR 28788	SFDR	119	DU	23	67	89	76	44	120	1,139
	TR 28790	SFDR	110	DU	21	62	83	70	41	111	1,053
	Subtotal TAZ 30				**44**	**128**	**172**	**147**	**85**	**231**	**2,192**

Traffic Allocation Zone (TAZ)	Project Name	Land Use[1]	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
					In	Out	Total	In	Out	Total	
31	Menifee Walmart Shopping Center (PP 22674)[7]	Discount Superstore	205.000	TSF	193	150	342	463	482	945	10,892
		Auto Care Center	6.680	TSF	13	7	20	11	11	23	134
		Specialty Retail	13.800	TSF	8	5	14	16	21	37	612
		Sit-Down Restaurant	6.500	TSF	39	36	75	43	30	72	826
		Fast Food w/Drive-Thru	6.200	TSF	156	150	306	109	101	210	3,076
		Gas Station w/ Market & Car Wash	16	VFP	97	94	191	114	109	223	2,445
		Internal Capture (10%)			-45	-45	-90	-78	-78	-156	-1,883
		Pass-by Reduction (25%)			0	0	0	-51	-48	-99	-1,242
	Subtotal TAZ 31				**461**	**396**	**858**	**628**	**628**	**1,255**	**14,860**
City of Menifee Total					**4,658**	**6,420**	**11,079**	**8,202**	**6,821**	**15,022**	**154,720**
GRAND TOTAL					**5,073**	**6,936**	**12,009**	**9,122**	**7,650**	**16,772**	**173,990**

[1] *SFDR = Single Family Detached Residential*
[2] *DU = Dwelling Units; TSF = Thousand Square Feet; VFP = Vehicle Fueling Positions*
[3] *Project trip generation is consistent with the Canyon Plaza Traffic Study (Darnell & Associates, Inc., November 10, 2003).*
[4] *Project trip generation is consistent with the Baxter Crossing Traffic Impact Analysis (Urban Crossroads, Inc., June 17, 2010).*
[5] *Menifee Village Shopping Center (2011-130).*
[6] *School site located within Menifee Town Center Specific Plan. Internal interaction with proposed residential within SP.*
[7] *Project trip generation is consistent with the Menifee Shopping Center Traffic Impact Analysis (Urban Crossroads, Inc., May 10, 2010).*

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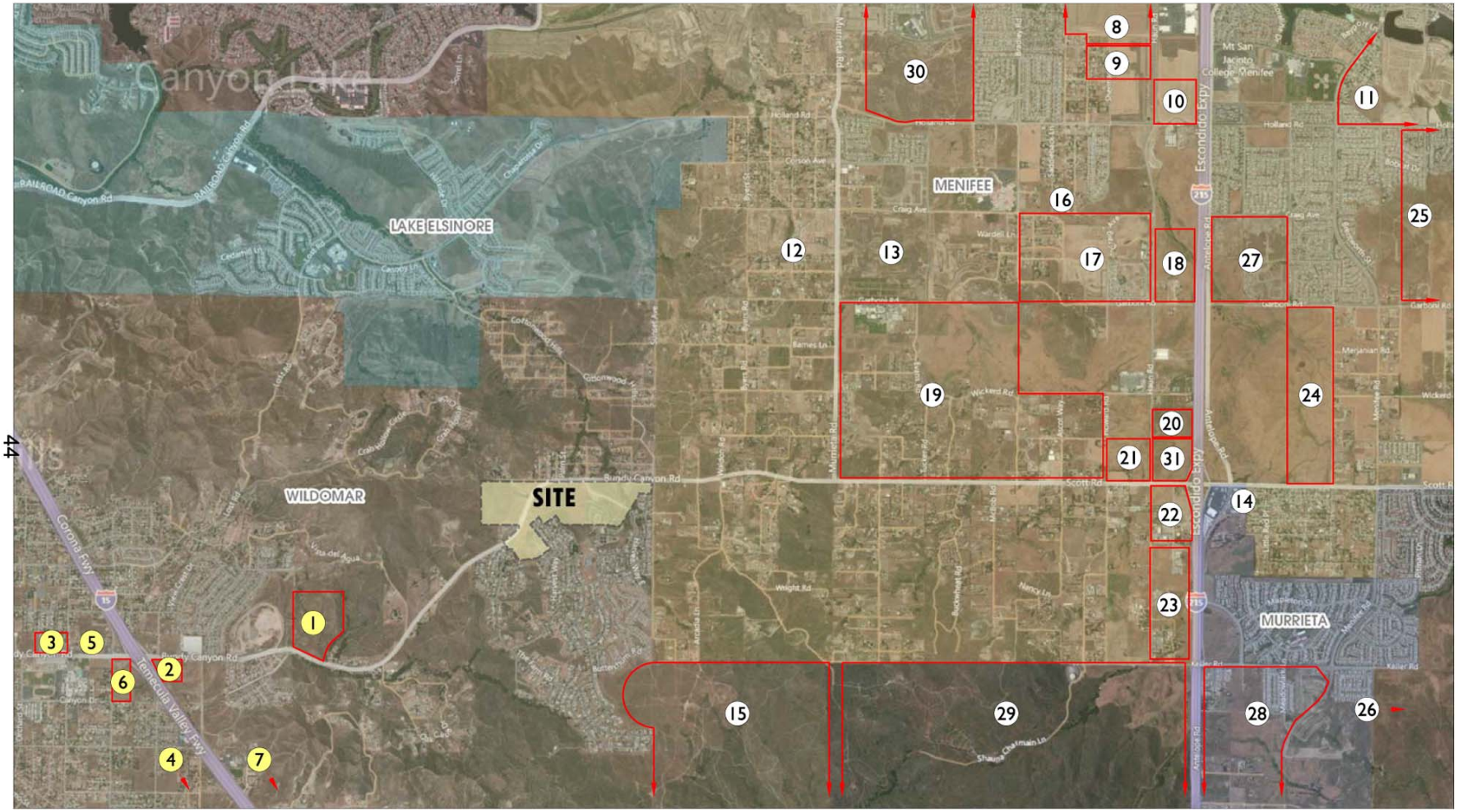
CUMULATIVE DEVELOPMENT PROJECTS LOCATION MAP



LEGEND:

1 = CITY OF WILDOMAR CUMULATIVE DEVELOPMENT PROJECT

8 = CITY OF MENIFEE CUMULATIVE DEVELOPMENT PROJECT

Source: City of Wildomar

N

Figure 3.3-4

Cumulative Project Location

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Cumulative Development Trip Assignment

Based on the identified trip distribution patterns for the cumulative development projects on arterial highways throughout the study area for future conditions, cumulative projected development ADT volumes and AM peak-hour and PM peak-hour intersection turning movement volumes are included in **Table 3.3-8**.

Traffic Forecasts

An Existing plus Project analysis scenario was included to address a recent CEQA case ruling, which asserts that impacts of a proposed project must be measured against the current existing physical conditions. The Existing plus Project analysis scenario was utilized to identify significant project-related impacts and mitigation measures necessary to reduce those impacts to less than significant.

To provide a comprehensive assessment of the potential project-related and cumulative traffic impacts, two types of analyses, "buildup" and "buildout," were performed in support of this work effort. The buildup method was used to approximate the Opening Year (2015) traffic conditions and is also intended to identify the direct project-related impacts on both the existing and planned near-term circulation system in conjunction with identifying cumulative impacts. The Opening Year (2015) without Project traffic condition includes background traffic and traffic generated by other cumulative development projects in the study area. The buildup method was also utilized to approximate the Opening Year (2015) with Project traffic condition and includes background traffic, traffic generated by other cumulative development projects within the study area, and the traffic generated by the proposed project. The buildout approach is used to forecast the Horizon Year (2035) without and with Project conditions of the study area.

Figure 3.3-5 shows the ADT volumes that can be expected for Existing plus Proposed Project traffic conditions. Existing plus Proposed AM and PM peak-hour intersection turning movement volumes are included in **Table 3.3-9**.

Opening Year (2015) Conditions

The buildup approach combines existing traffic counts with a background ambient growth factor to forecast the Opening Year (2015) traffic conditions. An ambient growth factor of 8.24 percent accounts for background (area-wide) traffic increases that occur over time up to the year 2015 from the year 2011 (compounded 2 percent per year growth over a four-year period). In addition, the local traffic generated by other cumulative development projects within the study area has also been included. Traffic volumes generated by the project are then added to assess the Opening Year (2015) with Project traffic conditions. The 2015 roadway network is similar to the existing roadway network with the exception of future roadways proposed to be developed by the project.

The near-term traffic analysis includes the following traffic conditions, with the various traffic components:

- Opening Year (2015) without Project
  - Existing 2011 counts
  - Ambient growth traffic (8.24 percent)

  - Cumulative development project traffic from Table 3.3-8

- Opening Year (2015) with Project
  - Existing 2011 counts
  - Ambient growth traffic (8.24 percent)
  - Cumulative development project traffic
  - Oak Creek (TTM No. 36388) traffic

Roadway Improvements Under Opening Year (2015) Conditions

The lane configurations and traffic controls assumed to be in place for Opening Year (2015) conditions are consistent with those shown previously on **Figure 3.3-1**, with the exception of project driveways and those facilities assumed to be constructed by the project to provide site access, which are assumed to be in place for Opening Year (2015) with Project conditions only.

Although an improvement project is planned at the Interstate 215 at Scott Road interchange, it is unclear at this time when the redesigned interchange would be in place. As such, the planned improvements at the interchange were not assumed for the purposes of the Opening Year (2015) conditions analyses.

Opening Year (2015) without Project Traffic Volume Forecasts

This scenario includes existing (2011) traffic volumes plus an ambient growth factor of 8.24 percent plus traffic from pending and approved but not yet constructed known development projects (as shown on **Table 3.3-8** above) in the area.

Opening Year (2015) with Project Traffic Volume Forecasts

This scenario includes existing (2011) traffic volumes, an ambient growth factor of 8.24 percent, traffic from pending and approved but not yet constructed known development projects in the area, and the addition of project traffic. The weekday ADT volumes that can be expected for Opening Year (2015) with Project traffic conditions are shown on **Figure 3.3-6,** while **Table 3.3-10** includes the AM and PM peak-hour intersection turning movement volumes for Opening Year (2015) with Project traffic conditions.

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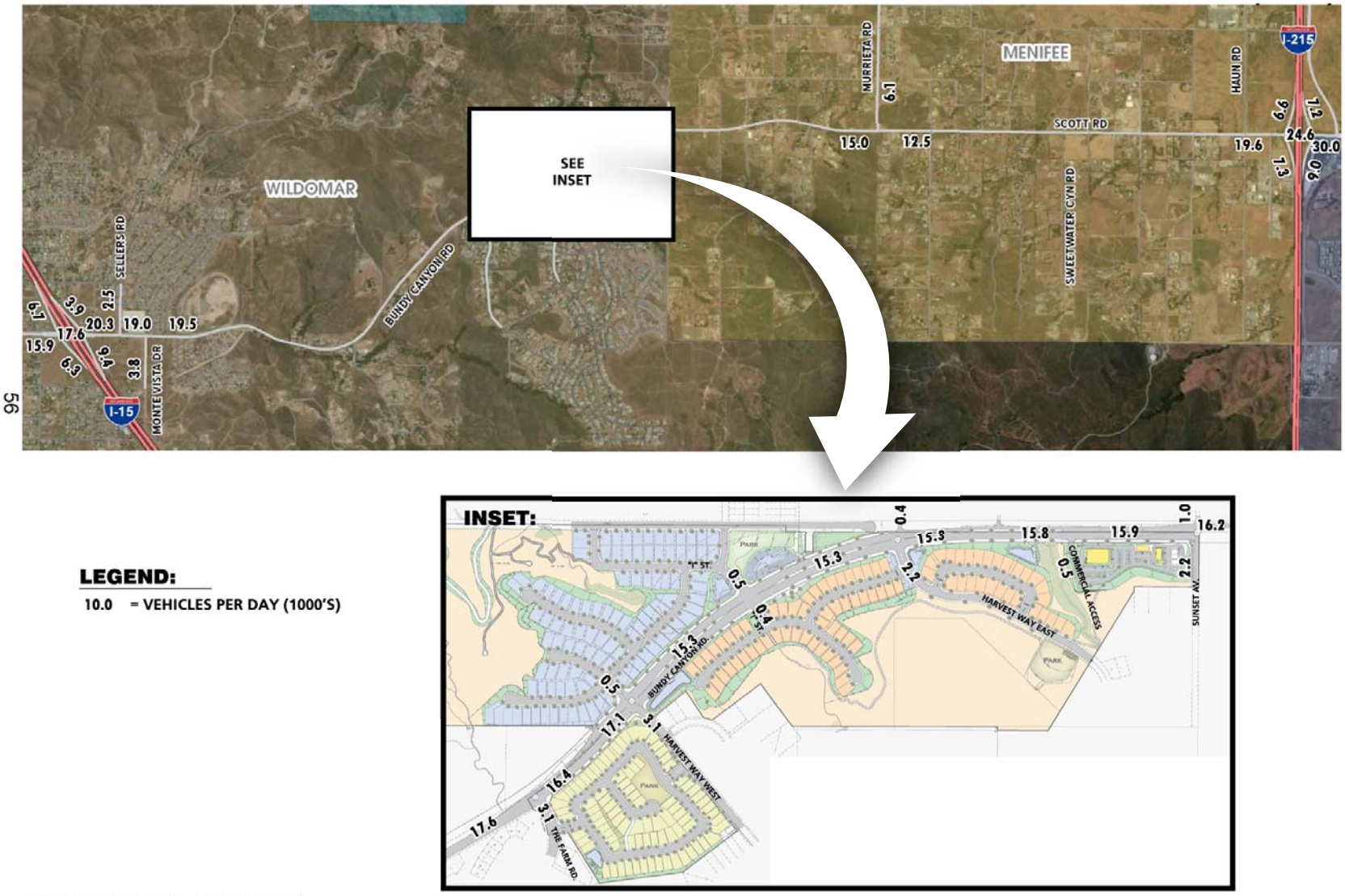
EXISTING PLUS PROJECT AVERAGE DAILY TRAFFIC (ADT)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

Source: City of Wildomar

N

Figure 3.3-5

Existing Plus Project ADT

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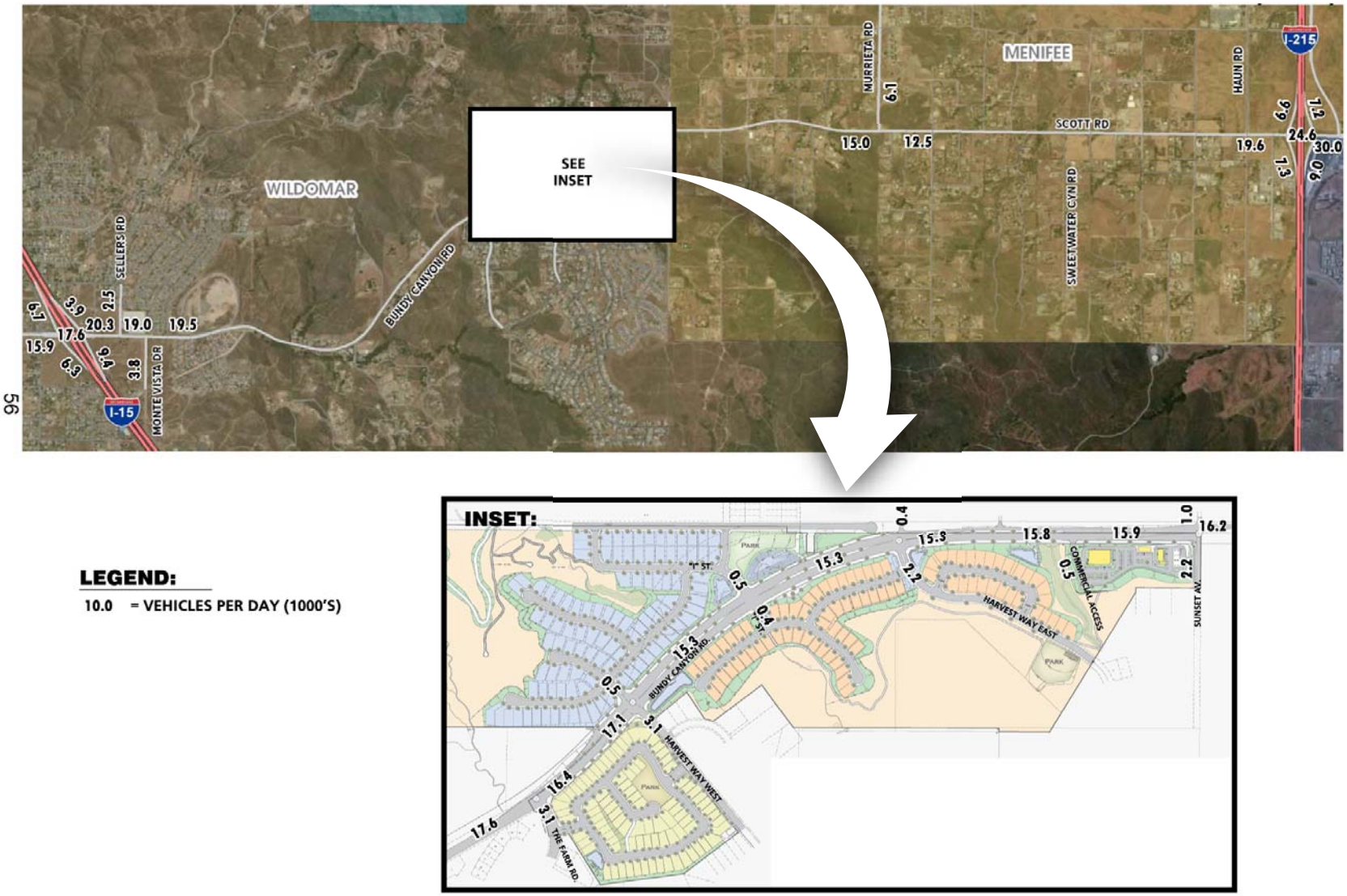
EXISTING PLUS PROJECT AVERAGE DAILY TRAFFIC (ADT)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

Source: City of Wildomar

N

Figure 3.3-6

Opening Year ADT

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Horizon Year (2035) Conditions

The Horizon Year (2035) with Project traffic volumes were derived from the Riverside County Transportation and Analysis Model (RivTAM) using accepted procedures for model forecast refinement and smoothing. The traffic forecasts reflect the area-wide growth anticipated between existing (2011) conditions and Horizon Year (2035) conditions. In most instances, the traffic **Figure 3.3-6** Opening Year ADTodel zone structure is not designed to provide accurate turning movements along arterial roadways unless refinement and reasonableness checking is performed. Therefore, the Horizon Year (2035) peak-hour forecasts were refined using the model-derived long-range forecasts, along with Opening Year (2015) with Project peak-hour traffic volumes. Future estimated peak-hour traffic data was used for new intersections and intersections with an anticipated change in travel patterns to further refine the Horizon Year (2035) peak-hour forecasts. Lastly, Horizon Year (2035) turning volumes were compared to Opening Year (2015) with Project volumes in order to ensure a minimum growth of 10 percent as part of the refinement process. The minimum 10 percent growth includes any additional growth between Opening Year (2015) with Project and Horizon Year (2035) traffic conditions that is not accounted for by the traffic generated by cumulative development projects and the ambient growth between existing and Opening Year (2015) with Project conditions.

Flow conservation checks and forecast adjustments were performed as necessary to ensure that all future Opening Year (2015) with Project and Horizon Year (2035) traffic volume forecasts are reasonable. Flow conservation checks were performed in an effort to ensure the flow of traffic volumes between closely spaced intersections is maintained. In other words, traffic flow between two closely spaced intersections, such as two freeway ramp locations, is verified in order to make certain that vehicles leaving one intersection are entering the adjacent intersection and that there is no unexplained loss of vehicles. The result of this traffic forecasting procedure is a series of traffic volumes suitable for traffic operations analysis.

The RivTAM 2035 traffic forecasts assume buildout of the City of Wildomar General Plan circulation network. Lane configurations and traffic controls assumed to be in place for Horizon Year (2035) without and with Project conditions are consistent with those planned according to the City of Wildomar General Plan roadway classifications in conjunction with the project driveways and those facilities assumed to be constructed by the project or cumulative development projects to provide site access. **Figure 3.3-7** shows the future lane geometrics assumed for each analysis location under Horizon Year (2035) with Project traffic conditions.

Roadway Improvements Under Horizon Year (2035) Conditions

As stated above, Caltrans improvements are planned at the Interstate 215 at Scott Road interchange; however, it is not known when these improvements would be in place. For the purposes of the TIA, it was assumed that the Interstate 215 at Scott Road interchange improvements would be in place under Horizon Year (2035) traffic conditions. **Figure 3.3-8** shows the planned Interstate 215 at Scott Road interchange improvements.

The City of Wildomar General Plan Circulation Element is based on the circulation needs as defined by buildout of the Land Use Element. As such, it is assumed that the circulation network would be built out as the Land Use Element is built out.

The lane geometrics shown in **Figure 3.3-7** are consistent with those previously shown on **Figure 3.3-8**, with the exception of the following intersections:

- Harvest Way West/Bundy Canyon Road (Access Options)
- "I" Street/Bundy Canyon Road (new intersection)
- Commercial Access/Bundy Canyon Road (new intersection)

Horizon Year (2035) without Project Traffic Volume Forecasts

This scenario includes the refined post-processed volumes obtained from the Riverside County Transportation and Analysis Model (RivTAM) less the traffic generated by the proposed project. The weekday ADT volumes that can be expected for Horizon Year (2035) without Project traffic conditions included in **Table 3.3-12** show the AM and PM peak-hour intersection turning movement volumes for Horizon Year (2035) without Project traffic conditions.

Horizon Year (2035) with Project Traffic Volume Forecasts

This scenario includes the refined post-processed volumes obtained from RivTAM plus the project-related volumes. The weekday ADT volumes that can be expected for Horizon Year (2035) with Project traffic conditions are shown on **Figure 3.3-9**. **Table 3.3-12** includes the AM and PM peak-hour intersection turning movement volumes for Horizon Year (2035) with Project traffic conditions.

PROJECT IMPACTS AND MITIGATION MEASURES

Roadway Facilities (Standard of Significance 1)

Impact 3.3.1 Implementation of the proposed project would cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system. This will be a **potentially significant** impact.

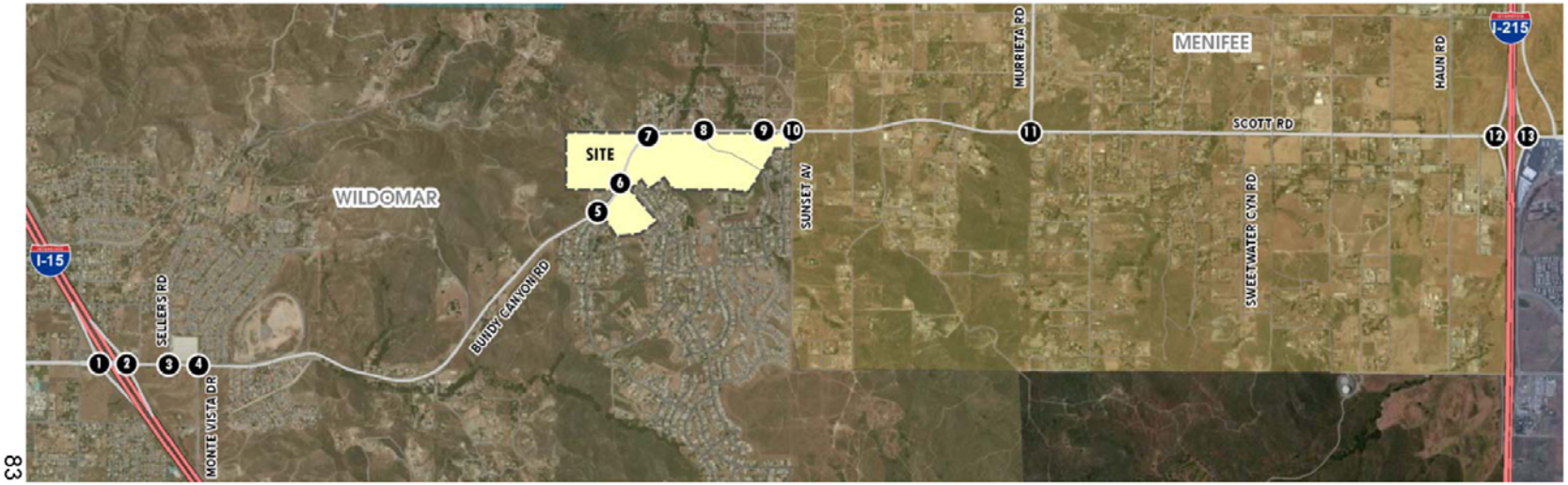
Existing plus Project Intersection Operations Analysis

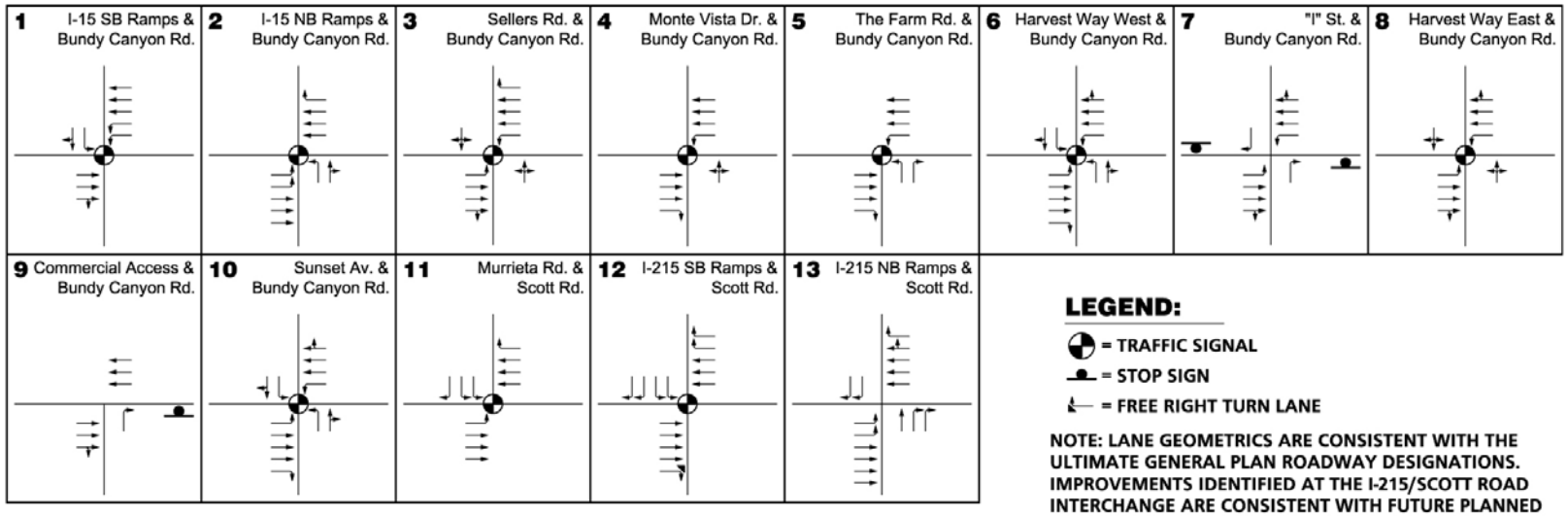
Existing plus Project peak-hour traffic operations were evaluated for the study area intersections based on the analysis methodologies presented above. The intersection analysis results are summarized in **Table 3.3-9**, which indicates that the following study area intersections are anticipated to operate at unacceptable levels of service with the addition of project traffic:

- Sellers Road/Bundy Canyon Road
- Monte Vista Drive/Bundy Canyon Road
- Harvest Way West/Bundy Canyon Road
- Harvest Way East/Bundy Canyon Road
- Sunset Avenue/Bundy Canyon Road
- Murrieta Road/Scott Road

T:_CS\Work\Wildomar, City of\Figures for Oak Creek Canyon EIR 28-0047A-11-0261

HORIZON YEAR (2035) WITH PROJECT LANE CONFIGURATION AND INTERSECTION CONTROLS





LEGEND:

- = TRAFFIC SIGNAL
- = STOP SIGN
- = FREE RIGHT TURN LANE

NOTE: LANE GEOMETRICS ARE CONSISTENT WITH THE ULTIMATE GENERAL PLAN ROADWAY DESIGNATIONS. IMPROVEMENTS IDENTIFIED AT THE I-215/SCOTT ROAD INTERCHANGE ARE CONSISTENT WITH FUTURE PLANNED IMPROVEMENTS PER CALTRANS.

Source: City of Wildomar

0 1/2 1
MILE

N

Figure 3.3-7
Future Lane Geometrics

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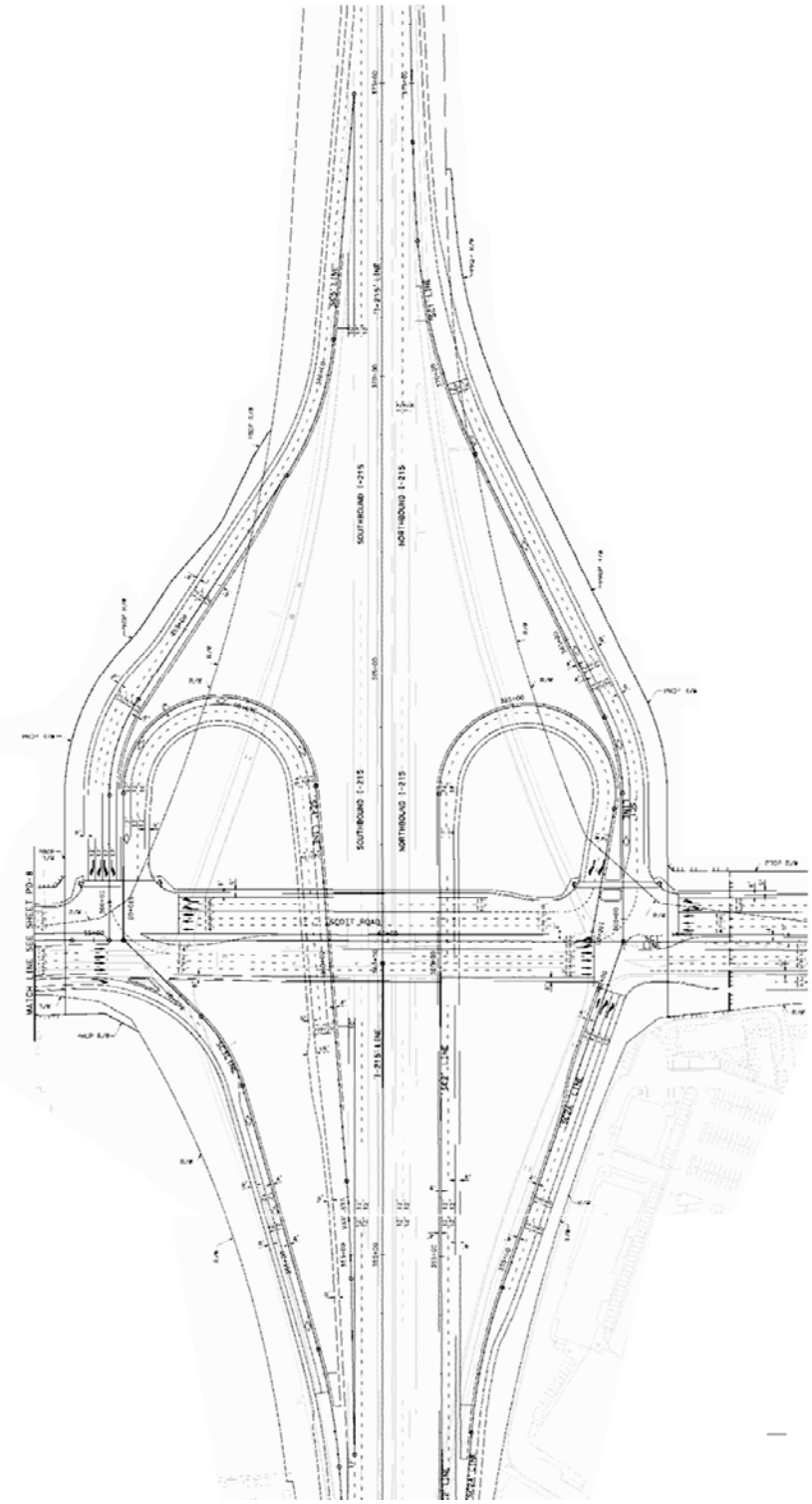
CALTRANS I-215/SCOTT RD. INTERCHANGE IMPROVEMENTS



Source: City of Wildomar

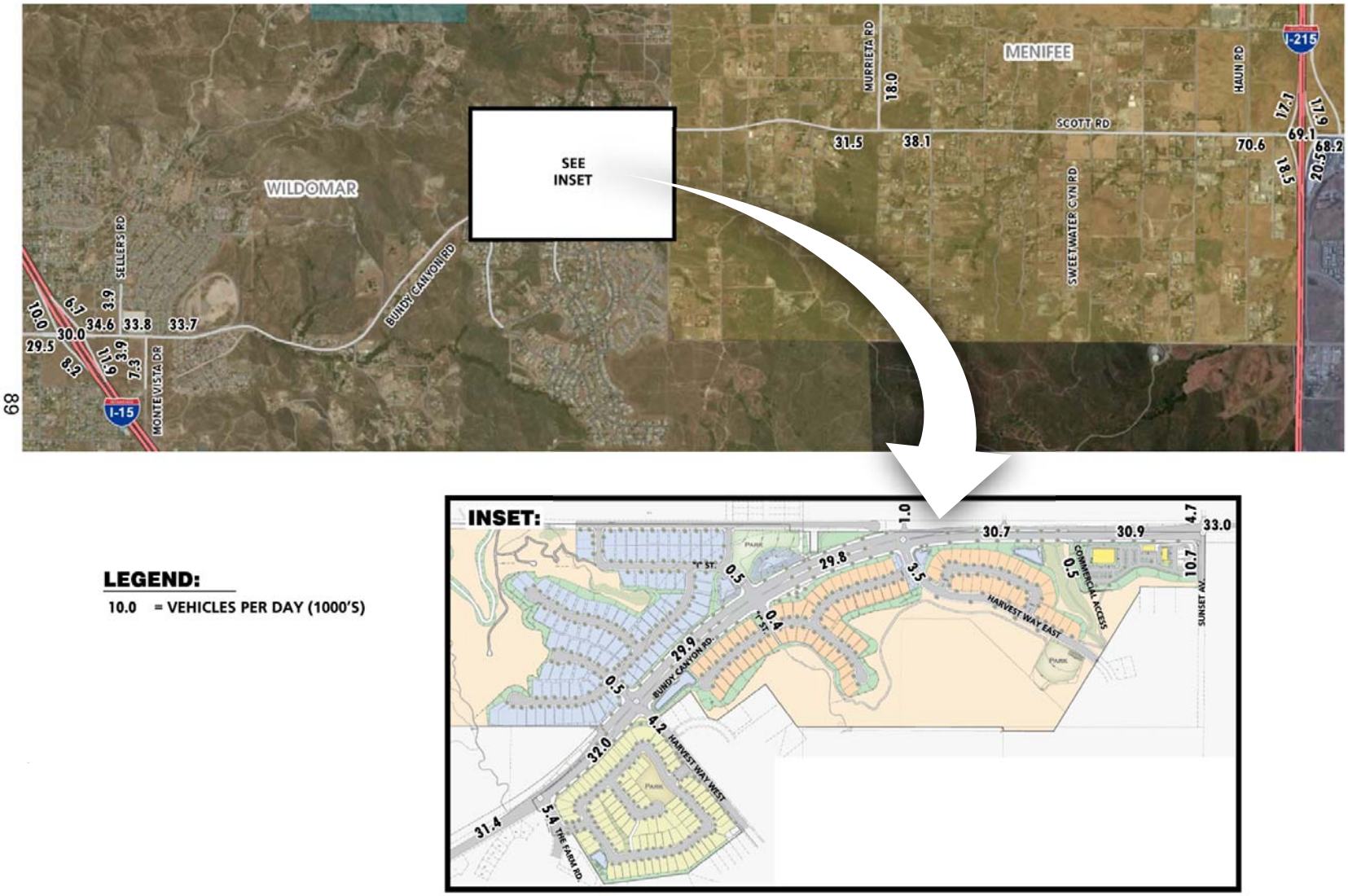
Figure 3.3-8

I-215 Scott Road Improvements

N

PMC®

HORIZON YEAR (2035) WITH PROJECT AVERAGE DAILY TRAFFIC (ADT)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

Source: City of Wildomar

0 1/2 1
MILE

N

Figure 3.3-9
2035 ADT

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As noted in the table, the intersections of Monte Vista/Bundy Canyon Road and Murrieta Road/Scott Road already operate at unacceptable levels. The intersection of Harvest Way West at Bundy Canyon Road is anticipated to operate at acceptable peak-hour levels of service with the access alternative assumptions. If access is restricted at this intersection, the installation of a traffic signal is not necessary to achieve acceptable peak-hour intersection operations (i.e., LOS D or better).

Based on the City of Wildomar specialized significance criteria discussed in the Standards of Significance subsection above, the following intersections were found to be impacted by the project:

Sellers Road/Bundy Canyon Road – This intersection is anticipated to operate at an acceptable LOS (LOS D or better) during the AM and PM peak hours under existing (2011) traffic conditions. The addition of project traffic is anticipated to cause the intersection to operate at unacceptable LOS (LOS E) during the PM peak hour only.

Monte Vista Drive/Bundy Canyon Road – Although this intersection was found to operate at an unacceptable LOS (LOS F) during the weekday PM peak hour under existing (2011) conditions, the City of Wildomar's specialized significance criteria dictate that if the addition of project traffic (as measured by 50 peak-hour trips) results in an increase in delay by more than 5.0 seconds, the impact is considered significant. The project-related delay increase is greater than 5.0 seconds.

Harvest Way West/Bundy Canyon Road – This intersection is anticipated to operate at an acceptable LOS (LOS D) during the AM and PM peak hours under existing (2011) traffic conditions. The addition of project traffic is anticipated to cause the intersection to operate at unacceptable LOS (LOS F) during the PM peak hour.

Harvest Way East/Bundy Canyon Road – This intersection is anticipated to operate at an acceptable LOS (LOS D or better) during the AM and PM peak hours under existing (2011) traffic conditions. The addition of project traffic is anticipated to cause the intersection to operate at unacceptable LOS (LOS F and E) during the AM and PM peak hours.

Sunset Avenue/Bundy Canyon Road – This intersection is anticipated to operate at an acceptable LOS (LOS C) during the AM and PM peak hours under existing (2011) traffic conditions. The addition of project traffic is anticipated to cause the intersection to operate at unacceptable LOS (LOS F) during the PM peak hour only.

Impacts on these roadway intersections under Existing plus Project conditions are therefore considered **potentially significant.**

TABLE 3.3-9
INTERSECTION ANALYSIS FOR EXISTING PLUS PROJECT CONDITIONS

#	Intersection	Jurisdiction	Traffic Control[2]	Existing				Existing + Project			
				Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
				AM	PM	AM	PM	AM	PM	AM	PM
1	I-15 SB Ramps/Bundy Canyon Rd.	Caltrans	TS	23.0	18.9	C	B	25.5	21.8	C	C
2	I-15 NB Ramps/Bundy Canyon Rd.	Caltrans	TS	18.9	19.3	B	B	19.8	20.8	B	C
3	Sellers Rd./Bundy Canyon Rd.	Wildomar	CSS	24.2	31.1	C	D	30.3	***46.1***	D	***E***
4	Monte Vista Dr./Bundy Canyon Rd.	Wildomar	CSS	21.4	***62.2***	C	***F***	26.0	***> 80.0***	D	***F***
5	The Farm Rd./Bundy Canyon Rd.										
	- Preferred Access	Wildomar	TS	9.3	11.1	A	B	9.8	11.9	A	B
	- Access Alternative	Wildomar	TS	9.3	11.1	A	B	13.2	15.2	B	B
6	Harvest Way West/Bundy Canyon Rd.										
	- Preferred Access	Wildomar	CSS	27.5	30.6	D	D	26.9	***55.5***	D	***F***
	- Access Alternative	Wildomar	CSS	27.5	30.6	D	D	9.7	10.5	A	B
7	"I" Street/Bundy Canyon Rd.	Wildomar	**CSS**	Not Applicable				9.6	10.0	A	B
8	Harvest Way East/Bundy Canyon Rd.	Wildomar	CSS	26.6	24.5	D	C	***56.2***	***44.9***	***F***	***E***
9	Commercial Access/Bundy Canyon Rd.	Wildomar	**CSS**	Not Applicable				9.5	10.2	A	B
10	Sunset Ave./Bundy Canyon Rd.	Wildomar/ Menifee	CSS	21.3	23.3	C	C	33.8	***> 80.0***	D	***F***
11	Murrieta Rd./Scott Rd.	Menifee	AWS	18.7	***39.4***	C	***F***[3]	29.5	***71.0***	D	***F***
12	I-215 SB Ramps/Scott Rd.	Caltrans	TS	24.6	30.8	C	C	26.6	32.7	C	C
13	I-215 NB Ramps/Scott Rd.	Caltrans	TS	26.6	32.3	C	C	29.3	33.9	C	C

1 *Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.*

2 *CSS = cross-street stop; AWS = all-way stop; TS = traffic signal*

3 *Volume-to-capacity ratio is greater than 1.00; Intersection unstable; Level of Service F.*

Opening Year (2015) Intersection Operations Analysis

Level of service calculations were conducted for the study intersections to evaluate their operations under Opening Year (2015) conditions with existing roadway and intersection geometrics. As shown in **Table 3.3-10**, the following intersections were found to operate at an unacceptable level of service under Opening Year (2015) with Project traffic conditions.

- Sellers Road/Bundy Canyon Road
- Monte Vista Drive/Bundy Canyon Road
- Harvest Way West/Bundy Canyon Road
- Harvest Way East/Bundy Canyon Road
- Sunset Avenue/Bundy Canyon Road
- Murrieta Road/Scott Road
- I-215 Southbound Ramps/Scott Road
- I-215 Northbound Ramps/Scott Road

As shown in **Table 3.3-10**, the intersection of Harvest Way West at Bundy Canyon Road is anticipated to operate at acceptable peak hour levels of service with the access alternative assumptions. If access is restricted at this intersection, the installation of a traffic signal is not necessary to achieve acceptable peak hour intersection operations (i.e., LOS D or better). The intersection operations analysis worksheets for Opening Year (2015) without Project traffic conditions are included in Appendix 6.1 of the TIA. The intersection operations analysis worksheets for Opening Year (2015) with Project traffic conditions are included in Appendix 6.2 of the TIA.

TABLE 3.3-10
INTERSECTION ANALYSIS FOR OPENING YEAR (2015) CONDITIONS

#	Intersection	Jurisdiction	Traffic Control[2]	2015 Without Project				2015 With Project			
				Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
				AM	PM	AM	PM	AM	PM	AM	PM
1	I-15 SB Ramps/Bundy Canyon Rd.	Caltrans	TS	26.9	33.1	C	C	30.6	42.5	C	D
2	I-15 NB Ramps/Bundy Canyon Rd.	Caltrans	TS	24.9	26.9	C	C	27.4	31.4	C	C
3	Sellers Rd./Bundy Canyon Rd.	Wildomar	CSS	***> 80.0***	***> 80.0***	***F***	***F***	***> 80.0***	***> 80.0***	***F***	***F***
4	Monte Vista Dr./Bundy Canyon Rd.	Wildomar	CSS	***> 80.0***	***> 80.0***	***F***	***F***	***> 80.0***	***> 80.0***	***F***	***F***
5	The Farm Rd./Bundy Canyon Rd.										
	- Preferred Access	Wildomar	TS	24.2	24.1	C	C	35.5	35.8	D	D
	- Access Alternative	Wildomar	TS	24.2	24.1	C	C	21.0	37.1	C	D
6	Harvest Way West/ Bundy Canyon Rd.										
	- Preferred Access	Wildomar	CSS	***> 80.0***	***> 80.0***	***F***	***F***	***> 80.0***	***> 80.0***	***F***	***F***
	- Access Alternative	Wildomar	CSS	**> 80.0**	**> 80.0**	**F**	**F**	11.1	14.5	B	B
7	"I" Street/Bundy Canyon Rd.	Wildomar	**CSS**	Not Applicable				11.1	13.2	B	B
8	Harvest Way East/ Bundy Canyon Rd.	Wildomar	CSS	***> 80.0***	***> 80.0***	***F***	***F***	***> 80.0***	***> 80.0***	***F***	***F***
9	Commercial Access/ Bundy Canyon Rd.	Wildomar	**CSS**	Not Applicable				10.4	12.5	B	B
10	Sunset Ave./Bundy Canyon Rd.	Wildomar/ Menifee	CSS	***> 80.0***	***> 80.0***	***F***	***F***	***> 80.0***	***> 80.0***	***F***	***F***
11	Murrieta Rd./Scott Rd.	Menifee	AWS	***> 80.0***	***> 80.0***	***F***	***F***	***> 80.0***	***> 80.0***	***F***	***F***
12	I-215 SB Ramps/Scott Rd.	Caltrans	TS	***> 80.0***	***> 80.0***	***F***	***F***	***> 80.0***	***> 80.0***	***F***	***F***
13	I-215 NB Ramps/Scott Rd.	Caltrans	TS	***> 80.0***	***> 80.0***	***F***	***F***	***> 80.0***	***> 80.0***	***F***	***F***

1. Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.
2. CSS = cross-street stop; AWS = all-way stop; TS = traffic signal

Based on the City of Wildomar specialized significance criteria discussed in the Standards of Significance subsection above, the following intersections were found to be impacted by the project:

Sellers Road/Bundy Canyon Road – Although this intersection was found to operate at an unacceptable LOS (LOS F) during the AM and PM peak hours under Opening Year (2015) without Project traffic conditions, the City of Wildomar's specialized significance criteria dictates that if the addition of project traffic (as measured by 50 or more peak-hour trips) results in an increase in delay by more than 5.0 seconds, the impact is considered significant. As shown in **Table 3.3-11**, the project-related delay increase is greater than 5.0 seconds

Monte Vista Drive/Bundy Canyon Road – Although this intersection was found to operate at an unacceptable LOS (LOS F) during the AM and PM peak hours under Opening Year (2015) without Project traffic conditions, the City of Wildomar's specialized significance criteria dictates that if the addition of Project traffic (as measured by 50 or more peak-hour trips) results in an increase in delay by more than 5.0 seconds, the impact is considered significant. As shown in **Table 3.3-11**, the project-related delay increase is greater than 5.0 seconds.

Harvest Way West/Bundy Canyon Road – Although this intersection was found to operate at an unacceptable LOS (LOS F) during the AM and PM peak hours under Opening Year (2015) without Project traffic conditions, the City of Wildomar's specialized significance criteria dictates that if the addition of project traffic (as measured by 50 or more peak-hour trips) results in an increase in delay by more than 5.0 seconds, the impact is considered significant. As shown in **Table 3.3-11**, the project-related delay increase is greater than 5.0 seconds.

Harvest Way East/Bundy Canyon Road – Although this intersection was found to operate at an unacceptable LOS (LOS F) during the AM and PM peak hours under Opening Year (2015) without Project traffic conditions, the City of Wildomar's specialized significance criteria dictates that if the addition of project traffic (as measured by 50 or more peak-hour trips) results in an increase in delay by more than 5.0 seconds, the impact is considered significant. As shown in **Table 3.3-11**, the project-related delay increase is greater than 5.0 seconds.

Sunset Avenue/Bundy Canyon Road – Although this intersection was found to operate at an unacceptable LOS (LOS F) during the AM and PM peak hours under Opening Year (2015) without Project traffic conditions, the City of Wildomar's specialized significance criteria dictates that if the addition of project traffic (as measured by 50 or more peak hour trips) results in an increase in delay by more than 5.0 seconds, the impact is considered significant. As shown in **Table 3.3-11**, the project-related delay increase is greater than 5.0 seconds.

Impacts on these roadway intersections under Opening Year (2015) conditions are therefore considered **potentially significant.**

TABLE 3.3-11
CITY OF WILDOMAR SIGNIFICANT IMPACT CRITERIA TEST FOR OPENING YEAR (2015) CONDITIONS

#	Intersection	Jurisdiction	Traffic Control[3]	2015 Without Project				2015 With Project				Significant Project Impact?[1]			
												AM Peak Hour		PM Peak Hour	
				Delay[2] (secs.)		Level of Service		Delay[2] (secs.)		Level of Service		Change in Delay	Significant?	Change in Delay	Significant?
				AM	PM	AM	PM	AM	PM	AM	PM				
3	Sellers Rd./Bundy Canyon Rd.	Wildomar	CSS	***> 80.0***	***> 80.0***	***F***	***F***	***> 80.0***	***> 80.0***	***F***	***F***	***> 5.0***	***Yes***	***> 5.0***	***Yes***
4	Monte Vista Dr./ Bundy Canyon Rd.	Wildomar	CSS	***> 80.0***	***> 80.0***	***F***	***F***	***> 80.0***	***> 80.0***	***F***	***F***	***> 5.0***	***Yes***	***> 5.0***	***Yes***
6	Harvest Way West/ Bundy Canyon Rd.	Wildomar	CSS	***> 80.0***	***> 80.0***	***F***	***F***	***> 80.0***	***> 80.0***	***F***	***F***	***> 5.0***	***Yes***	***> 5.0***	***Yes***
8	Harvest Way East/ Bundy Canyon Rd.	Wildomar	CSS	***> 80.0***	***> 80.0***	***F***	***F***	***> 80.0***	***> 80.0***	***F***	***F***	***> 5.0***	***Yes***	***> 5.0***	***Yes***
10	Sunset Ave./Bundy Canyon Rd.	Wildomar/ Menifee	CSS	***> 80.0***	***> 80.0***	***F***	***F***	***> 80.0***	***> 80.0***	***F***	***F***	***> 5.0***	***Yes***	***> 5.0***	***Yes***

1. ***The*** *City of Wildomar threshold of significance was applied to those intersections within the city. Other jurisdictions do not have a threshold of significance.*
2. *Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.*
3. CSS = cross-street stop; AWS = all-way stop; TS = traffic signal

Horizon Year (2035) Intersection Operations Analysis

Levels of service calculations were conducted for the study intersections to evaluate their operations under Horizon Year (2035) without Project conditions. As shown in **Table 3.3-12**, all of the study area intersections are anticipated to operate at an acceptable LOS under Horizon Year (2035) without Project traffic conditions based on the intersection controls and lane geometrics assumed on **Figure 3.3-10**.

As shown on **Table 3.3-12**, the addition of project traffic is not anticipated to worsen the peak-hour operations at any of the study area intersections, resulting in no significant project-related impacts. As shown in **Table 3.3-12**, the intersection of Harvest Way West at Bundy Canyon Road is anticipated to operate at acceptable peak-hour levels of service with the access alternative assumptions. If access is restricted at this intersection, the installation of a traffic signal is not necessary to achieve acceptable peak-hour intersection operations (i.e., LOS D or better). Impacts under Horizon Year (2035) conditions are therefore considered **less than significant.**

TABLE 3.3-12
INTERSECTION ANALYSIS FOR HORIZON YEAR (2035) CONDITIONS

#	Intersection	Jurisdiction	Traffic Control[2]	2035 Without Project				2035 With Project			
				Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
				AM	PM	AM	PM	AM	PM	AM	PM
1	I-15 SB Ramps/Bundy Canyon Rd.	Caltrans	TS	18.1	33.2	B	C	18.8	38.2	B	D
2	I-15 NB Ramps/Bundy Canyon Rd.	Caltrans	TS	17.0	24.3	B	C	17.9	26.6	B	C
3	Sellers Rd./Bundy Canyon Rd.	Wildomar	TS	22.9	24.4	C	C	22.9	24.7	C	C
4	Monte Vista Dr./Bundy Canyon Rd.	Wildomar	TS	18.8	22.3	B	C	19.6	22.7	B	C
5	The Farm Rd./Bundy Canyon Rd.										
	- Preferred Access	Wildomar	TS	10.8	11.2	B	B	10.9	11.3	B	B
	- Access Alternative	Wildomar	TS	10.8	11.2	B	B	15.6	15.0	B	B
6	Harvest Way West/ Bundy Canyon Rd.										
	- Preferred Access	Wildomar	**TS**	10.9	9.4	B	A	15.2	13.6	B	B
	- Access Alternative	Wildomar	CSS	10.9	9.4	B	A	11.3	14.9	B	C
7	"I" Street / Bundy Canyon Rd.	Wildomar	**CSS**	Not Applicable				10.9	12.9	B	B
8	Harvest Way East/ Bundy Canyon Rd.	Wildomar	TS	14.1	12.8	B	B	14.9	13.4	B	B
9	Commercial Access/ Bundy Canyon Rd.	Wildomar	**CSS**	Not Applicable				10.3	12.7	B	B

#	Intersection	Jurisdiction	Traffic Control[2]	2035 Without Project				2035 With Project			
				Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
				AM	PM	AM	PM	AM	PM	AM	PM
10	Sunset Ave/Bundy Canyon Rd.	Wildomar/ Menifee	TS	16.7	18.1	B	B	17.7	22.6	B	C
11	Murrieta Rd./Scott Rd.	Menifee	TS	22.3	28.6	C	C	21.8	29.3	C	C
12	I-215 SB Ramps/Scott Rd.	Caltrans	TS	10.3	16.7	B	B	10.5	16.2	B	B
13	I-215 NB Ramps/Scott Rd.	Caltrans	TS	15.4	44.8	B	D	27.6	46.2	C	D

1. *Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.*
2. *CSS = cross-street stop; AWS = all-way stop; TS = traffic signal*

Traffic Signal Warrants Analysis

Traffic signal warrants for Existing plus Project traffic conditions are based on Existing plus Project peak-hour volumes. For Existing plus Project conditions, traffic signals appear to be warranted at the following intersections (see Appendix 5.2 of the TIA):

- Harvest Way East/Bundy Canyon Road
- Sunset Avenue/Bundy Canyon Road

Traffic signal warrants for Opening Year (2015) without and with Project traffic conditions are based on Opening Year (2015) without and with Project ADT volumes. For Opening Year (2015) without Project traffic conditions, there are no intersections anticipated to warrant a traffic signal as compared to those previously identified under existing (2011) traffic conditions. Similarly, no additional traffic signals appear to be warranted under Opening Year (2015) with Project traffic conditions in addition to those warranted under Opening Year (2015) without Project traffic conditions.

Traffic signal warrants for Horizon Year (2035) without and with Project traffic conditions are based on Horizon Year (2035) without and with Project ADT volumes. For Horizon Year (2035) without Project traffic conditions, there are no intersections anticipated to warrant a traffic signal as compared to those previously identified under Opening Year (2035) without Project traffic conditions. Similarly, no additional traffic signals appear to be warranted under Horizon Year (2035) with Project traffic conditions in addition to those warranted under Horizon Year (2035) without Project traffic conditions.

As noted above if access is ultimately restricted at the intersection of Harvest Way West and Bundy Canyon Road, the installation of a traffic signal is not necessary to achieve acceptable peak hour intersection operations (i.e., LOS D or better). The City has not determined whether access should be restricted in the future, so mitigation measure **MM 3.3.1** contains the requirement to include a traffic signal at this location.

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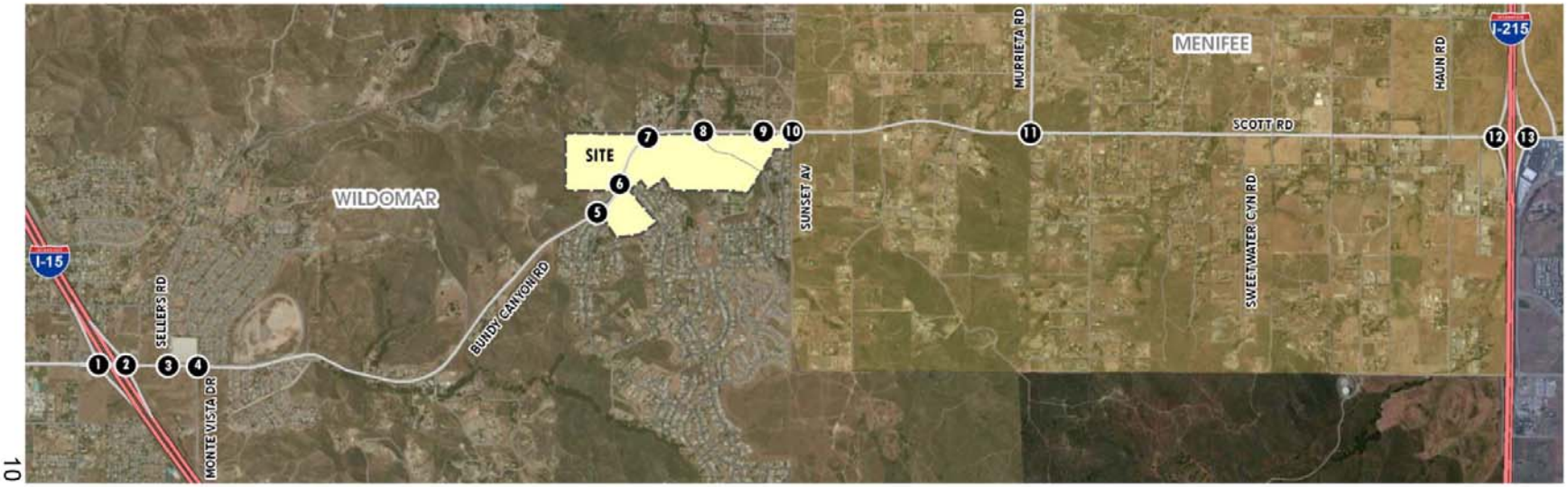
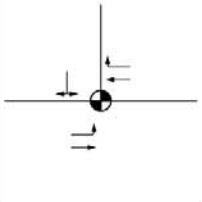
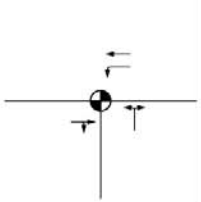
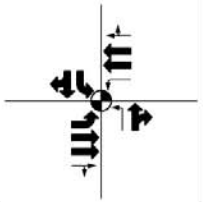
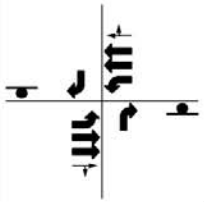
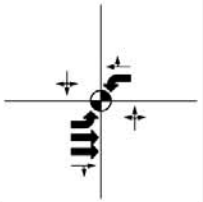
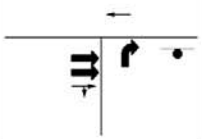
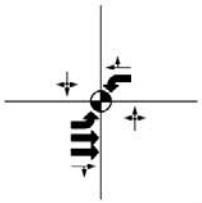
RECOMMENDED PROJECT MITIGATION MEASURES



1 I-15 SB Ramps & Bundy Canyon Rd.	**2** I-15 NB Ramps & Bundy Canyon Rd.	**3** Sellers Rd. & Bundy Canyon Rd.	**4** Monte Vista Dr. & Bundy Canyon Rd.	**5** The Farm Rd. & Bundy Canyon Rd.	**6** Harvest Way West & Bundy Canyon Rd.	**7** "I" St. & Bundy Canyon Rd.	**8** Harvest Way East & Bundy Canyon Rd.
No Improvements	No Improvements			No Improvements			
9 Commercial Access & Bundy Canyon Rd.	**10** Sunset Av. & Bundy Canyon Rd.	**11** Murrieta Rd. & Scott Rd.	**12** I-215 SB Ramps & Scott Rd.	**13** I-215 NB Ramps & Scott Rd.			
		No Improvements	No Improvements	No Improvements			

LEGEND:

- = TRAFFIC SIGNAL
- = ALL WAY STOP
- = STOP SIGN
- = EXISTING LANE
- = CURRENT PHASE IMPROVEMENT

Source: City of Wildomar

0 1/2 1
MILE

N

Figure 3.3-10
Project Mitigation Measures

PMC®

Mitigation Measures – Existing and Opening Year

MM 3.3.1 The project applicant shall be required to implement the following traffic improvements:

Sellers Road/Bundy Canyon Road

- Install a traffic signal.

Monte Vista Drive/Bundy Canyon Road

- Install a traffic signal.

Harvest Way West/Bundy Canyon Road

- Install a traffic signal.
- Stripe a shared northbound through-right turn lane in place of the existing de facto right turn lane.
- Construct a southbound left turn lane and shared through-right turn lane.
- Construct an eastbound left turn lane and two additional through lanes.
- Construct two additional westbound through lanes.

Harvest Way East/Bundy Canyon Road

- Install a traffic signal.
- Construct an eastbound left turn lane and two additional through lanes.
- Construct a westbound left turn lane.

Sunset Avenue/Bundy Canyon Road

- Install a traffic signal.
- Construct an eastbound left turn lane and two additional through lanes.
- Construct a westbound left turn lane.

Timing/Implementation: *Prior to issuance of Final Map, a subdivision improvement agreement will be executed that will establish the precise timing for the improvements. All improvements shall be in place prior to full buildout of the project.*

Enforcement/Monitoring: *City of Wildomar Public Works Department*

Mitigation strategies have been recommended to address the proposed project's impact at study area intersections. As shown in **Table 3.3-13**, the proposed mitigation measures will ensure that all intersections operate at an acceptable level of service under the Existing plus Project

scenario. **Table 3.3-14** also shows that traffic resulting from regional growth will impact the study area intersections, causing two of them (Sellers Road/Bundy Canyon Road and Monte Vista Drive/Bundy Canyon Road) to operate at an unacceptable level of service even with the mitigation. The mitigation is designed to address the proposed project's impacts and consequently reduces delay at these intersections caused by the project. As shown in **Table 3.3-14**, implementation of the proposed mitigation reduces the delay at the Sellers Road/Bundy Canyon Road and Monte Vista Drive/Bundy Canyon Road intersections and therefore does not increase the delay by the threshold 5.0 seconds. With implementation of the intersection mitigation discussed above, project-related impacts to study area intersections would be **less than significant**.

TABLE 3.3-13
INTERSECTION ANALYSIS FOR EXISTING PLUS PROJECT CONDITIONS WITH PROJECT MITIGATION MEASURES

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
3	Sellers Rd./Bundy Canyon Rd.																	
	- Existing (2011)	CSS	0	0	0	0	1	0	1	1	0	0	1	1	24.2	31.1	C	D
	- E+P w/o Mitigation[4]	CSS	0	0	0	0	1	0	1	1	0	0	1	1	30.3	**46.1**	D	**E**
	- With Project Mitigation 1.1	**TS**	0	0	0	0	1	0	1	1	0	0	1	1	14.8	37.6	B	D
4	Monte Vista Dr./Bundy Canyon Rd.																	
	- Existing (2011)	CSS	0	1	0	0	0	0	0	1	0	1	1	0	21.4	***62.2***	C	***F***
	- E+P w/o Mitigation[4]	CSS	0	1	0	0	0	0	0	1	0	1	1	0	26.0	**>80.0**	D	**F**
	- With Project Mitigation 2.1	**TS**	0	1	0	0	0	0	0	1	0	1	1	0	29.4	24.0	C	C
6	Harvest Way West/Bundy Canyon Rd.																	
	- Existing (2011)	CSS	1	0	d	0	0	0	0	1	1	1	1	0	27.5	30.6	D	D
	- E+P w/o Mitigation[4]	CSS	1	**1**	**0**	**1**	**1**	0	**1**	**3**	**0**	1	**3**	0	26.9	**55.5**	D	**F**
	- With Project Mitigation 3.1	**TS**	1	**1**	**0**	**1**	**1**	0	**1**	**3**	**0**	1	**3**	0	28.8	27.1	C	C
8	Harvest Way East/Bundy Canyon Rd.																	
	- Existing (2011)	CSS	0	1	0	0	1	0	0	1	0	0	1	0	26.6	24.5	D	C
	- E+P w/o Mitigation[4]	CSS	0	1	0	0	1	0	**1**	**3**	0	**1**	1	0	**56.2**	**44.9**	**F**	**E**
	- With Project Mitigation 4.1	**TS**	0	1	0	0	1	0	**1**	**3**	0	**1**	1	0	19.2	19.0	B	B
10	Sunset Ave./Bundy Canyon Rd.								-			-						
	- Existing (2011)	CSS	0	1	0	0	1	0	0	1	0	0	1	0	21.3	23.3	C	C
	- E+P w/o Mitigation[4]	CSS	0	1	0	0	1	0	**1**	**3**	0	**1**	1	0	33.8	**>80.0**	D	**F**
	- With Project Mitigation 5.1	**TS**	0	1	0	0	1	0	**1**	**3**	0	**1**	1	0	19.0	19.9	B	B

1. *When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes.*
L = Left; T = Through; R = Right; ≥ Right-Turn Overlap Phasing; d= De Facto Right Turn Lane; ***1*** *= Improvement*

2. *Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.*

3. CSS = cross-street stop; AWS = all-way stop; TS = traffic signal

4. E+P w/o mitigation assumes lanes that would be constructed by the project as part of their site adjacent roadway improvements.

TABLE 3.3-14
INTERSECTION ANALYSIS FOR OPENING YEAR (2015) CONDITIONS WITH PROJECT MITIGATION MEASURES

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												2015 With Project			
			Northbound			Southbound			Eastbound			Westbound			Delay[2] (secs.)		Level of Service	
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
	Sellers Rd./Bundy Canyon Rd.																	
3	- Pre-Project Conditions	CSS	0	0	0	0	1	0	1	1	0	0	1	1	***>300.0***	***>300.0***	***F***	***F***
	- With Project Mitigation 1.1	**TS**	0	1	0	0	1	0	1	1	0	1	1	1	***60.3***	***>113.5***	***E***	***F***
	Monte Vista Dr./Bundy Canyon Rd.																	
4	- Pre-Project Conditions	CSS	0	1	0	0	0	0	0	1	0	1	1	0	***>269.3***	***>300.0***	***F***	***F***
	- With Project Mitigation 2.1	**TS**	0	1	0	0	0	0	0	1	0	1	1	0	***113.5***	***132.5***	***F***	***F***
	Harvest Way West/Bundy Canyon Rd.																	
6	- Pre-Project Conditions	CSS	1	0	d	0	0	0	0	1	1	1	1	0	***>80.0***	***>80.0***	***F***	***F***
	- With Project Mitigation 3.1	**TS**	1	**1**	**0**	**1**	**1**	0	**1**	**3**	**0**	1	**3**	0	30.6	27.9	C	C
	Harvest Way East/Bundy Canyon Rd.																	
8	- Pre-Project Conditions	CSS	0	1	0	0	1	0	0	1	0	0	1	0	***>80.0***	***>80.0***	***F***	***F***
	- With Project Mitigation 4.1	**TS**	0	1	0	0	1	0	**1**	**3**	0	**1**	1	0	25.4	21.8	C	C
	Sunset Ave./Bundy Canyon Rd.																	
10	- Pre-Project Conditions	CSS	0	1	0	0	1	0	0	1	0	0	1	0	***>80.0***	***>80.0***	***F***	***F***
	- With Project Mitigation 5.1	**TS**	0	1	0	0	1	0	**1**	**3**	0	**1**	1	0	57.5	47.0	D	D

1. *When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes.*
   *L = Left; T = Through; R = Right; ≥ Right-Turn Overlap Phasing; d= De Facto Right Turn Lane; **1** = Improvement*
2. *Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.*
3. *CSS = cross-street stop; AWS = all-way stop; TS = traffic signal*

Transit System (Standard of Significance 7)

Impact 3.3.2 Implementation of the proposed project will not conflict with adopted policies, plans or programs supporting alternative transportation. This is considered a **less than significant** impact.

The addition of housing and population proposed by the project has the potential to increase the demand for public transit. While the project has a small commercial component, it is likely that residents will need to travel to meet employment and shopping needs. While Wildomar is served by RTA Routes 7 and 23, the proposed project is not located along either route. The proposed Bundy Canyon Road improvements will include area within the right-of-way for future transit stops should RTA expand the route system at the intersection of Harvest Way and L Street. As the proposed project does not impede the possibility of future transit stops in the area, this impact is considered **less than significant**.

The City of Wildomar has neither a developed bicycle trail system nor a plan for a bicycle system. Although the proposed project has open space and is likely to have trails, these will be recreation oriented and are not anticipated to connect to other trail systems. The Bundy Canyon Road improvements will be designed to accommodate bicycle traffic, which will ensure eventual connectivity to other roadways in the community. This impact is considered **less than significant**.

Mitigation Measures

None required.

Roadway or Traffic Hazards (Standard of Significance 4)

Impact 3.3.3 Implementation of the proposed project will not result in increased hazards due to a design feature or incompatible uses. This impact is considered **less than significant**.

The proposed project will complete a portion of the Bundy Canyon Road realignment that is a capital improvement of the Riverside County Transportation Department. The objectives of the road realignment are to:

- Improve safety and access through Bundy Canyon and along the project alignment by reconstructing the roadway to current geometric standards and eliminating nonstandard sight distances and grades.
- Improve the traffic handling capacity of the existing roadway, which is currently heavily congested and has less than desirable roadway geometry.
- Provide a transportation facility that will allow for planned buildout of the area as designated by the adopted 2003 Riverside County General Plan and its component Area and Specific Plans.

Within the proposed project, a portion of the planned Bundy Canyon Road/Scott Road improvements that have been envisioned by Riverside County will be constructed. Impacts from this construction will be considered **less than significant**. Note: The remainder of the Bundy Canyon Road/Scott Road Improvement Project will be implemented by the Riverside County Transportation Commission and/or the City of Menifee. An EIR (SCH# 2007051156) is being

drafted for all of the Bundy Canyon Road/Scott Road improvements from Interstate 15 to Interstate 215 via Scott Road. The project is partially funded through payment of the Transportation Uniform Mitigation Fee (TUMF), with funding for the remainder of the improvements provided by development along Bundy Canyon Road such as the proposed project.

The proposed project includes other roadways designed for access to homes and commercial and recreation areas. These roadways will be designed consistent with Chapter 16, Subdivisions, of the Wildomar Municipal Code. Section 16.08.020, General Street Design, establishes road standards, including length of cul-de-sacs, width of pavement, intersection alignment, etc. The City Engineer, Planning and Public Works Department, will review final subdivision improvement plans for consistency with City development standards. No exceptions to the City's development standards have been requested. This impact is considered **less than significant**.

Mitigation Measures

None required.

Emergency Access (Standard of Significance 5)

Impact 3.3.4 Implementation of the proposed project could result in temporary blockages of Bundy Canyon Road and other roadways, causing an impact on emergency access. This impact is considered **less than significant with mitigation incorporated.**

All of the roadways proposed with the project meet the City's design standards for access. During construction, however, the roadways may be temporarily blocked or subject to detours and delays, which could temporarily affect emergency access. Both Riverside County and the City of Wildomar require traffic management plans (TMP) for large-scale construction projects. A TMP is prepared through coordination with emergency services personnel and made part of the construction requirements placed on the contractor. The TMP often requires public notice of construction schedules as well as contact information in case of emergency or concern with the construction site and/or roadways. A TMP can be customized to avoid construction during special events, holidays, or other periods of intense traffic demand. Of particular focus in a TMP is a requirement to ensure access to adjacent homes and property during the construction process. Note that the County of Riverside may initiate construction on part or all of Bundy Canyon Road, which includes the portion within this project. The mitigation measure requires coordination of the TMP with the County to ensure consistency. The following mitigation measure establishes the requirement for the TMP and minimizes the effect of construction activity on emergency access. Implementation of the mitigation measure will reduce this impact to a **less than significant** level.

Mitigation Measures

MM 3.3.4 The project applicant will prepare and implement a Traffic Management Plan (TMP) to minimize the inconveniences during construction. Included among the provisions, the contractor will coordinate with the City of Wildomar, Riverside County, and local police, fire, and emergency medical service providers regarding construction scheduling and any other practical measures to maintain adequate access to properties and response times. The TMP will include contact information for the general public who may have questions concerning the project and access to their property. Two-way

traffic through the construction zone will be maintained throughout the construction period.

Timing/Implementation: *Prior to fling of a final map*

Enforcement/Monitoring: *City of Wildomar Public Works and Planning Departments*

3.3.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

Future year traffic forecasts have been based upon four years of background (ambient) growth at 2 percent per year for 2015 traffic conditions. The total ambient growth is 8.24 percent for 2015 traffic conditions (compounded growth of 2 percent per year over four years). This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth has been added to daily and peak-hour traffic volumes on surrounding roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies.

Cumulative development trip generation rates and associated trip generation is shown in **Table 3.3-15.**

TABLE 3.3-15
CUMULATIVE DEVELOPMENT TRIP GENERATION SUMMARY

TAZ	Project Name	Land Use[1]	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
					In	Out	Total	In	Out	Total	
City of Wildomar											
1	Tulip Lane (08-0147)	SFDR	60	DU	**11**	**34**	**45**	**38**	**22**	**61**	**574**
2	Canyon Plaza/JR Oil (08-179)	Retail	33.800	TSF	51	33	84	147	160	307	3,394
		Pass-by Reduction (40%)			-20	-13	-34	-59	-64	-123	-1,358
		Fast Food w/Drive Thru	6.200	TSF	173	167	340	149	138	287	3,076
		Pass-by Reduction (45%)			-78	-75	-153	-67	-62	-129	-1,384
		Gas Station w/ Market	12	VFP	63	64	127	82	81	163	1,953
		Pass-by Reduction (60%)			-38	-38	-76	-49	-49	-98	-1,172
	Subtotal TAZ 2[3]				**151**	**137**	**288**	**203**	**204**	**407**	**4,509**
3	DL Almond (09-0265)	Wholesale Nursery	5.040	TSF	**6**	**6**	**12**	**13**	**13**	**26**	**197**
4	Baxter Crossing (10-0064)	Condo/Townhomes	265	DU	19	98	117	93	45	138	1,540
		Apartments	110	DU	11	45	56	44	24	68	732
		Retail	130.600	TSF	110	71	181	372	388	760	8,078
		Internal Trips (10% Residential)			-3	-14	-17	-14	-7	-21	-227
		Internal Trips (Retail)			-14	-3	-17	-7	-14	-21	-227
		Pass-by Reduction (25%-Retail Only)			0	0	0	-91	-94	-185	-1,963
	Subtotal TAZ 4[4]				**123**	**197**	**320**	**397**	**342**	**739**	**7,932**

TAZ	Project Name	Land Use[1]	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
					In	Out	Total	In	Out	Total	
5	Subway (10-0222)	Specialty Retail	10.500	TSF	**6**	**4**	**11**	**12**	**16**	**28**	**465**
6	Tentative Map No. 30522 (10/0301)	Retail	79.497	TSF	48	31	79	145	151	297	3,414
		Fast Food w/Drive Thru	1.500	TSF	38	36	74	26	24	51	744
		Pass-by Reduction (25%-Retail Only)									
		Gas Station w/ Market	6	VFP	30	30	61	40	40	80	977
		Pass-by Reduction (62%-AM; 56%-PM & Daily)			-19	-19	-38	-22	-22	-45	-547
	Subtotal TAZ 6				**98**	**79**	**177**	**190**	**193**	**383**	**4,588**
7	Richland Planned Community (11-0137)	SFDR	105	DU	**20**	**59**	**79**	**67**	**39**	**106**	**1,005**
City of Wildomar Total					**415**	**516**	**931**	**920**	**830**	**1,750**	**19,270**
City of Menifee											
8	Menifee Town Center Specific Plan	Retail[5]	150.000	TSF	92	59	150	275	285	560	6,441
		Retail	359.370	TSF	219	140	359	658	683	1,340	15,431
		Hotel	200	Room	68	44	112	62	56	118	1,634
		Office	65.340	TSF	89	12	101	16	81	97	719
		SFDR	577	DU	110	323	433	369	213	583	5,522
		Condo/Townhomes	475	DU	33	176	209	166	81	247	2,760
		Internal Capture			-8	-8	-16	-28	-28	-56	-524
		Pass-by Reduction (25% Retail Only)			0	0	0	-230	-238	-468	-5,403
	Subtotal TAZ 8				**602**	**746**	**1,348**	**1,288**	**1,133**	**2,421**	**26,581**
City of Menifee											
9	Santa Rosa Charter School[6]	Elementary School	363	STU	178	116	294	25	36	62	900
		Middle School	338	STU	166	108	274	24	34	57	166
		High School	400	STU	196	128	324	28	40	68	196
		Internal Capture			0	0	0	0	0	0	0
	Subtotal TAZ 9				**539**	**352**	**892**	**77**	**110**	**187**	**1,262**
10	PP 2010-123	Retail	263.160	TSF	161	103	263	482	500	982	11,300
		Pass-by Reduction (25% Retail Only)			0	0	0	-120	-125	-245	-2,825
	Subtotal TAZ 10				**161**	**103**	**263**	**361**	**375**	**736**	**8,475**
11	The Lakes TR 30422 (SP 247 Amendment 1)	SFDR	992	DU	**188**	**556**	**744**	**635**	**367**	**1,002**	**9,493**
12	TR 29636	SFDR	75	DU	**14**	**42**	**56**	**48**	**28**	**76**	**718**
13	TR 30142	SFDR	537	DU	**102**	**301**	**403**	**344**	**199**	**542**	**5,139**
14	Antelope Square	Retail	93.250	TSF	57	36	93	171	177	348	4,004
		Fast Food w/Drive Thru	2.000	TSF	50	48	99	35	32	68	992
		Pharmacy w/Drive Thru	14.000	TSF	21	16	37	73	73	145	1,234
		Gas Station w/ Market	16	VFP	81	81	163	107	107	214	2,604
		Self Storage	250	Units	3	3	5	3	3	5	63

TAZ	Project Name	Land Use[1]	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
					In	Out	Total	In	Out	Total	
		Pass-by Reduction (25% Retail Only)			0	0	0	-97	-98	-195	-2,224
	Subtotal TAZ 14				**212**	**184**	**397**	**291**	**294**	**585**	**6,673**
15	TR 31217	SFDR	1,200	DU	**228**	**672**	**900**	**768**	**444**	**1,212**	**11,484**
16	TR 30465	SFDR	8	DU	**2**	**4**	**6**	**5**	**3**	**8**	**77**
17	TR 31724	SFDR	15	DU	3	8	11	10	6	15	144
	TR 33883	SFDR	51	DU	10	29	38	33	19	52	488
	TR 31831	SFDR	110	DU	21	62	83	70	41	111	1,053
	Subtotal TAZ 17				**33**	**99**	**132**	**113**	**65**	**178**	**1,684**
18	PP 18014	Mini-Warehouse	191.263	TSF	**17**	**11**	**29**	**25**	**25**	**50**	**478**
19	TR 31194	SFDR	483	DU	92	270	362	309	179	488	4,622
	TR 33511	SFDR	71	DU	13	40	53	45	26	72	679
	Subtotal TAZ 19				**105**	**310**	**416**	**355**	**205**	**560**	**5,302**
20	TR 33371	Condo/Townhomes	229	DU	**16**	**85**	**101**	**80**	**39**	**119**	**1,330**
21	PP 22279	Discount Club	148.663	TSF	59	24	83	315	315	630	6,214
		Home Improvement	140.760	TSF	101	76	177	160	173	334	4,195
		Retail	237.377	TSF	145	93	237	434	451	885	10,193
		Pass-by Reduction (25%)			0	0	0	-228	-235	-462	-5,150
	Subtotal TAZ 21				**306**	**192**	**498**	**683**	**704**	**1,387**	**15,451**
22	Shops at Scott	Retail	82.000	TSF	50	32	82	150	156	306	3,521
		Fast Food w/Drive Thru	9.000	TSF	227	218	444	158	146	305	4,465
		Pass-by Reduction (25%)			0	0	0	-77	-75	-153	-1,997
	Subtotal TAZ 22				**227**	**218**	**444**	**81**	**71**	**152**	**2,469**
23	PP 21452 & PP 22280	General Light Industrial	872.347	TSF	707	96	803	105	741	846	6,080
	PP 18570	Warehousing	109.935	TSF	26	7	33	9	26	35	391
	PP 20021	Warehousing	4.500	TSF	1	0	1	0	1	1	16
	Subtotal TAZ 23				**734**	**103**	**837**	**114**	**769**	**883**	**6,488**
24	Cantalena	SFDR	353	DU	67	198	265	226	131	357	3,378
		Apartments	851	DU	85	349	434	340	187	528	5,659
	Subtotal TAZ 24				**152**	**547**	**699**	**566**	**318**	**884**	**9,037**
25	TR 31229	SFDR	242	DU	46	136	182	155	90	244	2,316
	TR 32277	SFDR	411	DU	78	230	308	263	152	415	3,933
	Subtotal TAZ 25				**124**	**366**	**490**	**418**	**242**	**660**	**6,249**
26	TR 30433	SFDR	498	DU	**95**	**279**	**374**	**319**	**184**	**503**	**4,766**
27	TR 32628	SFDR	364	DU	69	204	273	233	135	368	3,483
	TR 28206	SFDR	148	DU	28	83	111	95	55	149	1,416
	Subtotal TAZ 27				**97**	**287**	**384**	**328**	**189**	**517**	**4,900**

TAZ	Project Name	Land Use[1]	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
					In	Out	Total	In	Out	Total	
28	Murrieta Fields II	SFDR	10	DU	2	6	8	6	4	10	96
	Sepulveda Bldg.	General Light Industrial	2.500	TSF	2	0	2	0	2	2	17
	Golden City SP	SFDR	502	DU	95	281	377	321	186	507	4,804
		Retail	23.340	TSF	14	9	23	43	44	87	1,002
		Pass-by Reduction (25%)			0	0	0	-11	-11	-22	-251
	Keller Commercial	Retail	5.875	TSF	4	2	6	11	11	22	252
		Pass-by Reduction (25%)			0	0	0	-3	-3	-5	-63
	Subtotal TAZ 28				**117**	**298**	**416**	**368**	**233**	**601**	**5,858**
29	Murrieta Hills	Senior Adult Housing	1,012	DU	**81**	**142**	**223**	**162**	**111**	**273**	**3,755**
30	TR 28788	SFDR	119	DU	23	67	89	76	44	120	1,139
	TR 28790	SFDR	110	DU	21	62	83	70	41	111	1,053
	Subtotal TAZ 30				**44**	**128**	**172**	**147**	**85**	**231**	**2,192**
31	Menifee Walmart Shopping Center (PP 22674)[7]	Discount Superstore	205.000	TSF	193	150	342	463	482	945	10,892
		Auto Care Center	6.680	TSF	13	7	20	11	11	23	134
		Specialty Retail	13.800	TSF	8	5	14	16	21	37	612
		Sit-Down Restaurant	6.500	TSF	39	36	75	43	30	72	826
		Fast Food w/Drive Thru	6.200	TSF	156	150	306	109	101	210	3,076
		Gas Station w/ Market & Car Wash	16	VFP	97	94	191	114	109	223	2,445
		Internal Capture (10%)			-45	-45	-90	-78	-78	-156	-1,883
		Pass-by Reduction (25%)			0	0	0	-51	-48	-99	-1,242
	Subtotal TAZ 31				**461**	**396**	**858**	**628**	**628**	**1,255**	**14,860**
CITY OF MENIFEE TOTAL					**4,658**	**6,420**	**11,079**	**8,202**	**6,821**	**15,022**	**154,720**
GRAND TOTAL					**5,073**	**6,936**	**12,009**	**9,122**	**7,650**	**16,772**	**173,990**

1 SFDR = Single Family Detached Residential
2 DU = Dwelling Units; TSF = Thousand Square Feet; VFP = Vehicle Fueling Positions
3 Project trip generation is consistent with the Canyon Plaza Traffic Study (Darnell & Associates, Inc., November 10, 2003).
4 Project trip generation is consistent with the Baxter Crossing Traffic Impact Analysis (Urban Crossroads, Inc., June 17, 2010).
5 Menifee Village Shopping Center (2011-130).
6 School site located within Menifee Town Center Specific Plan. Internal interaction with proposed residential within SP.
7 Project trip generation is consistent with the Menifee Shopping Center Traffic Impact Analysis (Urban Crossroads, Inc., May 10, 2010).

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Traffic Impacts on Local Roadways and State Highways

Impact 3.3.5 When considered with existing, proposed, planned, and approved development in the region, implementation of the proposed project would contribute to cumulative traffic volumes in the region that result in significant impacts to level of service and operations. This is considered a **cumulatively considerable** impact.

A significant cumulative impact has been identified when an intersection is projected to operate below the requisite level of service standard under pre-project conditions and the project's measurable increase in traffic, as defined by 50 or more peak-hour trips, contributes to

the deficiency. Mitigation measures necessary to reduce cumulative impacts to less than cumulatively considerable are also discussed below.

Murrieta Road/Scott Road – This intersection was found to operate at an unacceptable level of service (LOS F) during the weekday PM peak hour under existing (2011) conditions and is anticipated to continue to operate at LOS F during the PM peak hour with the addition of project traffic (as measured by 50 or more peak-hour trips). It is also anticipated to operate at an unacceptable LOS (LOS F) during the AM and PM peak hours under Opening Year (2015) without Project conditions and to operate at LOS F during the peak hours in 2035 with the addition of project traffic (as measured by 50 or more peak-hour trips).

I-215 Southbound Ramps/Scott Road (#12) – This intersection is anticipated to operate at an unacceptable LOS (LOS F) during the AM and PM peak hours under Opening Year (2015) without Project conditions and is anticipated to continue to operate at LOS F during the peak hours with the addition of project traffic (as measured by 50 or more peak-hour trips).

I-215 Northbound Ramps/Scott Road (#13) – This intersection is anticipated to operate at an unacceptable level of service (LOS F) during the AM and PM peak hours under Opening Year (2015) without Project conditions and is anticipated to continue to operate at LOS F during the peak hours with the addition of project traffic (as measured by 50 or more peak-hour trips).

Cumulative impacts on these roadway intersections are considered **cumulatively considerable**.

Mitigation Measures

MM 3.3.5 The project applicant shall be required to implement, or pay a fair share of the costs of the implementation of, the following traffic improvements:

Murrieta Road/Scott Road

- Install a traffic signal.
- Construct an eastbound left turn lane.
- Restripe the southbound shared left-right turn lane as a right turn lane and construct two left turn lanes.
- Construct an additional eastbound through lane.
- Construct an additional westbound through lane and a dedicated right turn lane.

I-215 Southbound Ramps/Scott Road

- Restripe the southbound shared left-through lane as a left turn lane and construct a second left turn lane and second right turn lane.
- Construct three additional eastbound through lanes.
- Eliminate the westbound left turn lane and construct two additional through lanes and a right turn lane.

It should be noted that these improvements are consistent with the planned Bundy Canyon Road/Scott Road and Interstate 215 at Scott Road interchange improvements planned by the Riverside County Transportation Commission funded by the Transportation Uniform Mitigation Fee.

I-215 Northbound Ramps/Scott Road

- Construct a second northbound right turn lane and restripe the shared left-through lane as a through lane.
- Construct two southbound right turn lanes.
- Construct a second eastbound left turn lane and two additional through lanes.
- Construct two additional westbound through lanes and a shared through-right turn lane.

It should be noted that these improvements are consistent with the planned Bundy Canyon Road/Scott Road and Interstate 215 at Scott Road interchange improvements planned by the Riverside County Transportation Commission funded by the Transportation Uniform Mitigation Fee. This project's payment of the TUMF is considered adequate mitigation.

Timing/Implementation: *Prior to issuance of building permits*

Enforcement/Monitoring: *City of Wildomar Public Works and Building Departments*

The effectiveness of the recommended improvements discussed above to address Existing plus Project cumulative traffic impacts is presented in **Table 3.3-16**. The effectiveness of the recommended improvements discussed above to address Opening Year (2015) with Project cumulative traffic impacts is presented in **Table 3.3-17**. With implementation of the intersection mitigation discussed above, project-related cumulative impacts to study area intersections would be **less than cumulatively considerable**.

TABLE 3.3-16
INTERSECTION ANALYSIS FOR EXISTING PLUS PROJECT CONDITIONS WITH CUMULATIVE MITIGATION MEASURES

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
11	Murrieta Rd./Scott Rd.																	
	- Pre-Project Conditions	AWS	0	0	0	0	1	0	0	1	0	0	1	0	18.7	***39.4***	C	***F***[4]
	- With Cumulative Mitigation	**TS**	0	0	0	0	1	0	**1**	1	0	0	1	0	18.3	18.5	B	B

1. *When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes.*

   L = Left; T = Through; R = Right; ≥ Right-Turn Overlap Phasing; d= De Facto Right Turn Lane; ***1*** *= Improvement*

2. *Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.*
3. *CSS = cross-street stop; AWS = all-way stop; TS = traffic signal*
4. *Volume-to-capacity ratio is greater than 1.00; Intersection unstable; Level of Service F.*

TABLE 3.3-17
INTERSECTION ANALYSIS FOR OPENING YEAR (2015) CONDITIONS WITH CUMULATIVE MITIGATION MEASURES

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												2015 With Project			
			Northbound			Southbound			Eastbound			Westbound			Delay[2] (secs.)		Level of Service	
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
11	Murrieta Rd./Scott Rd.																	
	- Pre-Project Conditions	AWS	0	0	0	0	1	0	0	1	0	0	1	0	***>80.0***	***>80.0***	***F***	***F***
	- With Cumulative Mitigation	**TS**	0	0	0	**2**	**0**	**1**	**1**	**2**	0	0	**2**	**1**	18.0	24.9	B	C
12	I-215 SB Ramps/Scott Rd.																	
	- Pre-Project Conditions	TS	0	0	0	0	1	1	0	1	1	1	1	0	***>80.0***	***>80.0***	***F***	***F***
	- With Cumulative Mitigation	TS	0	0	0	**2**	**0**	**2**	0	**4**	1	**0**	**3**	**1**	10.7	16.9	B	B
13	I-215 NB Ramps/Scott Rd.																	
	- Pre-Project Conditions	TS	0	1	1	0	0	0	1	1	0	0	1	1	***>80.0***	***>80.0***	***F***	***F***
	- With Cumulative Mitigation	TS	0	1	**2**	0	0	**2**	**2**	**3**	0	0	**4**	1	24.3	41.4	C	D

1. *When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes.*
   *L = Left; T = Through; R = Right; ≥Right-Turn Overlap Phasing; d= De Facto Right Turn Lane; **1** = Improvement*
2. *Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.*
3. *CSS = cross-street stop; AWS = all-way stop; TS = traffic signal*

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3.4 AIR QUALITY

This section includes a description of existing air quality conditions, a summary of applicable regulations, a description of existing air quality conditions, and an analysis of potential air quality impacts associated with the proposed Oak Creek Canyon Development project. Mitigation measures are recommended, as necessary, to reduce significant air quality impacts. This air quality analysis and the associated modeling were conducted by Urban Crossroads, Inc. (see **Appendix 3.4-1**).

3.4.1 EXISTING SETTING

SOUTH COAST AIR BASIN

South Coast Air Basin Characteristics

The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. The project site is located in the South Coast Air Basin (SCAB), which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County. The SCAB is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD), the air quality officer of the SCAB. The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards.

Regional Climate

The regional climate significantly influences the air quality in the SCAB. In addition, temperature, wind, humidity, precipitation, and the amount of sunshine influence air quality.

The annual average temperatures throughout the SCAB vary from the low to middle 60s (degrees Fahrenheit (F)). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide (SO_2) to sulfates is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity in the SCAB is 71 percent along the coast and 59 percent inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. It should be noted that these effects decrease with distance from the coast.

More than 90 percent of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately 9 inches in Riverside to 14 inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB, with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant

radiation is a key factor in photochemical reactions. On the shortest day of the year, there are approximately 10 hours of possible sunshine, with approximately 14½ hours of possible sunshine on the longest day of the year.

The importance of wind to air pollution is considerable. The direction and speed of the wind determine the horizontal dispersion and transport of air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. The late autumn to early spring rainy season also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas," each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over Southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the Catalina Eddy, a low-level cyclonic (counterclockwise) flow centered over Santa Catalina Island, which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, two distinct temperature inversion structures control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing, which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as nitrogen oxides (NO_X) and carbon monoxide (CO) from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

Wind Patterns and Project Location

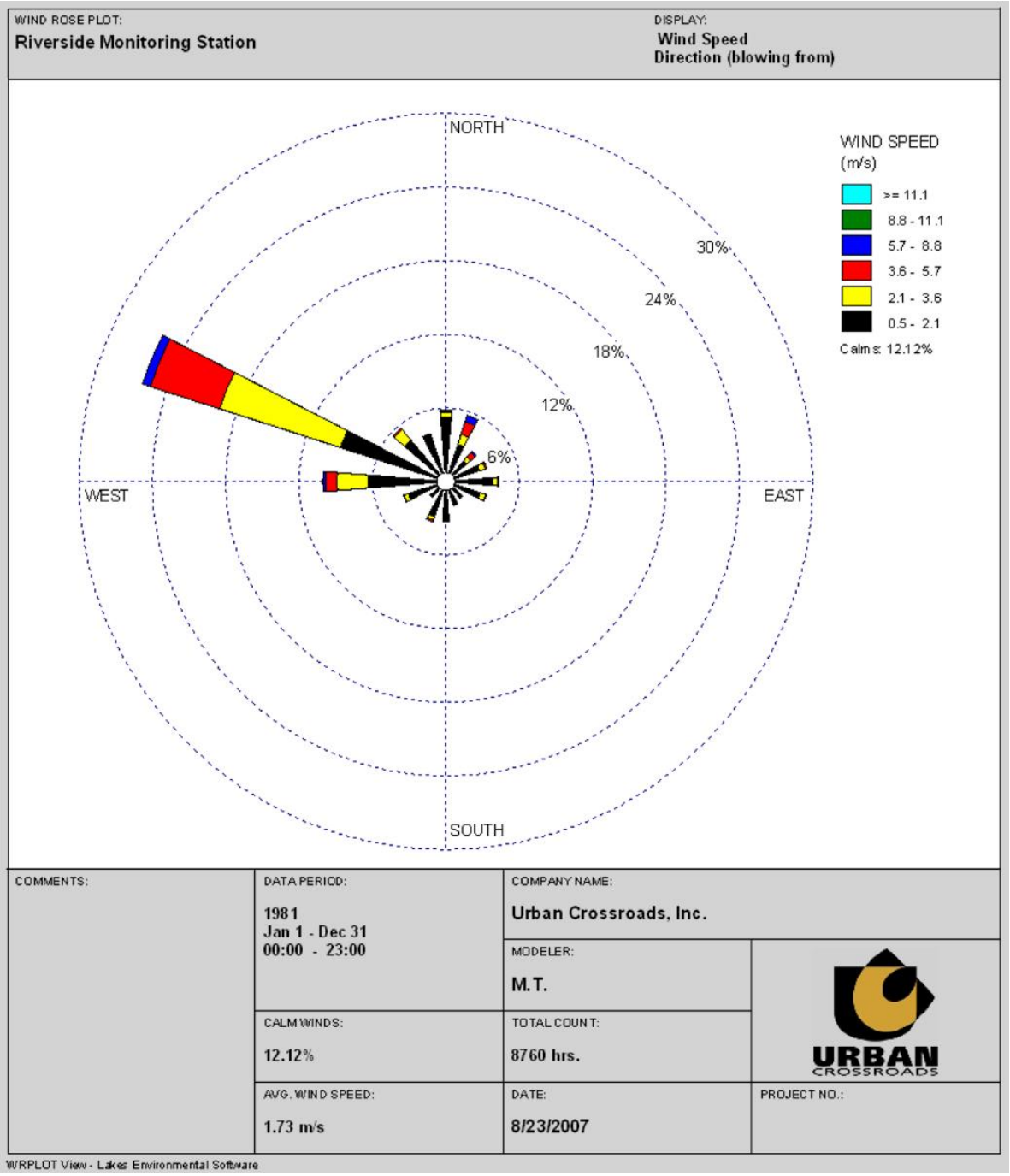
The distinctive climate of the project area and the SCAB is determined by its terrain and geographical location. The SCAB is located in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant, with high mountains forming the remainder of the perimeter.

Wind patterns across the south coastal region are characterized by westerly and southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light, although the speed is somewhat greater during the dry summer months than during the rainy winter season.

The prevailing winds in the project area move predominantly from west to east and southwest to northeast with an average wind speed of 1.73 meters per second (m/s). A wind rose exhibit is included in **Figure 3.4-1** and shows prevailing wind patterns and average speed in the project

area. Meteorological data from the SCAQMD's Riverside monitoring station was used to be representative of the project area. Meteorological data was available for use by the SCAQMD on its website.

FIGURE 3.4-1 WIND ROSE



Existing Air Quality

Existing air quality is measured based on ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect, as well health effects of each pollutant regulated under these standards, are shown in **Table 3.4-1**.

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards presented in **Table 3.4-1**. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for ozone (O_3), CO, SO_2, nitrogen dioxide (NO_2), coarse particulate matter sized between 2.5 and 10 microns (PM_{10}), and fine particulate matter sized less than 2.5 microns ($PM_{2.5}$) are not equaled or exceeded at any time in any consecutive three-year period, and the federal standards (other than O_3, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not exceeded more than once per year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

TABLE 3.4-1
STATE AND NATIONAL CRITERIA POLLUTANT STANDARDS, EFFECTS, AND SOURCE

Pollutant	Averaging Time	California Standards	National Standards	Health and Atmospheric Effects	Major Sources
Ozone	1 hour	0.09 ppm	–	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue	Formed when reactive organic gases (ROG) and nitrogen oxides (NOx) react in the presence of sunlight. Major sources include on-road vehicles, solvent evaporation, and commercial/industrial mobile equipment.
	8 hours	0.07 ppm[1]	0.075 ppm		
Carbon Monoxide	1 hour	20 ppm	35 ppm	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm		
Nitrogen Dioxide	1 hour	0.18 ppm	–	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations. Industrial sources, aircraft, ships, and railroads.
	Annual Avg.	0.030 ppm	0.053 ppm		

Pollutant	Averaging Time	California Standards	National Standards	Health and Atmospheric Effects	Major Sources
Sulfur Dioxide	1 hour	0.25 ppm	75 ppb	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	24 hours	0.04 ppm	–		
Particulate Matter (PM_{10})	24 hours	50 $\mu g/m^3$	150 $\mu g/m^3$	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	Annual Average	20 $\mu g/m^3$	–		
Particulate Matter – Fine ($PM_{2.5}$)	24 hours	–	35 $\mu g/m^3$	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning. Also formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.
	Annual Average	12 $\mu g/m^3$	15 $\mu g/m^3$		
Lead	Monthly Average	1.5$\mu g/m^3$	–	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction.	Present sources: lead smelters, battery manufacturing and recycling facilities. Past sources: combustion of leaded gasoline.
	Quarterly	–	1.5 $\mu g/m^3$		
	Rolling 3-Month Average	–	0.15$\mu g/m^3$		
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations)	Geothermal power plants, petroleum projections and refining.
Sulfates	24 hours	25 $\mu g/m^3$	No National Standard	Breathing difficulties, aggravates asthma, reduced visibility.	Produced by the reaction in the air of sulfur oxide.
Visibility-Reducing Particles	8 hours	Light extinction of 0.23/km; visibility of 10 miles or more	No National Standard	Reduces visibility, reduced airport safety, lower real estate value, discourages tourism.	See PM_{10}/$PM_{2.5}$.

Source: Urban Crossroads 2012
Notes: ppm = parts per million; ppb = parts per billion; $\mu g/m^3$ = micrograms per cubic meter

Regional Air Quality

The SCAQMD monitors levels of various criteria pollutants at 30 monitoring stations throughout the air district. In 2010, state standards were exceeded on one or more days for O_3 and PM_{10}, and federal standards were exceeded on one or more days for O_3 and $PM_{2.5}$ at most monitoring locations. No areas of the SCAB exceeded federal or state standards for NO_2, SO_2, CO, sulfates, or lead. See **Table 3.4-2** for attainment designations for the SCAB.

TABLE 3.4-2
ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SOUTH COAST AIR BASIN (SCAB)

Pollutant	State	Federal
1-hour Ozone (O_3)	Nonattainment	No Standard
8-hour Ozone (O_3)	Nonattainment	Extreme Nonattainment[1]
Coarse Particulate Matter (PM_{10})	Nonattainment	Serious Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Attainment/Maintenance
Nitrogen Dioxide (NO_2)	Nonattainment[2]	Attainment/Maintenance
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead	Attainment/Nonattainment[3]	Attainment
All Others	Attainment/Unclassified	Attainment/Unclassified

Source: Urban Crossroads 2012
[1] The EPA approved redesignation from Severe 17 to Extreme Nonattainment on May 5, 2010, to be effective June 4, 2010.
[2] The SCAB was reclassified from attainment to nonattainment for nitrogen dioxide on March 25, 2010.
[3] Los Angeles County was reclassified from attainment to nonattainment for lead on March 25, 2010; the remainder of the SCAB is in attainment of the state standard.

Local Air Quality

The nearest long-term air quality monitoring in relation to the project for O_3, CO, and NO_2 is carried out by the SCAQMD at the Lake Elsinore monitoring station located in Source Receptor Area 25 (SRA 25). Data for coarse particulates (PM_{10}) was obtained from the Perris Valley monitoring station located in SRA 24. Data for ultrafine particulates ($PM_{2.5}$) was obtained from the Metropolitan Riverside County 2 monitoring station, located in SRA 23. It should be noted that the Perris Valley and Metropolitan Riverside County 2 monitoring stations were utilized in lieu of the Lake Elsinore monitoring station only where data was not available from the nearest monitoring site. The three years of data in **Table 3.4-3** show the number of days standards were exceeded for the study area. Additionally, data for SO_2 has been omitted, as attainment is regularly met in the SCAB and few monitoring stations measure SO_2 concentrations.

TABLE 3.4-3
PROJECT AREA AIR QUALITY MONITORING SUMMARY 2008–2010[1]

Pollutant	Standard	Year		
		2008	2009	2010
Ozone (O_3) – nonattainment for state and federal standards				
Maximum 1-Hour Concentration (ppm)	–	0.139	0.128	0.107
Maximum 8-Hour Concentration (ppm)	–	0.118	0.105	0.091
Number of Days Exceeding State 1-Hour Standard	>0.09 ppm	49	34	15
Number of Days Exceeding State 8-Hour Standard	>0.07 ppm	92	65	42
Number of Days Exceeding Federal 8-Hour Standard	>0.075 ppm	32	37	24
Number of Days Exceeding Health Advisory	≥0.15 ppm	0	0	0
Carbon Monoxide (CO) – attainment for state and federal standards				
Maximum 1-Hour Concentration (ppm)	–	1.0	1.0	1.0
Maximum 8-Hour Concentration (ppm)	–	1.0	0.7	0.6
Number of Days Exceeding Federal/State 8-Hour Standard	>9.0 ppm	0	0	0
Number of Days Exceeding State 1-Hour Standard	>20 ppm	0	0	0
Number of Days Exceeding State 1-Hour Standard	>35 ppm	0	0	0
Nitrogen Dioxide (NO_2) – nonattainment for state standard, attainment for federal standard				
Maximum 1-Hour Concentration (ppm)	–	0.06	0.06	0.05
Annual Arithmetic Mean Concentration (ppm)	–	0.0129	0.0129	0.0129
Number of Days Exceeding State 1-Hour Standard	>0.18 ppm	0	0	0
Respirable Particulate Matter (PM_{10})[2]– nonattainment for state and federal standards				
Maximum 24-Hour Concentration (µg/m^3)	–	85	80	51
Number of Samples	–	45	58	61
Number of Samples Exceeding State Standard	>50 µg/m^3	12	9	1
Number of Samples Exceeding Federal Standard	>150 µg/m^3	0	0	0
Fine Particulate Matter ($PM_{2.5}$)[3]– nonattainment for state and federal standards				
Maximum 24-Hour Concentration (µg/m^3)	–	43.0	49.3	43.7
Annual Arithmetic Mean (µg/m^3)	–	13.4	16.9	11.0
Number of Samples Exceeding Federal 24-Hour Standard	>35µg/m^3	4	16	2

Source: Urban Crossroads 2012
Notes: µg/m^3 = micrograms per cubic meter; ppm = parts per million
1. Lake Elsinore (SRA 25) Monitoring Station used unless otherwise noted.
2. Perris Valley (SRA 24) Monitoring Station used.
3. Metropolitan Riverside County 2 (SRA 23) Monitoring Station used.

Criteria pollutants are pollutants that are regulated through the development of human health–based and/or environmentally based criteria for setting permissible levels. Examples of sources and effects of the criteria pollutants are identified below.

- **Carbon Monoxide (CO):** A colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood.

- **Sulfur Dioxide (SO_2):** A colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant, mainly as a result of burning high-sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms sulfates (SO_4). Collectively, these pollutants are referred to as sulfur oxides (SO_X).

- **Ozone (O_3):** A highly reactive and unstable gas that is formed when reactive organic gases (ROGs) and nitrogen oxides (NO_X), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.

  - **Reactive Organic Gases (ROG):** While not a criteria air pollutant, reactive organic gases (ROG) are precursors in forming ozone and consist of compounds containing methane, ethane, propane, butane, and longer-chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and nitrogen oxides react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant.

- **Nitrogen Oxides (oxides of nitrogen, or NO_x):** Consist of nitric oxide (NO), nitrogen dioxide (NO_2), and nitrous oxide (N_2O) and formed when nitrogen (N_2) combines with oxygen (O_2). Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide to 170 years for nitrous oxide. Nitrogen oxides are typically created during combustion processes and are major contributors to smog formation and acid deposition. NO_2 is a criteria air pollutant and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO_2 is the most abundant in the atmosphere. Because ambient concentrations of NO_2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO_2 than those indicated by regional monitors.

- **PM_{10} (particulate matter less than 10 microns):** A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. PM_{10} also causes visibility reduction.

- **$PM_{2.5}$ (particulate matter less than 2.5 microns):** A similar air pollutant consisting of tiny solid or liquid particles that are 2.5 microns or smaller (which are often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO_2 release from power plants and industrial facilities and nitrates that are formed from NO_X release from power plants, automobiles, and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions.

- **Lead:** A heavy metal that is highly persistent in the environment. In the past, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. As a result of the removal of lead from gasoline, there have been no violations at any of the

SCAQMD's regular air monitoring stations since 1982. Currently, emissions of lead are largely limited to stationary sources such as lead smelters. It should be noted that the proposed project is not anticipated to generate a quantifiable amount of lead emissions.

HEALTH EFFECTS OF AIR POLLUTANTS

Ozone

Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible subgroups for ozone effects. Short-term exposure (lasting for a few hours) to ozone at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated ozone levels are associated with increased school absences. In recent years, a correlation between elevated ambient ozone levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple sports and live in communities with high ozone levels.

Ozone exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes ozone may be more toxic than exposure to ozone alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

Carbon Monoxide

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (oxygen deficiency) as seen at high altitudes.

Reduction in birth weight and impaired neurobehavioral development have been observed in animals chronically exposed to CO, resulting in COHb levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels; these include pre-term births and heart abnormalities.

Particulate Matter

A consistent correlation between elevated ambient fine particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, the number and severity of asthma attacks, and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life span, and increased mortality from lung cancer.

Daily fluctuations in $PM_{2.5}$ concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long-term exposure to particulate matter.

The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$.

Nitrogen Dioxide

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO_2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. An increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these subgroups.

In animals, exposure to levels of NO_2 considerably higher than ambient concentrations results in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of ozone exposure increases when animals are exposed to a combination of ozone and NO_2.

Sulfur Dioxide

A few minutes of exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increases in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2.

Animal studies suggest that despite SO_2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.

Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.

Lead

Fetuses, infants, and children are more sensitive than others to the adverse effects of lead exposure. Exposure to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased lead levels are associated with increased blood pressure.

Lead poisoning can cause anemia, lethargy, seizures, and death, although it appears that there are no direct effects of lead on the respiratory system. Lead can be stored in the bone from early age environmental exposure, and elevated blood lead levels can occur due to

breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland), and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of lead because of previous environmental lead exposure of their mothers.

TOXIC AIR CONTAMINANTS

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity, including compounds such as benzene, ethylene dibromide, haxavalent chromium, cadmium, and vinyl chloride. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

To date, CARB has designated nearly 200 compounds as toxic air contaminants. Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to a relatively few compounds, one of the most important in Southern California being particulate matter from diesel-fueled engines. In 1998, CARB identified particulate emissions from diesel-fueled engines (diesel PM) as a toxic air contaminant. Previously, the individual chemical compounds in the diesel exhaust were considered as TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

In 2008, the South Coast Air Quality Management District updated a study on ambient concentrations of TACs and estimated the potential health risks from air toxics. The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,200 in a million. The largest contributor to this risk was diesel exhaust, accounting for 84 percent of the air toxics risk (SCAQMD 2008).

ODORS

The science of odor as a health concern is still new. Merely identifying the hundreds of gaseous compounds that cause odors poses a big challenge. Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, some of the gases that cause odors, such as ROGs, can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress. The Farm Mutual Water Company operates a wastewater treatment facility south of the proposed project site. The spray field used to dispose of wastewater is adjacent to the

proposed project site. The spray field is fenced and at its closest point is 150 feet south of lot 128 of the proposed subdivision.

3.4.2 REGULATORY FRAMEWORK

FEDERAL

The US Environmental Protection Agency (EPA) is responsible for setting and enforcing the National Ambient Air Quality Standards for the criteria pollutants O_3, CO, NO_x, SO_2, PM_{10}, and lead. The EPA has jurisdiction over emissions sources that are under the authority of the federal government, including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet CARB's stricter emission requirements.

The federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards and the NAAQS, and specifies future dates for achieving compliance. The CAA also mandates that states submit and implement State Implementation Plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions), as opposed to other sections of the CAA such as Title II (Aircraft Emissions Standards) and Title III (Vapor Recovery for Small Business Marketers of Petroleum Project), which are not applicable to the proposed project.

Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants: O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and lead. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt a standard for $PM_{2.5}$. **Table 3.4-1** (previously presented) provides the NAAQS within the South Coast Air Basin.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_x. NO_x is a collective term that includes all forms of nitrogen oxides (NO, NO_2, NO_3), which are emitted as byproducts of the combustion process.

STATE

The California Air Resources Board, which became part of the California EPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and regulating emissions from consumer products and motor vehicles. The California CAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. CARB established the California Ambient Air Quality Standards for all pollutants for which the federal government has National Ambient Air Quality Standards and, in addition, establishes standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. However at this time, hydrogen sulfide and vinyl chloride are not measured at any

monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS.

Local air quality management districts, such as the SCAQMD, regulate air emissions from commercial and light industrial facilities. All air pollution control districts have been formally designated as attainment or nonattainment for each CAAQS.

Serious nonattainment areas are required, pursuant to the Clean Air Act, to prepare air quality management plans that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources.
- Development of control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g., motor vehicle use generated by residential and commercial development).
- A district permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions.
- Implementation of reasonably available transportation control measures and assurances of a substantial reduction in growth rate of vehicle trips and miles traveled.
- Significant use of low emissions vehicles by fleet operators.
- Sufficient control strategies to achieve a 5 percent or more annual reduction in emissions or 15 percent or more in a period of three years for ROGs, NO_x, CO, and PM_{10}. However, air basins may use an alternative emission reduction strategy that achieves a reduction of less than 5 percent per year under certain circumstances.

AIR QUALITY MANAGEMENT PLANNING

Currently, the NAAQS and CAAQS for O_3, PM_{10}, $PM_{2.5}$, and NO_2 are exceeded in most parts of the South Coast Air Basin. In response, the SCAQMD has adopted a series of air quality management plans (AQMPs) to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and project consistency with the AQMP is provided below.

3.4.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Per Appendix G of the California Environmental Quality Act (CEQA) Guidelines, air quality impacts are considered significant if implementation of the proposed project would:

1) Conflict with or obstruct implementation of an applicable air quality plan.
2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

3) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

4) Expose sensitive receptors to substantial pollutant concentrations.

5) Create objectionable odors affecting a substantial number of people.

The SCAQMD has developed regional and localized significance thresholds for regulated pollutants, as summarized at **Table 3.4-4**. The SCAQMD's CEQA Air Quality Significance Thresholds (March 2009) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

TABLE 3.4-4
MAXIMUM DAILY EMISSIONS THRESHOLDS

Pollutant	Construction	Operational
NO_x	100 lbs/day	55 lbs/day
ROG	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day

Source: Urban Crossroads 2012

Furthermore, based on the SCAQMD's *CEQA Air Quality Handbook* (1993), project impacts would be significant if they exceed the following California standards for localized CO concentrations:

- 1-hour CO standard of 20.0 parts per million (ppm)
- 8-hour CO standard of 9.0 ppm

The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as localized significance thresholds (LSTs). The significance of localized emissions impacts depends on whether ambient levels in the vicinity of the project are above or below state standards. In the case of CO and NO_2, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a state or federal standard, then project emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM_{10} and $PM_{2.5}$, both of which are nonattainment pollutants.

The SCAQMD established localized significance thresholds in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4. Localized significance thresholds represent

the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that a lead agency can use the LSTs as another indicator of significance in its air quality impact analyses.

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted localized significance thresholds that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects.

METHODOLOGY

On February 3, 2011, the SCAQMD released the California Emissions Estimator Model (CalEEMod). The purpose of this new model is to more accurately calculate air quality emissions from direct and indirect sources and to quantify applicable air quality reductions achieved from mitigation measures. As such, the latest version of CalEEMod has been used for the proposed project to determine construction and operational air quality impacts. Output from the model runs for both construction and operational activity is provided in **Appendix 3.4-1.**

For purposes of this analysis, LSTs have been evaluated only for construction of the proposed project and would not apply to emissions during operational activity. Localized concentration cannot be properly quantified during operations due to the variable locations of mobile sources, which make up the largest source of criteria air pollutants under operational activity of the proposed project. Only CO concentrations at roadway intersections with an adverse level of service may be quantified, as evaluated in Impact 3.4.4.

IMPACTS AND MITIGATION MEASURES

Regional Air Quality Management Planning (Standard of Significance 1)

Impact 3.4.1 Land use activities associated with the proposed project will not conflict with or obstruct implementation of regional air quality management planning. This impact is **less than significant**.

The project site is located within the SCAB, which is characterized by relatively poor air quality. The South Coast Air Quality Management District has jurisdiction over an approximately 12,000-square-mile area consisting of the four-county South Coast Air Basin and the Los Angeles County and Riverside County portions of what used to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control and works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments, as well as with state and federal agencies, to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, these state and federal air quality standards are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of air quality management plans (AQMPs) to meet the state and federal ambient air quality standards. AQMPs are updated regularly (approximately every three years) in order to more effectively reduce emissions, accommodate growth, and minimize any negative fiscal impacts of air pollution control on the economy.

The SCAQMD published the *Draft Final 2007 Air Quality Management Plan*, which was adopted by the SCAQMD Governing Board on June 1, 2007. In September 2007, the CARB Board adopted the SCAQMD 2007 AQMP as part of the State Implementation Plan. The purpose of the 2007 AQMP for the South Coast Air Basin (and for those portions of the Salton Sea Air Basin under the SCAQMD's jurisdiction) is to set forth a comprehensive program that will lead these areas into compliance with federal and state air quality planning requirements for ozone and $PM_{2.5}$. On September 27, 2007, the CARB Board adopted the State Strategy for the 2007 State Implementation Plan and the SCAQMD's 2007 AQMP as part of the SIP. Additionally, the 2007 AQMP has been submitted to the EPA for approval; no timeline on the approval is available at this time.

As part of the *Draft Final 2007 Air Quality Management Plan*, the SCAQMD is requesting the EPA's approval of a "bump-up" to the "extreme" nonattainment classification for ozone in the South Coast Air Basin, which would extend the attainment date to 2024 and allow for the attainment demonstration to rely on emission reductions from measures that anticipate the development of new technologies or improvement of existing control technologies. Although $PM_{2.5}$ plans for nonattainment areas were due in April 2008, the 2007 AQMP also focuses on attainment strategies for the $PM_{2.5}$ standard through stricter control of sulfur oxides, directly emitted $PM_{2.5}$, NO_X, and ROGs. The need to commence $PM_{2.5}$ control strategies before April 2008 is due to the attainment date for $PM_{2.5}$ (2015) being much earlier than that for ozone (2021 for the current designation of severe 17 or 2024 for the extreme designation). However, it should be noted that the $PM_{2.5}$ plans are still in the process of being submitted. Control measures and strategies for $PM_{2.5}$ will also help control ozone generation in the region because $PM_{2.5}$ and ozone share similar precursors (e.g., NO_X). The SCAQMD has integrated $PM_{2.5}$ and ozone reduction control measures and strategies in the 2007 AQMP. In addition, the AQMP focuses on reducing ROG emissions, which have not been reduced at the same rate as NO_X emissions in the past. Hence, the South Coast Air Basin has not achieved the reductions in ozone as were expected in previous plans.

The 2007 AQMP was based on assumptions provided by both CARB and SCAG in the new EMFAC2007 model for the most recent motor vehicle and demographics information, respectively. The air quality levels projected in the 2007 AQMP are based on several assumptions. For example, the 2007 AQMP assumed that development associated with general plans, specific plans, residential projects, and wastewater facilities will be constructed in accordance with population growth projections identified by SCAG in its 2004 Regional Transportation Plan. The 2007 AQMP also has assumed that such development projects will implement strategies to reduce emissions generated during the construction and operational phases of development. The project's consistency with the 2007 AQMP is discussed below.

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3, of the SCAQMD's *CEQA Air Quality Handbook* (1993). These indicators are discussed below.

- Consistency Criterion No. 1: The proposed project will not result in an increase in the frequency or severity of existing air quality violations, or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

  The violations that Consistency Criterion No. 1 refers to are the CAAQS and NAAQS. As evaluated as part of the project localized significance thresholds analysis (presented in Impact 3.4-2 below), the project will not exceed the short-term construction standards, with mitigation imposed, or long-term operational standards for localized emissions and in so doing will not violate the CAAQS. Additionally, the analysis for long-term local air

quality impacts showed that future CO concentration levels along roadways and at intersections affected by project traffic will not exceed the 1-hour and 8-hour state CO pollutant concentration standards.

Lastly, neither construction nor operational emissions will be generated in excess of the SCAQMD's regional threshold criteria (see Impacts 3.4-3 and 3.4-4); thus, a less than significant impact is expected. On the basis of the preceding discussion, the project is determined to be consistent with the first criterion.

- Consistency Criterion No. 2: The proposed project will not exceed the assumptions in the AQMP in 2011 or increments based on the years of project buildout phase.

  CEQA requires that projects be consistent with the applicable air quality management plan. Projects that are consistent with the projections of employment and population identified in the Growth Management Chapter of the Regional Comprehensive Plan and Guide (RCPG) prepared by SCAG are considered consistent with the AQMP growth projections, because the Growth Management Chapter forms the basis of the land use and transportation control portion of the AQMP. The proposed project was analyzed to determine whether it would generate population and employment growth and, if so, whether that growth would exceed the growth rates forecast in the AQMP.

  The project would include development of a mixed-use residential and commercial retail project. As such, it would generate new housing and employment in the area. The project would not result in a significant increase in population since it is designed to accommodate current and projected population growth within the City of Wildomar. The RCPG prepared by SCAG is based on this projected growth. As stated in Section 2.0, Project Description, The Farm Specific Plan (Specific Plan No. 116-C/W), which was originally approved on September 24, 1974, and subsequently amended on July 28, 1981 (Resolution No. 81-269) and on January 29, 2002 (Resolution 2002-27), is a master planned community consisting of approximately 1,520 acres with residential uses assigned to occupy 776.7 acres. The full buildout of the project proposes to construct 275 residential lot single-family units. Therefore, the increase in housing and employment resulting from the proposed project would not be beyond the regional growth projections and in fact would facilitate the appropriate housing and jobs balance for Wildomar because of the project's mixed-use nature. The proposed project is not regionally significant and would be consistent with the applicable AQMP. Therefore, the project impact would be less than significant.

Since the project satisfies both of the two aforementioned criteria for determining consistency, the project is deemed consistent with the AQMP and the impact is **less than significant**.

Mitigation Measures

None required.

Short-Term Construction-Generated Emissions of Criteria Air Pollutants (Standard of Significance 2)

Impact 3.4.2 Construction-generated emissions could result in an air quality violation concerning localized significance. This impact is considered **potentially significant**.

As previously stated, the SCAQMD has established that impacts to air quality are significant if there is a potential to contribute to or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as localized significance thresholds (LSTs), which represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor.

For this project, the appropriate Source Receptor Area (SRA) for the localized significance thresholds is the Norco/Corona area (SCAQMD SRA 22) since this area includes the project site. LSTs apply to carbon monoxide (CO), nitrogen dioxide (NO_2), particulate matter ≤10 microns (PM_{10}), and particulate matter ≤2.5 microns ($PM_{2.5}$). The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size; however, the tables can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required.

The SCAQMD has issued guidance on LSTs for 1 acre, 2 acres, and 5 acres of disturbance. SCAQMD considers 5 acres the maximum amount of acreage that can be graded on any given day of construction. Therefore, for the purposes of this analysis, the SCAQMD LST for 5 acres of disturbance in any single day has been employed. CalEEMod reflects an equipment mix that can achieve 5 acres of disturbance per day. LSTs for a 5-acre site are applicable to the proposed project as this is the largest amount of acreage identified as part of the SCAQMD localized significance threshold methodology. The nearest existing sensitive receptor to the development boundaries may be located adjacent to the proposed development. However, the SCAQMD methodology explicitly states, "It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters." As such, LSTs for receptors at 25 meters are utilized in this analysis.

Table 3.4-5 presents the results of localized emissions during construction activity.

TABLE 3.4-5
LOCALIZED SIGNIFICANCE SUMMARY – CONSTRUCTION (WITHOUT MITIGATION)
(POUNDS PER DAY)

Activity	NO_x	CO	PM_{10}	$PM_{2.5}$
2012	69.75	38.42	21.20	12.84
2013	65.43	36.76	9.88	6.40
2014	60.85	35.30	9.61	6.13
2015	23.15	17.84	2.43	1.98
Maximum Daily Emissions	69.75	38.42	21.20	14.20
SCAQMD Localized Threshold	371	1,965	13	8
Significant?	**No**	**No**	**Yes**	**Yes**

Source: Urban Crossroads 2012. See Appendix 3.4-1 for the CalEEMod output files for the estimated emissions.

As shown, emissions of PM_{10} and $PM_{2.5}$ exceed localized significance thresholds for construction activity and thus represent a **potentially significant** impact.

Mitigation Measures

MM 3.4.2a The following measures shall be incorporated into project plans and specifications and complied with by the project applicant at all times during construction:

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour (mph).
- The construction contractor shall ensure that all disturbed unpaved roads and disturbed areas within the project site are watered daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day. (As shown in Table XI-A in **Appendix 3.4-1**, implementation of this measure is estimated to reduce PM_{10} and $PM_{2.5}$ fugitive dust emissions by approximately 61 percent.)
- The contractor shall ensure that traffic speeds on unpaved roads and project site areas are reduced to 15 miles per hour (mph) or less to reduce PM_{10} and $PM_{2.5}$ fugitive dust haul road emissions by approximately 44 percent.

Timing/Implementation: *As a condition of project approval, and implemented during ground-disturbing activities*

Enforcement/Monitoring: *City of Wildomar Planning and Building Departments*

MM 3.4.2b Prior to issuance of a grading permit, the grading plans shall reference that a sign will be posted on-site stating that construction workers need to shut off engines after 5 minutes of idling. The California Air Resources Board, in Title 13, Chapter 10, Section 2485, Division 3 of the California Code of Regulations, imposes a requirement that heavy-duty trucks accessing the site shall not idle for greater than 5 minutes at any location. This measure is intended to apply to construction traffic.

Timing/Implementation: *As a condition of project approval, and implemented during ground-disturbing activities*

Enforcement/Monitoring: *City of Wildomar Planning and Building Departments*

Table 3.4-6 summarizes the results of localized emissions during construction activity with implementation of mitigation measures **MM 3.4.2a** and **MM 3.4.2b**.

TABLE 3.4-6
LOCALIZED SIGNIFICANCE SUMMARY – CONSTRUCTION (WITH MITIGATION)
(POUNDS PER DAY)

Activity	NO_x	CO	PM_{10}	$PM_{2.5}$
2012	69.75	38.42	10.18	6.78
2013	65.43	36.76	5.90	4.38
2014	60.85	35.30	5.62	4.38
2015	23.15	17.84	2.43	1.98
Maximum Daily Emissions	69.75	38.42	10.18	6.78
SCAQMD Localized Threshold	371	1,965	13	8
Significant?	**No**	**No**	**No**	**No**

Source: Urban Crossroads 2012. See Appendix 3.4-1 for the CalEEMod output files for the estimated emissions.

As shown, emissions resulting from short-term construction activity would not exceed the localized significance thresholds with implementation of mitigation measures **MM 3.4.2a** and **MM 3.4.2b.** This impact is **less than significant**.

Air Quality Standard or Air Quality Violation: Short-Term Construction Emissions (Standard of Significance 2)

Impact 3.4.3 Construction-generated emissions will not contribute substantially to an existing or projected air quality violation. This impact is considered **less than significant**.

Construction activities associated with the proposed project will result in emissions of CO, ROG, NO_x, SO_x, PM_{10}, and $PM_{2.5}$. While construction activities may vary depending on contractors, the following assumptions concerning construction activities will be used in the environmental analysis for the proposed project. Construction-related emissions are expected from:

- Site preparation
- Grading
- Asphalt paving
- Building construction
- Architectural coatings
- Construction workers commuting
- Materials delivery

The project will begin construction no earlier than 2012. This date is a conservative estimate, and since construction equipment emissions will decrease with time due to technological

advancements,[1] this estimate would represent a "worst-case" analysis should construction begin any time after 2012.

Project construction would occur as four distinct and independent actions: (1) site preparation, (2) grading, (3) asphalt paving, and (4) physical building construction and painting activity. A detailed summary of construction equipment assumptions by phase is provided in **Table 3.4-7**. Construction equipment estimates were derived for the project applicant as well as from model defaults in CalEEMod.

TABLE 3.4-7
CONSTRUCTION EQUIPMENT ASSUMPTIONS

Site Preparation Equipment	
Description	**Number**
Rubber-Tired Dozer	3
Tractor/Loader/Backhoe	4
Grading Equipment	
Description	**Number**
Grader	1
Scraper	2
Rubber-Tired Dozer	1
Tractor/Loader/Backhoe	2
Excavator	2
Asphalt Paving Equipment	
Description	**Number**
Pavers	2
Paving Equipment	2
Rollers	2
Physical Building Construction/Painting Equipment	
Description	**Number**
Air Compressor	1
Tractor/Loader/Backhoe	3
Forklift	3
Cranes	1
Generator Set	1
Welder	1

Source: Urban Crossroads 2012

[1] In August 2011, the EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced the first-ever program to reduce emissions and improve fuel efficiency of heavy-duty trucks. The EPA and the NHTSA have each adopted complementary standards under their respective authorities covering model years 2014–2018, which together form a comprehensive Heavy-Duty National Program. The goal of the joint rulemakings is to present coordinated federal standards that help manufacturers to build a single fleet of vehicles and engines that are able to comply with both. The Heavy-Duty National Program is projected to reduce fuel use and air pollutant emissions from medium- and heavy-duty vehicles, from semi trucks to the largest pickup trucks and vans, as well as all types and sizes of work trucks and buses in between. A second phase of regulations is planned for model years beyond 2018. The goals would include spurring innovation as well as updating the assessment of actual emissions and fuel use from this sector. Such future regulation would also be designed to align with similar programs developed outside the United States.

Dust is typically a major concern during rough grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions." Emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. Additionally, based on discussion with the project applicant, it is anticipated that the site will balance, and no import or export of soil will be required. Additionally, construction emissions for construction worker vehicles traveling to and from the project site, as well as vendor trips (construction materials delivered to the project site), were estimated using CalEEMod.

The estimated maximum daily construction emissions are summarized in **Table 3.4-8**. (Please refer to specific detailed modeling inputs/outputs contained in **Appendix 3.4-1**.)

TABLE 3.4-8
CONSTRUCTION-RELATED CRITERIA POLLUTANT AND PRECURSOR EMISSIONS (WITHOUT MITIGATION)
(POUNDS PER DAY)

Source	Reactive Organic Gases (Ozone Precursor)	Nitrogen Oxide (Ozone Precursor)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Year 2012 Construction	8.49	69.75	38.42	0.07	21.20	12.84
Year 2013 Construction	8.04	65.43	36.76	0.07	9.88	6.40
Year 2014 Construction	23.63	60.85	35.30	0.07	9.61	6.13
Year 2015 Construction	23.37	23.15	17.84	0.03	2.43	1.98
Maximum Daily Emissions	**26.63**	**69.75**	**38.42**	**0.07**	**21.20**	**12.84**
SCAQMD Regional Threshold	75	100	550	150	150	55
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Urban Crossroads 2012. See Appendix 3.4-1 for the CalEEMod output files and additional calculations for the estimated emissions.

As shown in **Table 3.4-8**, emissions resulting from project construction will not exceed any applicable thresholds. This impact is considered **less than significant**. For informational purposes, **Table 3.4-9** depicts construction-generated emissions after implementation of mitigation measures **MM 3.4.2a** and **MM 3.4.2b**.

TABLE 3.4-9
CONSTRUCTION-RELATED CRITERIA POLLUTANT AND PRECURSOR EMISSIONS (WITH MITIGATION)
(POUNDS PER DAY)

Source	Reactive Organic Gases (Ozone Precursor)	Nitrogen Oxide (Ozone Precursor)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Year 2012 Construction	8.49	69.75	38.42	0.07	10.18	6.78
Year 2013 Construction	8.04	65.43	36.76	0.07	5.90	4.38
Year 2014 Construction	23.63	60.85	35.30	0.07	5.62	4.11
Year 2015 Construction	23.37	23.15	17.84	0.03	2.43	1.98
Maximum Daily Emissions	**26.63**	**69.75**	**38.42**	**0.07**	**10.18**	**6.78**
SCAQMD Regional Threshold	75	100	550	150	150	55
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Urban Crossroads 2012. See Appendix 3.4-1 for the CalEEMod output files and additional calculations for the estimated emissions.

Mitigation Measures

None required.

Air Quality Standard or Air Quality Violation: Long-Term Operational Emissions (Standard of Significance 2)

Impact 3.4.4 Subsequent land use activities associated with implementation of the proposed project will not result in long-term operational emissions that could violate or substantially contribute to a violation of federal and state standards for ozone and coarse and fine particulate matter. This impact is considered to be **less than significant**.

Operational activities associated with the proposed project will result in emissions of ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Operational emissions would be expected from the following primary sources:

- Vehicles
- Combustion emissions associated with natural gas and electricity
- Fugitive dust related to vehicular travel
- Landscape maintenance equipment
- Emissions for consumer products
- Architectural coatings

Vehicles

Project operational (vehicular) impacts are dependent on both overall daily vehicle trip generation and the effect of the project on peak-hour traffic volumes and traffic operations in the vicinity of the project. The project-related operational air quality impact centers primarily on the vehicle trips generated by the project. Trip characteristics available from the traffic impact analysis prepared for the project were utilized in this analysis. The estimated emissions resulting from vehicle operations are summarized in **Table 3.4-10**.

Combustion Emissions Associated with Natural Gas and Electricity

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and the consumption of natural gas. However, because electrical generating facilities for the project area are located outside the South Coast Air Basin, criteria pollutant emissions from off-site generation of electricity is excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using CalEEMod. The estimated combustion emissions are provided in **Table 3.4-10** (detailed emission calculations are provided in **Appendix 3.4-1**).

Fugitive Dust Related to Vehicular Travel

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust. The emissions estimates for travel on paved roads were calculated using CalEEMod, as it is assumed that all project roadways would be paved as part of the construction of these roads. The estimated PM_{10} and $PM_{2.5}$ emissions from vehicles for fugitive dust are summarized in **Table 3.4-10**, and details are provided in **Appendix 3.4-1**.

Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain project landscaping. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod. The estimated landscape maintenance emissions are provided in **Table 3.4-10**, and detailed model outputs are presented in **Appendix 3.4-1**.

Emissions for Consumer Products and Fireplaces

Consumer products include, but are not limited to, detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants.

CalEEMod also considers the number of woodstoves and hearths (fireplaces) of various types as well as the usage of these devices. Woodstoves are separate from fireplaces since a home may have both and these devices may have different use patterns. For purposes of this analysis, only natural gas hearths are considered since wood-burning stoves and fireplaces would be prohibited in accordance with SCAQMD Rule 445.

Architectural Coatings

Over a period of time, the buildings that are part of this project will be subject to emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as part of project maintenance. The emissions associated with architectural coatings were calculated using CalEEMod. The estimated architectural coating emissions are provided in **Table 3.4-10**, and detailed model outputs are presented in **Appendix 3.4-1**.

Operations Emissions Summary

The project-related operations emissions burdens, along with a comparison of SCAQMD recommended significance thresholds, are shown in **Table 3.4-10**.

TABLE 3.4-10
OPERATIONAL-RELATED CRITERIA POLLUTANT AND PRECURSOR EMISSIONS (MAXIMUM EMISSIONS)
(POUNDS PER DAY)

Source	Reactive Organic Gases (Ozone Precursor)	Nitrogen Oxide (Ozone Precursor)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Summer Emissions						
Area Source Emissions [1]	12.56	0.27	23.42	–	0.46	0.45
Energy Source Emissions [2]	0.33	2.83	1.21	0.02	0.23	0.23
Mobile Emissions [3]	21.07	48.44	203.94	0.33	36.36	3.20
Maximum Daily Emissions	**33.97**	**51.54**	**228.57**	**0.35**	**37.05**	**3.88**
Significant Impact Threshold (pounds per day)	55	55	550	150	150	55
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Winter Emissions						
Area Source Emissions [1]	12.56	0.27	23.42	–	0.46	0.45
Energy Source Emissions [2]	0.33	2.83	1.21	0.02	0.23	0.23
Mobile Emissions [3]	20.55	50.53	195.67	0.30	36.40	3.23
Maximum Daily Emissions	**33.44**	**53.63**	**220.30**	**0.32**	**37.09**	**3.91**
Significant Impact Threshold (pounds per day)	55	55	550	150	150	55
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Urban Crossroads 2012
Notes: Please refer to Appendix 3.4-1 for the CalEEMod output files and additional supporting information for the estimated emissions.
1. Includes emissions of landscape maintenance equipment and architectural coatings emissions.
2. Includes emissions of natural gas consumption.
3. Includes emissions of vehicle emissions and fugitive dust related to vehicular travel.

As shown in **Table 3.4-10**, emissions resulting from project operations will not exceed the SCAQMD regional criteria pollutant thresholds for operational activity. As a result, this impact would be considered **less than significant**.

Mitigation Measures

None required.

Substantial Carbon Monoxide Pollutant Concentrations (Standard of Significance 4)

Impact 3.4.5 The proposed project will not contribute to localized concentrations of CO that would exceed applicable ambient air quality standards. This is considered to be a **less than significant** impact.

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the project vicinity have steadily declined, as shown based on historical data presented in **Table 3.4-3**. Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard.

The analysis prepared for CO attainment in the South Coast Air Basin by the SCAQMD can be used to assist in evaluating the potential for CO exceedances in the basin. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 Air Quality Management Plan (2003 AQMP) and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan). There have been no subsequent air quality planning documents for CO since attainment of this pollutant. As discussed in the 1992 CO Plan, peak carbon monoxide concentrations in the SCAB are due to unusual meteorological and topographical conditions, and are not due to the impact of particular intersections. Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of the 1992 CO Plan and subsequent plan updates and air quality management plans.

In the 1992 CO Plan, a carbon monoxide hotspot analysis was conducted for four busy intersections in Los Angeles during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood); Wilshire Boulevard and Veteran Avenue (Westwood); Sunset Boulevard and Highland Avenue (Hollywood); and La Cienega Boulevard and Century Boulevard (Inglewood). These analyses did not predict a violation of CO standards. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. The Los Angeles County Metropolitan Transportation Authority evaluated the level of service (LOS) in the vicinity of the Wilshire Boulevard /Veteran Avenue intersection and found it to operate at LOS E at peak morning traffic and LOS F at peak afternoon traffic. (The capacity of a transportation system is referred to as the level of service and is generally defined as a ratio of traffic volume to roadway capacity. While it is customary to refer to an LOS using an alphabetic reference A–F, the inevitable comparison to school grades is not accurate. From a purely transportation standpoint, a roadway with an LOS of D is a roadway used to its design capacity.)

At buildout of the project, the highest number of average daily trips would be 70,700 for Scott Road east and west of Haun Road, which is lower than the values studied in the 1992 CO Plan. Consequently at buildout of the proposed project, according to the traffic impact analysis prepared for the project, none of the intersections in the vicinity of the proposed project site would have peak hourly traffic volumes exceeding those at the intersections modeled in the 2003 AQMP, nor would there be any reason unique to project area meteorology, such as air-confining structures like a tunnel or overhead freeway, to conclude that this intersection would yield higher CO concentrations if modeled in detail. As a result, the South Coast Air Basin has been designated as attainment for CO since 2007 (Urban Crossroads 2012), and even very busy intersections do not result in exceedances of the CO standard. Thus, impacts are expected to be **less than significant**, and no additional analysis is required. Consequently, sensitive receptors would not be significantly affected by CO emissions generated by project-related traffic.

Mitigation Measures

None required.

Toxic Air Contaminants (Standard of Significance 4)

Impact 3.4.6 The proposed project would not result in exposure of sensitive receptors to substantial toxic emissions. This impact is considered **less than significant**.

Sensitive receptors can include uses such as long-term healthcare facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, childcare centers, and athletic facilities can also be considered sensitive receptors.

As discussed under Impact 3.4.2, for conservative analysis purposes, sensitive receptors were considered to be at a distance of 25 meters from the project boundary, and the proposed project would not exceed SCAQMD localized significance thresholds. Therefore, the exposure of sensitive receptors to toxic air contaminants during construction activities is considered a less than significant impact.

Concerning exposure of sensitive receptors to toxic air contaminants during project operations, in April 2005, CARB released the *Land Use and Air Quality Handbook: A Community Health Perspective*, which offers guidance on siting sensitive land uses in proximity to sources of air toxics. Sensitive land uses identified in the handbook include residential communities, schools and school yards, day care centers, parks and playgrounds, and hospitals and medical facilities. One particular source of air toxics treated in the guidance is freeways and major roadways. These roadways are sources of diesel particulate matter (DPM), which CARB has listed as a toxic air contaminant.

The handbook recommends that sensitive land uses be sited no closer than 500 feet from a freeway or major roadway, defined as an urban roadway with more than 100,000 daily trips. This 500-foot buffer area was developed to protect sensitive receptors from exposure to diesel PM and was based on traffic-related studies that showed a 70 percent drop in PM concentrations at a distance of 500 feet from the roadway. Presumably, acute and chronic risks as well as lifetime cancer risk due to DPM exposure are lowered proportionately. The project site is over 2.5 miles (13,241 feet) feet east of Interstate 15. Therefore, the site lies beyond the CARB-recommended buffer area and future receptors would not be negatively affected by toxic air contaminants generated on Interstate 15. In addition, while the project site is located adjacent to Bundy Canyon Road, this facility is not considered a major roadway as it does not accommodate more that 100,000 daily trips on average. There are no other potential sources of air toxics in the

vicinity of the project. Toxic air contaminant impacts to sensitive receptors are considered to be **less than significant**.

Mitigation Measures

None required.

Exposure of Sensitive Receptors to Odorous Emissions (Standard of Significance 5)

Impact 3.4.7 Development of the proposed project will not result in exposure of sensitive receptors to substantial odorous emissions. Thus, this impact is considered to be **less than significant**.

The potential for the project to generate objectionable odors has been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The project does not contain land uses typically associated with emissions of objectionable odors. Potential odor sources associated with the proposed project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities, and the temporary storage of typical solid waste (refuse) associated with the proposed project's (long-term operational) uses. Standard construction requirements such as those described in mitigation measure **MM 3.4.2b** would minimize odor impacts resulting from construction activity. It should be noted that any construction odor emissions generated would be temporary, short term, and intermittent in nature and would cease upon completion of the respective phase of construction activity and are thus considered less than significant. It is expected that project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. The proposed project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the proposed project construction and operations would be less than significant.

The Farm Mutual Water Company wastewater treatment facility is located south of the proposed project boundaries. The facility uses a lagoon system and spray field to treat and dispose of the domestic wastewater from The Farm residential development. Under normal

operation, a wastewater treatment plant will not generate odor. The spray field is located north of the wastewater treatment facility and is separated from the proposed project site by a chain-link security fence. Lot 128 of the proposed subdivision map is the closest to the spray field fence at a distance of approximately 150 feet. The spray field is designed to minimize the potential for wind to blow the spray out of the field. Vegetation grows along the spray field where water is present. The combination of design, setback, and vegetation ensures that water from the spray field does not leave the property. The fence ensures that existing residents and those of the proposed project cannot come into contact with wastewater. The wastewater treatment plant is operated by the Farm Mutual Water Company and regulated by the California State Water Resources Control Board. The City has received no complaints of odors from the wastewater treatment facility or spray field from the existing residents of The Farm community, and the proposed project will not affect current operations of the facility. There is no reason to anticipate that the wastewater treatment facility will create odors or otherwise impact the proposed project.

Mitigation Measures

None required.

3.4.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for air quality includes the entirety of the South Coast Air Basin. The SCAB is currently designated nonattainment for O_3, NO_2, PM_{10}, and $PM_{2.5}$ under state standards and for O_3, PM_{10}, and $PM_{2.5}$ under federal standards. Cumulative growth in population, vehicle use, and industrial activity could inhibit efforts to improve regional air quality and attain the ambient air quality standards.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Contribution to Nonattainment Criteria Pollutants (Standard of Significance 3)

Impact 3.4.8 Construction of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the South Coast Air Basin, will not significantly contribute to cumulative increases in emissions of criteria air pollutants that could contribute to future concentrations of pollutants for which the region is currently designated nonattainment. This impact would be considered **less than cumulatively considerable.**

CEQA Section 21100(e) addresses evaluation of cumulative effects, allowing the use of approved land use documents in a cumulative impact analysis. CEQA Guidelines Section 15064(i)(3) further stipulates that for an impact involving a resource addressed by an approved plan or mitigation program, the lead agency may determine that a project's incremental contribution is not cumulatively considerable if the project complies with the adopted plan or program. In addressing cumulative effects for air quality, the SCAQMD's Air Quality Management Plan is the most appropriate document to use because it sets forth a comprehensive program that will lead the South Coast Air Basin, including the project area, into compliance with all federal and state air quality standards. The AQMP also utilizes control measures and related emissions reduction estimates based on emissions projections for a future development scenario derived from land use, population, and employment characteristics

defined in consultation with local governments. Since the proposed project is in conformance with the Air Quality Management Plan, it is appropriate to conclude that the project's incremental contribution to criteria pollutant emissions is not cumulatively considerable. As a result, this impact would be considered **less than cumulatively considerable.**

Mitigation Measures

None required.

REFERENCES

CARB (California Air Resources Board). 2005. *Land Use and Air Quality Handbook: A Community Health Perspective*.

SCAQMD (South Coast Air Quality Management District). 1993. *CEQA Air Quality Handbook*.

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Urban Crossroads. 2012. *Oak Creek (Tentative Tract Map No. 36388) (PA 11-0261) Air Quality Impact Analysis*.

3.5 Noise

This section discusses the existing noise setting, identifies potential noise impacts associated with implementation of the proposed project, and recommends mitigation measures to address potential impacts. Specifically, this section analyzes potential noise impacts due to development of the project area relative to the existing ambient noise environment and applicable noise criteria. Noise mitigation measures are recommended where the predicted noise levels would exceed applicable noise standards.

3.5.1 ACOUSTIC FUNDAMENTALS

Noise is generally defined as sound that is loud, disagreeable, or unexpected. Sound is mechanical energy transmitted in the form of a wave because of a disturbance or vibration. Sound levels are described in terms of both amplitude and frequency.

AMPLITUDE

Amplitude is defined as the difference between ambient air pressure and the peak pressure of the sound wave. Amplitude is measured in decibels (dB) on a logarithmic scale. Amplitude is interpreted by the ear as corresponding to different degrees of loudness. Laboratory measurements correlate a 10 dB increase in amplitude with a perceived doubling of loudness and establish a 3 dB change in amplitude as the minimum audible difference perceptible to the average person.

FREQUENCY

The frequency of a sound is defined as the number of fluctuations of the pressure wave per second. The unit of frequency is the Hertz (Hz). One Hz equals one cycle per second. The human ear is not equally sensitive to sound of different frequencies. For instance, the human ear is more sensitive to sound in the higher portion of this range than in the lower and sound waves below 16 Hz or above 20,000 Hz cannot be heard at all. To approximate the sensitivity of the human ear to changes in frequency, environmental sound is usually measured in what is referred to as A-weighted decibels (dBA). On this scale, the normal range of human hearing extends from about 10 dBA to about 140 dBA (EPA 1971). Common community noise sources and associated noise levels, in dBA, are depicted in **Figure 3.5-1**.

ADDITION OF DECIBELS

Because decibels are logarithmic units, sound levels cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dB increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one automobile produces a sound level of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together would produce an increase of 5 dB.

SOUND PROPAGATION AND ATTENUATION

Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level decreases (attenuates) at a rate of approximately 6 decibels for each

doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 decibels for each doubling of distance from a line source, depending on ground surface characteristics. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or a body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an excess ground-attenuation value of 1.5 decibels per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation for soft surfaces results in an overall attenuation rate of 4.5 decibels per doubling of distance from the source.

Atmospheric Effects

Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) from a highway due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects.

Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in minimum 5 dB of noise reduction. Taller barriers provide increased noise reduction.

Noise reductions afforded by building construction can vary depending on construction materials and techniques. Standard construction practices typically provide approximately 15 dBA exterior-to-interior noise reductions for building facades, with windows open, and approximately 20–25 dBA with windows closed. With compliance with current Title 24 energy efficiency standards, which require increased building insulation and inclusion of an interior air ventilation system to allow windows on noise-impacted façades to remain closed, exterior-to-interior noise reductions typically average approximately 25 dBA. The absorptive characteristics of interior rooms, such as carpeted floors, draperies, and furniture, can result in further reductions in interior noise.

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COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	INTOLERABLE OR DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	
GAS LAWN MOWER AT 1m (3 ft)		90		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		SLEEP DISTURBANCE
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

Source: City of Wildomar

Figure 3.5-1

Noise

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HUMAN RESPONSE TO NOISE

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases. The acceptability of noise and the threat to public well-being are the basis for land use planning policies preventing exposure to excessive community noise levels.

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called "ambient" environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged. Regarding increases in A-weighted noise levels, knowledge of the following relationships will be helpful in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived by humans.
- Outside of the laboratory, a 3 dB change is considered a just-perceivable difference.
- A change in level of at least 5 dB is required before any noticeable change in community response would be expected. An increase of 5 dB is typically considered substantial.
- A 10 dB change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

A limitation of using a single noise-level increase value to evaluate noise impacts, as discussed above, is that it fails to account for pre-development noise conditions. With this in mind, the Federal Interagency Committee on Noise (FICON) developed guidance to be used for the assessment of project-generated increases in noise levels that take into account the ambient noise level. The FICON recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (i.e., CNEL, L_{dn}). FICON-recommended noise evaluation criteria are summarized in **Table 3.5-1**.

TABLE 3.5-1
FEDERAL INTERAGENCY COMMITTEE ON NOISE RECOMMENDED CRITERIA FOR EVALUATION OF INCREASES IN AMBIENT NOISE LEVELS

Ambient Noise Level Without Project	Increase Required for Significant Impact
<60 dB	5.0 dB, or greater
60–65 dB	3.0 dB, or greater
>65 dB	1.5 dB, or greater

Source: FICON 2000

As depicted in **Table 3.5-1**, an increase in the traffic noise level of 5.0, or greater, would typically be considered to result in increased levels of annoyance where existing ambient noise levels are less than 60 dB. Within areas where the ambient noise level ranges from 60 to 65 dB, increased levels of annoyance would be anticipated at increases of 3 dB, or greater. Increases of 1.5 dB, or greater, could result in increased levels of annoyance in areas where the ambient noise level exceeds 65 dB. The rationale for the FICON-recommended criteria is that as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause significant increases in annoyance (FICON 2000).

EFFECTS OF NOISE ON HUMAN ACTIVITIES

The extent to which environmental noise is deemed to result in increased levels of annoyance, activity interference, and sleep disruption varies greatly from individual to individual depending on various factors, including the loudness or suddenness of the noise, the information value of the noise (e.g., aircraft overflights, child crying, fire alarm), and an individual's sleep state and sleep habits. Over time, adaptation to noise events and to increased levels of noise may also occur. In terms of land use compatibility, environmental noise is often evaluated in terms of the potential for noise events to result in increased levels of annoyance, sleep disruption, or interference with speech communication, activities, and learning. Noise-related effects on human activities are discussed in more detail below.

Speech Communication

For most noise-sensitive land uses, an interior noise level of 45 dB L_{eq} is typically identified for the protection of speech communication in order to provide for 100 percent intelligibility of speech sounds. Assuming an average 20 dB reduction in sound level between outdoors and indoors (which is an average amount of sound attenuation that assumes windows are closed), this interior noise level would equates to an exterior noise level of 65 dBA L_{eq}. For outdoor voice communication, an exterior noise level of 60 dBA L_{eq} allows normal conversation at distances up to 2 meters with 95 percent sentence intelligibility (EPA 1971). Based on this information, speech interference begins to become a problem when steady noise levels reach approximately 60 to 65 dBA. Within interior noise environments, an average-hourly background noise level of 45 dBA L_{eq} is typically recommended for noise-sensitive land uses, such as educational facilities (Caltrans 2002).

Annoyance and Sleep Disruption

With regard to potential increases in annoyance, activity interference, and sleep disruption, land use compatibility determinations are typically based on the use of the cumulative noise exposure metrics (i.e., CNEL or L_{dn}). Perhaps the most comprehensive and widely accepted evaluation of the relationship between noise exposure and the extent of annoyance was one originally

developed by Theodore J. Schultz in 1978. Schultz's research findings provided support for L_{dn} as the descriptor for environmental noise. Research conducted by Schultz identified a correlation between the cumulative noise exposure metric and individuals who were highly annoyed by transportation noise. When expressed graphically, this relationship is typically referred to as the Schultz curve. The Schultz curve indicates that approximately 13 percent of the population is highly annoyed at a noise level of 65 dBA L_{dn}. It also indicates that the percentage of people describing themselves as being highly annoyed accelerates smoothly between 55 and 70 dBA L_{dn}. A noise level of 65 dBA L_{dn} is a commonly referenced dividing point between lower and higher rates of people describing themselves as being highly annoyed (Caltrans 2002).

The Schultz curve and associated research became the basis for many of the noise criteria subsequently established for federal, state, and local entities. Most federal and State of California regulations and policies related to transportation noise sources establish a noise level of 65 dBA CNEL/L_{dn} as the basic limit of acceptable noise exposure for residential and other noise-sensitive land uses. For instance, with respect to aircraft noise, both the Federal Aviation Administration (FAA) and the State of California have identified a noise level of 65 dBA L_{dn} as the dividing point between normally compatible and normally incompatible residential land use generally applied for determination of land use compatibility. For noise-sensitive land uses exposed to aircraft noise, noise levels in excess of 65 dBA CNEL/L_{dn} are typically considered to result in a potentially significant increase in levels of annoyance (Caltrans 2002).

Allowing for an average exterior-to-interior noise reduction of 20 dB, an exterior noise level of 65 dBA CNEL/L_{dn} would equate to an interior noise level of 45 dBA CNEL/L_{dn}. An interior noise level of 45 dB CNEL/L_{dn} is generally considered sufficient to protect against activity interference at most noise-sensitive land uses, including residential dwellings, and would also be sufficient to protect against sleep interference (EPA 1971). In California, the California Building Code establishes a noise level of 45 dBA CNEL as the maximum acceptable interior noise level for residential uses (other than detached single-family dwellings). Use of the 45 dBA CNEL threshold is further supported by recommendations provided in the State of California Office of Planning and Research's General Plan Guidelines, which recommend an interior noise level of 45 dB CNEL/L_{dn} as the maximum allowable interior noise level sufficient to permit "normal residential activity" (OPR 2003).

The cumulative noise exposure metric is currently the only noise metric for which there is a substantial body of research data and regulatory guidance defining the relationship between noise exposure, people's reactions, and land use compatibility. However, when evaluating environmental noise impacts involving intermittent noise events, such as aircraft overflights and train pass-bys, the use of cumulative noise metrics may not provide a thorough understanding of the resultant impact. The general public often finds it difficult to understand the relationship between intermittent noise events and cumulative noise exposure metrics. In such instances, supplemental use of other noise metrics, such as the L_{eq} or L_{max} descriptor, may be helpful as a means of increasing public understanding regarding the relationship between these metrics and the extent of the resultant noise impact (Caltrans 2002).

Noise Reduction

Various methods can be employed to reduce noise levels, including enclosures, barriers, and sound-dampening materials. The methods employed are dependent on various factors, including source and receptor characteristics as well as environmental conditions. With regard to typical community noise sources, noise reduction techniques typically focus on the isolation or shielding of the noise source from nearby noise-sensitive receptors. The more common methods include the use of buffers, enclosures, and barriers. In general, these techniques contribute to

decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver. Buildings, concrete walls, and berms can all act as effective noise barriers. Wooden fences or broad areas of dense foliage can also reduce noise but are less effective than solid barriers. Changes in design specifications and use of equipment noise control devices (e.g., mufflers and silencers) are also commonly employed to reduce stationary-source (i.e., non-transportation) noise levels. Additional noise control techniques commonly used for transportation noise sources include traffic control, such as prohibiting heavy-duty trucks and reducing speed limits along primarily affected corridors. However, an approximate 20 mile per hour reduction in speed would typically be required to achieve a noticeable decrease in noise levels. In some instances, the use of noise-reducing pavements, such as rubberized asphalt, has also been used to reduce traffic noise.

3.5.2 EXISTING SETTING

Noise-sensitive land uses in the area consist predominantly of single-family residential land uses located south of the project area, along The Farm Road, Harvest Way West, and Harvest Way East, and along the north side of Bundy Canyon Road.

To assess the current ambient noise levels both within and around the proposed project site, the roadways surrounding the proposed project were evaluated. This evaluation included establishing noise level contour boundaries for the 55, 60, 65, and 70 dBA Community Noise Equivalent Levels (CNEL) for each of the surrounding roadway segments. **Table 3.5-2** presents these existing CNEL noise contour boundaries with existing traffic volumes for all roadway segments adjacent to Bundy Canyon Road.

TABLE 3.5-2
EXISTING CONDITIONS NOISE CONTOURS

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Bundy Canyon Rd.	West of I-15 Fwy.	72.0	135	291	627	1,351
Bundy Canyon Rd.	I-15 Fwy. to Sellers Rd.	72.7	151	325	700	1,508
Bundy Canyon Rd.	Sellers Rd. to Monte Vista Dr.	72.4	144	309	667	1,436
Bundy Canyon Rd.	Monte Vista Dr. to Harvest Way West	72.5	146	315	680	1,464
Bundy Canyon Rd.	Harvest Way West to Harvest Way East	71.3	123	264	570	1,227
Bundy Canyon Rd.	Harvest Way East to Sunset Ave.	71.4	124	267	575	1,239
Bundy Canyon Rd.	Sunset Ave. to Murrieta Rd.	71.4	124	267	575	1,239
Bundy Canyon Rd.	Murrieta Rd. to Sweetwater Canyon Rd.	70.4	106	229	494	1,064
Bundy Canyon Rd.	Sweetwater Canyon Rd. to I-215 Fwy.	72.7	150	324	698	1,503
Bundy Canyon Rd.	East of I-215 Fwy.	74.8	208	448	966	2,080
Sunset Ave.	North of Bundy Canyon Rd.	45.8	RW	RW	RW	RW
Sunset Ave.	South of Bundy Canyon Rd.	40.7	RW	RW	RW	RW
Murrieta Rd.	North of Bundy Canyon Rd.	66.6	RW	128	275	592

Source: Urban Crossroads 2012
RW = Location of the respective noise contour falls within the right-of-way of the road.

3.5.3 REGULATORY FRAMEWORK

LOCAL

City of Wildomar

The City of Wildomar adopted the County of Riverside noise standards and noise ordinance upon city incorporation. The City ordinance was used to assess potential noise impacts. The City of Wildomar addresses two separate types of noise sources through the CEQA process: mobile and stationary. The mobile, or transportation-related, noise impacts are controlled using the 24-hour Community Noise Equivalent Level (CNEL) to assess the land use compatibility for community noise exposure. To control community noise impacts from stationary (non-transportation) noise sources (such as speakerphones, trash compactors, etc.), the City of Wildomar has identified the worst-case noise levels for daytime and nighttime activities. In the context of this noise analysis, the noise impacts associated with the commercial/mixed-use land use activities found in the proposed development are governed by the City noise standards for stationary sources. Off-site project-related vehicular traffic is governed by the CNEL noise level standards.

Mobile Noise Standards

The City of Wildomar General Plan Noise Element specifies the maximum noise levels allowable for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. For the purposes of this project, the noise impacts associated with traffic are controlled by the General Plan Noise Element.

The General Plan standards are derived from standards contained in the *General Plan Guidelines*, a publication of the California Office of Planning and Research (2003). These standards are used by many California cities and counties. The Noise Element includes standards for land use compatibility for community noise exposure. For single-family residential areas, the exterior noise levels should remain below 65 dBA CNEL, and the interior noise levels should remain below 45 dBA CNEL. As shown in **Table 3.5-2**, many of the roadway segments exceed the 65 dBA CNEL standard at 100 feet from centerline.

For commercial uses, the noise compatibility matrix sets guidelines according to the predicted noise exposure level. **Table 3.5-3** presents the General Plan land use and noise compatibility matrix. According to the noise compatibility matrix, an ambient noise level of up to 65 dBA CNEL for residential uses and up to 70 dBA CNEL for commercial uses is considered "normally acceptable."

Stationary Noise Standards

The City of Wildomar has set exterior noise limits to control delivery trucks, trash compactors, speakerphones, vehicle activities, and mechanical ventilation system noise impacts associated with development. The City considers noise generated by the use of motor vehicles to be a stationary noise source when operated on private property such as at a truck terminal or warehousing facility. These facility-related noises, as projected to any portion of any surrounding property containing a "habitable dwelling, hospital, school, library, or nursing home," must not exceed the following worst-case noise levels.

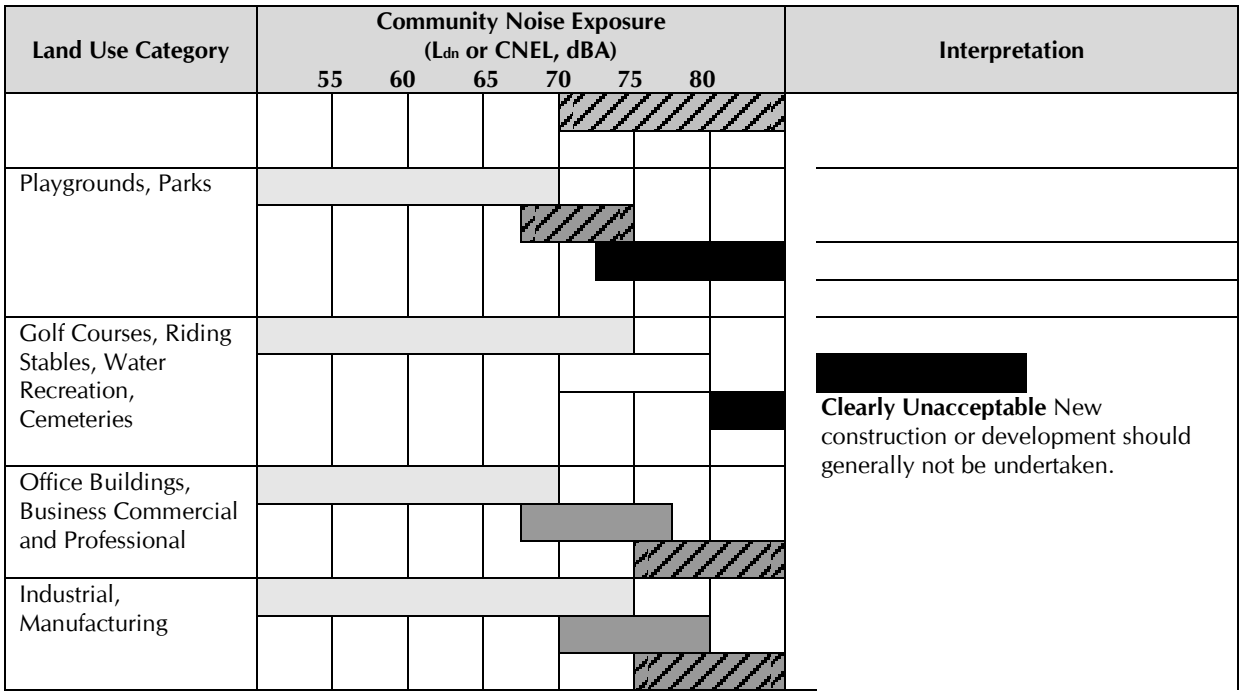
Policy N 4.1 of the City of Wildomar General Plan Noise Element sets an exterior noise limit not to be exceeded for a cumulative period of more than 10 minutes in any hour of 65 dBA L_{eq} for

daytime hours of 7 AM to 10 PM and 45 dBA L_{eq} during the noise-sensitive nighttime hours of 10 PM to 7 AM. This is consistent with the stationary source requirements included in the General Plan Noise Element.

Policy N 4.8 of the Noise Element requires that loading docks of industrial land uses minimize the potential noise impacts of vehicles on the site as well on adjacent land uses.

TABLE 3.5-3
CITY OF WILDOMAR LAND USE COMPATIBILITY NOISE CRITERIA

Land Use Category	Community Noise Exposure (L_{dn} or CNEL, dBA) 55 60 65 70 75 80	Interpretation
Residential – Single-Family		**Normally Acceptable** Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Residential – Multiple-Family		
Transient Lodging – Motels, Hotels		**Conditionally Acceptable** New construction or development should be undertaken only after a detailed analysis of noise reduction requirements and needed noise insulation features included in the design. Conventional construction with closed windows and fresh air supply systems or air conditioning will normally suffice.
Schools, Libraries, Churches, Hospitals, Nursing Homes		
Auditoriums, Concert Halls, Amphitheaters		
Sports Arena, Outdoor Spectator Sports		**Normally Unacceptable** New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.



Source: California Office of Noise Control

Community Noise Assessment Criteria

The noise criteria presented in this section is based on well-documented criteria and research into human response to community noise. In community noise assessment, changes in noise levels greater than 3 dBA are often identified as "barely perceptible," while changes of 5 dBA are "readily perceptible." Studies show that a relative noise impact of 5 dBA triggers community reaction (sporadic complaints to widespread complaints to several legal threats to vigorous action). In the range of 1 dBA to 3 dBA, people who are very sensitive to noise may perceive a slight change in noise level. In laboratory testing situations, humans are able to detect noise level changes of slightly less than 1 dBA. However, in a community situation, the noise exposure is extended over a long time period, and changes in noise levels occur over years rather than the immediate comparison made in a laboratory situation. Therefore, the level at which changes in community noise levels becomes discernible is likely to be some value greater than 1 dBA, and 3 dBA appears to be appropriate for most people. While a 1 dBA increase may be perceptible to a minority of very noise-sensitive people, noise increases of up to 3 dBA are barely perceptible to most people. The 3 dBA increase criteria represent a balance of community benefits and reasonableness.

For purposes of this analysis, based on the experience of the technical report and also upon previous discussions with City staff, roadway noise impacts would be considered significant if the proposed project increases noise levels for a noise-sensitive land use by 3 dBA CNEL and if: (1) the existing noise levels already exceed the 65 dBA CNEL residential standard, or (2) the project increases noise levels from below the 65 dBA CNEL standard to above 65 dBA CNEL.

GROUNDBORNE VIBRATION

There are no federal, state, or local regulatory standards for groundborne vibration. However, various criteria have been established to assist in the evaluation of vibration impacts. For instance, the California Department of Transportation (Caltrans) has developed vibration criteria

based on potential structural damage risks and human annoyance. Caltrans-recommended criteria for the evaluation of groundborne vibration levels, with regard to structural damage and human annoyance, are summarized in **Table 3.5-13** and **Table 3.5-14**, respectively, included in subsection 3.5.3 above. The criteria differentiate between transient and continuous/frequent sources. Transient sources of groundborne vibration include intermittent events, such as blasting, whereas continuous and frequent events would include the operations of equipment, including construction equipment, and vehicle traffic on roadways (Caltrans 2002, 2004).

3.5.4 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Criteria for determining the significance of noise impacts were developed based on information contained in the California Environmental Quality Act Guidelines (CEQA Guidelines, Appendix G). According to those guidelines, a project may have a significant effect on the environment if it would result in the following conditions:

1) Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or of applicable standards of other agencies.

2) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

3) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

4) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

5) For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport, exposure of people residing or working in the project area to excessive noise levels.

6) For a project within the vicinity of a private airstrip, exposure of people residing or working in the project area to excessive noise levels.

The nearest airport is Skylark Airport, which is located approximately 4 miles west of the proposed project. The proposed project site is not located within 2 miles of a public airport or private airstrip, nor would implementation of the proposed project affect airport operations. For these reasons, exposure to aircraft noise levels would be considered less than significant and is not discussed further in this DEIR.

Temporary noise impacts associated with the proposed project would be associated with short-term construction-related activities. Long-term permanent increases in noise levels would occur with on-site operational activities, as well as potential increases in traffic noise levels along area roadways. Potential increases in groundborne vibration levels would be primarily associated with short-term construction-related activities. For purposes of this analysis and where applicable, the City of Wildomar noise standards were used for evaluation of project-related noise impacts.

SHORT-TERM EXPOSURE TO CONSTRUCTION-RELATED NOISE

Construction noise represents a short-term impact on ambient noise levels. Noise generated by construction equipment, including trucks, graders, bulldozers, concrete mixers, and portable generators, can reach high levels. Grading activities typically represent one of the highest potential sources of noise impacts. The most effective method of controlling construction noise is through local control of construction hours and by limiting the hours of construction to normal weekday working hours.

Construction-Related Noise Standards

Due to their short-term nature, construction activities are not covered by the City's standards for stationary noise sources. The Noise Element includes the following policies to minimize noise impacts from construction activities:

N 12.1: Minimize the impacts of construction noise on adjacent uses within acceptable practices.

N 12.2: Ensure that construction activities are regulated to establish hours of operation in order to prevent and/or mitigate the generation of excessive or adverse noise impacts on surrounding areas.

N 12.3: Condition subdivision approval adjacent to developed/occupied noise sensitive land uses by requiring the developer to submit a construction-related noise mitigation plan to the County for review and approval prior to issuance of a grading permit. The plan must depict the location of construction equipment and how the noise from this equipment will be mitigated during construction of this project through the use of such methods as:

- Temporary noise attenuation fences
- Preferential location of equipment
- Use of current noise suppression technology and equipment

N 12.4: Require that all construction equipment utilizes noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.

Construction Noise Level Impacts

The US Environmental Protection Agency (EPA) has compiled data regarding the noise-generating characteristics of specific types of construction equipment. Noise levels generated by heavy construction equipment can range from approximately 68 dBA to noise levels in excess of 100 dBA when measured at 50 feet. However, these noise levels diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 68 dBA measured at 50 feet from the noise source to the receptor would be reduced to 62 dBA at 100 feet from the source to the receptor and would be further reduced by another 6 dBA to 56 dBA at 200 feet from the source to the receptor.

Construction Noise Level Impact Analysis

Although construction noise would result in a short-term increase greater than 5 dBA over ambient noise levels, construction noise is of short-term duration and will not present any long-term impacts on the project site or to the surrounding area. To minimize the potential short-term noise impacts during the construction activities for the proposed project, several construction noise reduction measures are identified in the Impacts and Mitigation Measures subsection below.

LONG-TERM ON-SITE EXPOSURE TO PROJECT-GENERATED NOISE

The project site will be subjected to transportation- and non-transportation-related noise impacts. This section discusses the potential noise impacts from the adjacent streets to the noise-sensitive residential portions of the proposed project and the potential stationary noise impacts. The City of Wildomar does not consider the commercial property within the proposed project site noise sensitive; therefore, specific analysis and mitigation regarding the impact of noise on future commercial land uses will not be considered in this Draft EIR.

Traffic-Related Noise Level Assessment

An analysis has been performed to determine the expected transportation-related noise impacts for the affected outdoor usable areas. The proposed subdivision (see **Figure 2.0-4**) was used to predict the future noise environment. This information identifies the relationship between the roadway centerline elevation, the pad elevation and the centerline distance to the noise barrier, and the backyard observer. The rear-yard exterior noise levels were determined based on an observer location 10 feet from the existing property line wall. Key input data for these barrier performance equations include the relative source-barrier-receiver horizontal separations, the relative source-barrier-receiver vertical separations, the typical noise source spectra, and the barrier transmission loss. The following general assumptions were used in determining the source and receiver geometry:

<u>Receiver Assumptions</u>

Horizontal Geometry:	Distance behind top-of-slope: 10 feet
Vertical Geometry:	Height above pad for ground-level receivers: • Exterior Noise: 5 feet • First Floor Interior: 5.5 feet • Second Floor Interior: 14.5 feet

<u>Source Assumptions</u>

Horizontal Geometry:	All vehicles are located at the single-lane equivalent acoustic center of the full roadway.
Vertical Geometry:	Height above road grade: • Autos = 0.0 feet • Medium Trucks = 2.3 feet • Heavy Trucks = 8.0 feet

Future Traffic Noise Levels

The industry standard Federal Highway Administration (FHWA) traffic noise prediction model and the traffic composition and timing modeling assumptions required by the Riverside County

Requirements for Determining and Mitigating Traffic Noise Impacts to Residential Structures were used to analyze noise impacts from Bundy Canyon Road to the proposed project. The modeling assumptions are outlined in **Tables 3.5-4** and **3.5-5**, and represent the countywide assumptions for calculations of the expected future noise impacts. **Table 3.5-6** presents a summary of future exterior noise level impacts. Based on the FHWA traffic noise prediction model, the future unmitigated exterior noise levels for the lots analyzed will range from 72.8 to 75.0 dBA CNEL. Based on the calculated noise level impacts presented, future traffic-related noise level impacts are expected to exceed the City of Wildomar exterior noise level standard of 65 dBA CNEL. In order to reduce the exterior noise level impact below the exterior noise level standard, a 6.5-foot-high noise barrier is required for lots 33–50 and a 6.0-foot-high barrier is required for lots 89–96, 131–144, 150–164, and 198–222 adjacent to Bundy Canyon Road. With the construction of the noise barrier, exterior noise level impacts will range from 60.9 to 64.8 dBA CNEL and remain below the City of Wildomar exterior noise level standard of 65 dBA CNEL.

The computer outputs for the specific site impacts are included in **Appendix 3.5-1**. The grading plans used for this analysis are included in **Appendix 3.5-2.**

TABLE 3.5-4
HOURLY TRAFFIC FLOW DISTRIBUTION[1]

Motor Vehicle Type	Daytime (7 AM to 7 PM)	Evening (7 PM to 10 PM)	Night (10 PM to 7 AM)	Total % Traffic Flow
Secondary, Collector				
Automobiles	77.5%	12.9%	9.6%	97.42%
Medium Trucks	84.8%	4.9%	10.3%	1.84%
Heavy Trucks	86.5%	2.7%	10.8%	0.74%
Major, Arterial, Urban Arterial				
Automobiles	75.0%	14.0%	10.5%	92.00%
Medium Trucks	48.0%	2.0%	50.0%	3.00%
Heavy Trucks	48.0%	2.0%	50.0%	5.00%

Source: Urban Crossroads 2012
[1] Required County of Riverside vehicle mixes

TABLE 3.5-5
ON-SITE ROADWAY PARAMETERS

Roadway	Segment	Buildout ADT[1]	Speed (MPH)	Site Conditions
Bundy Canyon Road	Monte Vista Dr. to Harvest Way West	32,000	55	Soft
	Harvest Way West to Harvest Way East	29,900	55	Soft
	Harvest Way East to Sunset Ave.	30,700	55	Soft

Source: Urban Crossroads 2012
[1] Based on required County of Riverside Level of Service C Roadway Design Capacity. (ADT = Average Daily Traffic)

TABLE 3.5-6
FUTURE EXTERIOR NOISE LEVELS (DBA CNEL)

Lot	Unmitigated Noise Level (dBA CNEL)	Mitigated Noise Level (dBA CNEL)	Required Barrier Height (feet)
46	75.0	60.9	6.5
38	74.4	64.8	6.5
213	73.8	64.1	6.0
207	73.4	63.6	6.0
91	73.6	64.1	6.0
203	73.3	63.6	6.0
94	73.8	64.8	6.0

Source: Urban Crossroads 2012

LONG-TERM OFF-SITE TRANSPORTATION NOISE IMPACTS

To assess the off-site noise level impacts associated with development of the proposed project, noise contours were developed for the following traffic scenarios:

- Existing: This scenario refers to the existing traffic noise conditions, without the proposed project.
- Project Completion (Year 2015) without/with Project: This scenario refers to the background noise conditions at project completion (Year 2015) without and with the proposed project.
- Horizon Year 2035 without/with Project: This scenario refers to the background noise conditions at Horizon Year 2035 without and with the proposed project.

Traffic Noise Contour Boundaries

Traffic noise contour boundaries are often desired by local land planning and zoning authorities to represent sound level exposures on land that is being considered for development and is adjacent to highways. Noise contour boundaries represent the equal levels of noise exposure and are measured from the center of the roadway. Traffic noise contour boundaries are typically calculated at distances of 100 feet from a roadway centerline. CNEL noise contour boundaries are also determined below for the 55, 60, 65, and 70 dBA noise levels. The off-site transportation noise contour calculations are presented in **Appendix 3.5-1**.

The distance from the centerline of the roadway to the CNEL contour boundaries for roadways in the proposed project's vicinity is presented in **Table 3.5.2** and in **Tables 3.5-7** through **3.5-10.** The noise contour boundaries do not take into account the effect of any existing noise barriers or topography that may affect ambient noise levels.

TABLE 3.5-7
YEAR 2015 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Bundy Canyon Rd.	West of I-15 Fwy.	73.8	179	386	831	1,791
Bundy Canyon Rd.	I-15 Fwy. to Sellers Rd.	74.7	207	445	959	2,066
Bundy Canyon Rd.	Sellers Rd. to Monte Vista Dr.	74.6	203	438	944	2,033
Bundy Canyon Rd.	Monte Vista Dr. to Harvest Way West	74.6	203	437	942	2,029
Bundy Canyon Rd.	Harvest Way West to Harvest Way East	74.1	187	402	866	1,865
Bundy Canyon Rd.	Harvest Way East to Sunset Ave.	74.2	189	408	879	1,894
Bundy Canyon Rd.	Sunset Ave. to Murrieta Rd.	74.4	197	425	915	1,972
Bundy Canyon Rd.	Murrieta Rd. to Sweetwater Canyon Rd.	75.2	223	481	1,036	2,231
Bundy Canyon Rd.	Sweetwater Canyon Rd. to I-215 Fwy.	78.0	342	737	1,587	3,419
Bundy Canyon Rd.	East of I-215 Fwy.	77.9	338	729	1,570	3,383
Sunset Ave.	North of Bundy Canyon Rd.	49.1	RW	RW	RW	41
Sunset Ave.	South of Bundy Canyon Rd.	59.6	RW	43	93	201
Murrieta Rd.	North of Bundy Canyon Rd.	71.0	117	252	543	1,170

Source: Urban Crossroads 2012

[1]RW = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 3.5-8
YEAR 2015 WITH PROJECT CONDITIONS NOISE CONTOURS

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Bundy Canyon Rd.	West of I-15 Fwy.	73.9	181	390	840	1,811
Bundy Canyon Rd.	I-15 Fwy. to Sellers Rd.	75.0	216	466	1,004	2,163
Bundy Canyon Rd.	Sellers Rd. to Monte Vista Dr.	74.9	213	459	989	2,131
Bundy Canyon Rd.	Monte Vista Dr. to Harvest Way West	74.9	213	459	989	2,131
Bundy Canyon Rd.	Harvest Way West to Harvest Way East	74.4	194	421	906	1,953
Bundy Canyon Rd.	Harvest Way East to Sunset Ave.	74.6	201	434	935	2,014
Bundy Canyon Rd.	Sunset Ave. to Murrieta Rd.	74.8	209	451	972	2,094
Bundy Canyon Rd.	Murrieta Rd. to Sweetwater Canyon Rd.	75.4	231	497	1,071	2,307

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Bundy Canyon Rd.	Sweetwater Canyon Rd. to I-215 Fwy.	78.1	347	748	1,612	3,473
Bundy Canyon Rd.	East of I-215 Fwy.	78.0	339	730	1,574	3,390
Sunset Ave.	North of Bundy Canyon Rd.	51.1	RW	RW	RW	55
Sunset Ave.	South of Bundy Canyon Rd.	60.4	RW	49	106	228
Murrieta Rd.	North of Bundy Canyon Rd.	71.1	119	256	552	1,189

Source: Urban Crossroads 2012

[1]RW = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 3.5-9
HORIZON YEAR 2035 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Bundy Canyon Rd.	West of I-15 Fwy.	74.7	205	442	953	2,052
Bundy Canyon Rd.	I-15 Fwy. to Sellers Rd.	75.2	221	477	1,027	2,213
Bundy Canyon Rd.	Sellers Rd. to Monte Vista Dr.	75.1	218	469	1,010	2,177
Bundy Canyon Rd.	Monte Vista Dr. to Harvest Way West	75.1	217	468	1,008	2,172
Bundy Canyon Rd.	Harvest Way West to Harvest Way East	74.5	200	430	926	1,996
Bundy Canyon Rd.	Harvest Way East to Sunset Ave.	74.6	203	437	942	2,029
Bundy Canyon Rd.	Sunset Ave. to Murrieta Rd.	74.9	211	455	981	2,113
Bundy Canyon Rd.	Murrieta Rd. to Sweetwater Canyon Rd.	75.7	239	514	1,107	2,386
Bundy Canyon Rd.	Sweetwater Canyon Rd. to I-215 Fwy.	78.4	365	787	1,695	3,651
Bundy Canyon Rd.	East of I-215 Fwy.	78.4	361	777	1,673	3,605
Sunset Ave.	North of Bundy Canyon Rd.	57.0	RW	RW	63	136
Sunset Ave.	South of Bundy Canyon Rd.	60.0	RW	47	101	217
Murrieta Rd.	North of Bundy Canyon Rd.	71.4	125	269	579	1,246

Source: Urban Crossroads 2012

[1]RW = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 3.5-10
HORIZON YEAR 2035 WITH PROJECT CONDITIONS NOISE CONTOURS

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Bundy Canyon Rd.	West of I-15 Fwy.	74.7	207	446	961	2,071
Bundy Canyon Rd.	I-15 Fwy. to Sellers Rd.	75.4	231	497	1,071	2,307
Bundy Canyon Rd.	Sellers Rd. to Monte Vista Dr.	75.3	227	489	1,054	2,271
Bundy Canyon Rd.	Monte Vista Dr. to Harvest Way West	75.1	219	472	1,017	2,190
Bundy Canyon Rd.	Harvest Way West to Harvest Way East	74.8	208	448	966	2,080
Bundy Canyon Rd.	Harvest Way East to Sunset Ave.	75.0	214	462	966	2,145
Bundy Canyon Rd.	Sunset Ave. to Murrieta Rd.	75.2	224	482	1,038	2,235
Bundy Canyon Rd.	Murrieta Rd. to Sweetwater Canyon Rd.	75.9	246	530	1,141	2,459
Bundy Canyon Rd.	Sweetwater Canyon Rd. to I-215 Fwy.	78.5	370	797	1,717	3,700
Bundy Canyon Rd.	East of I-215 Fwy.	78.4	361	778	1,677	3,612
Sunset Ave.	North of Bundy Canyon Rd.	57.4	RW	RW	67	145
Sunset Ave.	South of Bundy Canyon Rd.	60.8	RW	52	113	243
Murrieta Rd.	North of Bundy Canyon Rd.	71.5	127	273	587	1,265

Source: Urban Crossroads 2012

[1]RW = Location of the respective noise contour falls within the right-of-way of the road

Existing Roadway Noise Levels

Table 3.5-2 presents the existing noise contour boundaries. **Table 3.5-2** shows that for existing traffic volumes, all segments adjacent to Bundy Canyon Road currently exceed the City of Wildomar's 65 dBA CNEL standard for noise-sensitive residential areas at 100 feet from each roadway's centerline.

Opening Year (Year 2015) Project Traffic Noise Level Contributions

Table 3.5-11 presents a comparison of the opening year (Year 2015) without and with the proposed project noise levels shown in **Tables 3.5-7** and **3.5-8**. The roadway noise impacts will increase on all segments from 0.1 dBA CNEL to 2.0 dBA CNEL with the development of the proposed project.

TABLE 3.5-11
YEAR 2015 OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

Road	Segment	CNEL at 100 Feet (dBA)			Potential Significant Impact[1]
		No Project	With Project	Project Contribution	
Bundy Canyon Rd.	West of I-15 Fwy.	73.8	73.9	0.1	NO
Bundy Canyon Rd.	I-15 Fwy. to Sellers Rd.	74.7	75.0	0.3	NO
Bundy Canyon Rd.	Sellers Rd. to Monte Vista Dr.	74.6	74.9	0.3	NO
Bundy Canyon Rd.	Monte Vista Dr. to Harvest Way West	74.6	74.9	0.3	NO
Bundy Canyon Rd.	Harvest Way West to Harvest Way East	74.1	74.4	0.3	NO
Bundy Canyon Rd.	Harvest Way East to Sunset Ave.	74.2	74.5	0.3	NO
Bundy Canyon Rd.	Sunset Ave. to Murrieta Rd.	74.4	74.8	0.4	NO
Bundy Canyon Rd.	Murrieta Rd. to Sweetwater Canyon Rd.	75.2	75.4	0.2	NO
Bundy Canyon Rd.	Sweetwater Canyon Rd. to I-215 Fwy.	78.0	78.1	0.1	NO
Bundy Canyon Rd.	East of I-215 Fwy.	77.9	78.0	0.1	NO
Sunset Ave.	North of Bundy Canyon Rd.	49.1	51.1	2.0	NO
Sunset Ave.	South of Bundy Canyon Rd.	59.6	60.6	1.0	NO
Murrieta Rd.	North of Bundy Canyon Rd.	71.0	71.1	0.1	NO

Source: Urban Crossroads 2012

[1] A significant impact is considered both a level above 65 dBA CNEL and an increase greater than 3.0 dBA.

Horizon Year 2035 Project Traffic Noise Level Contributions

Table 3.5-12 presents a comparison of Horizon Year 2035 without and with the proposed project noise levels shown in **Tables 3.5-7** and **3.5-8**. The roadway noise impacts will increase on all segments from 0.0 dBA CNEL to 1.0 dBA CNEL with the development of the proposed project.

TABLE 3.5.12
HORIZON YEAR 2035 OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

Road	Segment	CNEL at 100 Feet (dBA)			Potential Significant Impact[1]
		No Project	With Project	Project Contribution	
Bundy Canyon Rd.	West of I-15 Fwy.	74.7	74.7	0.0	NO
Bundy Canyon Rd.	I-15 Fwy. to Sellers Rd.	75.2	75.4	0.2	NO
Bundy Canyon Rd.	Sellers Rd. to Monte Vista Dr.	75.1	75.3	0.2	NO
Bundy Canyon Rd.	Monte Vista Dr. to Harvest Way West	75.1	75.3	0.2	NO
Bundy Canyon Rd.	Harvest Way West to Harvest Way East	74.5	74.8	0.3	NO
Bundy Canyon Rd.	Harvest Way East to Sunset Ave.	74.6	74.9	0.3	NO
Bundy Canyon Rd.	Sunset Ave. to Murrieta Rd.	74.9	75.2	0.3	NO

Road	Segment	CNEL at 100 Feet (dBA)			Potential Significant Impact[1]
		No Project	With Project	Project Contribution	
Bundy Canyon Rd.	Murrieta Rd. to Sweetwater Canyon Rd.	75.7	75.8	0.1	NO
Bundy Canyon Rd.	Sweetwater Canyon Rd. to I-215 Fwy.	78.4	78.5	0.1	NO
Bundy Canyon Rd.	East of I-215 Fwy.	78.4	78.4	0.0	NO
Sunset Ave.	North of Bundy Canyon Rd.	57.0	57.4	0.4	NO
Sunset Ave.	South of Bundy Canyon Rd.	60.0	61.0	1.0	NO
Murrieta Rd.	North of Bundy Canyon Rd.	71.4	71.5	0.1	NO

Source: Urban Crossroads 2012

[1] A significant impact is considered both a level above 65 dBA CNEL and an increase greater than 3.0 dBA.

Off-Site Transportation-Related Project Noise Impacts

Project-related vehicular source noise may affect permanent and ongoing ambient noise conditions and would not be considered a temporary or periodic noise source. Applying the thresholds of significance discussed above, potentially permanent increases in the ambient noise levels generated by project traffic will be considered potentially significant if:

- Vehicular source noise exceeds applicable City standards;
- Ambient conditions are within the normally acceptable community noise exposure levels identified in the Noise Element, and the project increases the noise to levels above the normally acceptable community noise exposure at any sensitive receptor by an audible amount (3 dB or more); or
- Ambient conditions exceed the normally acceptable community noise exposure level identified in the Noise Element, *and* the project increases the ambient noise at any sensitive receptor by an audible amount (3 dB or more).

As indicated above, for all other roadway segments, the project's incremental vehicular source noise contributions will be considered barely perceptible (less than 3.0 dBA CNEL).

Exposure to Groundborne Vibration

The groundborne vibration criteria recommended by Caltrans for evaluation of potential structural damage is based on building classifications, which take into account the age and condition of the building. For residential structures and newer buildings, Caltrans considers a minimum peak-particle velocity (ppv) threshold of 0.5 inches per second (in/sec) for transient sources and 0.3 in/sec for continuous/frequent sources to be sufficient to protect against building damage. With the exception of fragile buildings, ruins, and ancient monuments, continuous groundborne vibration levels below approximately 0.2 in/sec ppv are unlikely to cause structural damage. In terms of human annoyance, continuous vibrations in excess of 0.04 in/sec ppv and transient sources in excess of 0.25 in/sec ppv are identified by Caltrans as being "distinctly perceptible." Within buildings, short periods of groundborne vibration in excess of 0.2 in/sec ppv are generally considered to result in increased levels of annoyance (Caltrans 2002, 2004).

Groundborne vibration levels would be considered significant if predicted short-term construction or long-term operational groundborne vibration levels attributable to the proposed

project would exceed recommended criteria demonstrated by **Tables 3.5-13** and **3.5-14** at nearby existing structures.

In estimating the potential of groundborne vibration emitted from common construction equipment, the following formula is used by Caltrans and the Federal Transit Administration:

PPVEquipment = PPVRef (25/D)n (in/sec)

Where:

PPVRef = reference PPV at 25 feet

D = distance from equipment to the receiver in feet

n = 1.1 (the value related to the attenuation rate through ground)

This formula is then used to determine the groundborne vibration caused by common construction equipment, which is displayed by **Table 3.5-15**.

TABLE 3.5-13
DAMAGE POTENTIAL TO BUILDINGS AT VARIOUS GROUNDBORNE VIBRATION LEVELS

Structure and Condition	Vibration Level (in/sec ppv)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely Fragile Historic Buildings, Ruins, Ancient Monuments	0.12	0.08
Fragile Buildings	0.20	0.10
Historic and Some Old Buildings	0.50	0.25
Older Residential Structures	0.50	0.30
New Residential Structures	1.00	0.50
Modern Industrial/Commercial Buildings	2.00	0.50

Source: Caltrans 2002, 2004
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

TABLE 3.5-14
ANNOYANCE POTENTIAL TO PEOPLE AT VARIOUS GROUNDBORNE VIBRATION LEVELS

Human Response	Vibration Level (in/sec ppv)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely Perceptible	0.04	0.01
Distinctly Perceptible	0.25	0.04
Strongly Perceptible	0.9	0.10
Severe	2.0	0.4

Source: Caltrans 2002, 2004
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment

TABLE 3.5-15
REPRESENTATIVE CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Equipment	Peak Particle Velocity at 25 Feet (in/sec ppv)
Vibratory Roller	0.210
Large Tractors	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Tractors	0.003

Source: Caltrans 2004; FTA 2006

LAND USE COMPATIBILITY

Proposed land uses are evaluated in comparison to the City's General Plan noise standards for land use compatibility shown in **Table 3.5-3**. Accordingly, residential land uses are considered normally acceptable within exterior noise environments up to 60 dBA CNEL/L_{dn} and conditionally acceptable at levels up to 70 dBA CNEL/L_{dn}. Commercial land uses and neighborhood parks are considered normally acceptable within exterior noise environments up to 70 dBA CNEL/L_{dn}. Commercial uses are considered conditionally acceptable at levels up to approximately 78 dBA CNEL/L_{dn}, and neighborhood parks are considered conditionally acceptable within exterior noise environments up to 75 dBA CNEL/L_{dn}.

METHODOLOGY

The following section outlines the methods and procedures used to model and analyze the future traffic noise environment.

Short-Term Construction Noise

Predicted noise levels at nearby noise-sensitive land uses were calculated utilizing typical noise levels and usage rates associated with construction equipment, derived from the Federal Highway Administration's Roadway Construction Noise Model (version 1.1). Construction noise levels are predicted assuming an average noise attenuation rate of 6 dB per doubling of distance from the source.

Transportation Noise

The following methods and procedures were used to model and analyze the future traffic noise environment.

FHWA Traffic Noise Prediction Model

The roadway noise impacts from vehicular traffic were projected using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model-FHWA-RD-77-108 (the FHWA Model). The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Adjustments are then made to the REMEL to account for the roadway classification (e.g., collector, secondary, major,

or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period.

Traffic Noise Prediction Model Inputs

Table 3.5-16 presents the FHWA Traffic Noise Prediction Model roadway parameters used in this analysis. Soft site conditions were used to develop the noise contours to analyze the traffic noise impacts. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. Even though the proposed project will result in development, the areas adjacent to the roadway will remain earthen and vegetated rather than completely covered with concrete, asphalt, or another building material. Therefore, soft site conditions better represent the noise level contours.

The Existing, Project Completion (Year 2015), and Horizon Year 2035 average daily traffic volumes used for the study and presented in **Table 3.5-17** were provided by the Traffic Impact Analysis prepared by Urban Crossroads in May 2012.

TABLE 3.5-16
OFF-SITE ROADWAY PARAMETERS

Roadway	Segment	Roadway Classification[1]	Vehicle Speed (MPH)	Site Conditions
Bundy Canyon Road	West of I-15 Fwy.	Urban Arterial	40	Soft
Bundy Canyon Road	I-15 Fwy. to Sellers Rd.	Urban Arterial	40	Soft
Bundy Canyon Road	Sellers Rd. to Monte Vista Dr.	Urban Arterial	40	Soft
Bundy Canyon Road	Monte Vista Dr. to Harvest Way West	Urban Arterial	40	Soft
Bundy Canyon Road	Harvest Way West to Harvest Way East	Urban Arterial	40	Soft
Bundy Canyon Road	Harvest Way East to Sunset Ave.	Urban Arterial	40	Soft
Bundy Canyon Road	Sunset Ave. to Murrieta Rd.	Urban Arterial	40	Soft
Bundy Canyon Road	Murrieta Rd. to Sweetwater Canyon Rd.	Urban Arterial	40	Soft
Bundy Canyon Road	Sweetwater Canyon Rd. to I-215 Fwy.	Urban Arterial	40	Soft
Bundy Canyon Road	East of I-215 Fwy.	Urban Arterial	40	Soft
Sunset Avenue	North of Bundy Canyon Rd.	Collector	40	Soft
Sunset Avenue	South of Bundy Canyon Rd.	Collector	40	Soft
Murrieta Road	North of Bundy Canyon Rd.	Arterial	40	Soft

Source: Urban Crossroads 2012

[1]According to the City of Wildomar General Plan Circulation Element

TABLE 3.5-17
AVERAGE DAILY TRAFFIC FOR EXISTING, YEAR 2015, AND POST YEAR 2035 CONDITIONS

Roadway	Segment	Average Daily Traffic (1,000s)				
		Existing	Year 2015		Post Year 2035	
			No Project	With Project	No Project	With Project
Bundy Canyon Road	West of I-15 Fwy.	15.6	23.8	24.2	29.2	29.5
Bundy Canyon Road	I-15 Fwy. to Sellers Rd.	18.4	29.5	31.4	32.7	34.6
Bundy Canyon Road	Sellers Rd. to Monte Vista Dr.	17.1	28.5	30.9	31.9	34.0
Bundy Canyon Road	Monte Vista Dr. to Harvest Way West	17.6	28.7	30.6	31.8	33.7
Bundy Canyon Road	Harvest Way West to Harvest Way East	13.5	25.3	27.1	28.0	29.8
Bundy Canyon Road	Harvest Way East to Sunset Ave.	13.7	25.9	28.1	28.7	30.9
Bundy Canyon Road	Sunset Ave. to Murrieta Rd.	13.7	27.5	30.1	30.5	33.2
Bundy Canyon Road	Murrieta Rd. to Sweetwater Canyon Rd.	10.9	33.1	34.6	36.6	38.1
Bundy Canyon Road	Sweetwater Canyon Rd. to I-215 Fwy.	18.3	62.8	64.1	69.3	70.6
Bundy Canyon Road	East of I-215 Fwy.	29.8	61.8	62.0	68.0	68.2
Sunset Avenue	North of Bundy Canyon Rd.	0.6	0.7	1.1	4.3	4.7
Sunset Avenue	South of Bundy Canyon Rd.	0.1	7.7	9.8	8.6	10.7
Murrieta Road	North of Bundy Canyon Rd.	5.8	16.1	16.5	17.7	18.0

Source: Urban Crossroads 2012

[1]*According to the Traffic Impact Analysis prepared by Urban Crossroads in May 2012*

GROUNDBORNE VIBRATION

Groundborne vibration levels associated with construction-related activities were evaluated utilizing typical groundborne vibration levels rates associated with construction equipment, obtained from the Federal Transit Administration's Transit Noise and Vibration Impact Assessment (2006) guidelines. Groundborne vibration impacts related to structural damage and human annoyance were evaluated, taking into account the distance from construction activities to nearby land uses, and typically applied criteria for structural damage and human annoyance are shown in **Tables 3.5-13** and **3.5-14**.

IMPACTS AND MITIGATION MEASURES

Exposure to Excessive Noise Levels (Standard of Significance 1)

Impact 3.5.1 The completed proposed project may expose persons to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. However, following implementation of the recommended mitigation measures below, the potential impact will be **less than significant with mitigation incorporated**.

The results of the noise impact analysis prepared for the proposed project indicate the future unmitigated exterior noise levels for the lots analyzed will range from 72.8 to 75.0 dBA CNEL. Based on the calculated noise level impacts presented, future traffic-related noise levels are expected to exceed the City of Wildomar exterior noise level standard of 65 dBA CNEL. To reduce expected traffic noise impacts in order to meet the City of Wildomar 65 dBA CNEL exterior and 45 dBA CNEL interior noise standard, the project applicant will implement noise mitigation measures **MM 3.5.1a** and **MM 3.5.1b**.

With the recommended exterior noise mitigation measures, including the construction of a 6.5-foot-high noise barrier at lots 33–50 and a 6.0-foot-high barrier at lots 89–96, 131–144, 150–164, and 198–222 adjacent to Bundy Canyon Road, the exterior noise levels at the first- and second-floor building facade will range from 63.5 to 74.3 dBA CNEL. The noise analysis shows that the "windows open" condition will not provide adequate interior noise mitigation.

To meet the 45 dBA CNEL interior noise standard, an interior noise level reduction ranging from 18.5 to 29.3 dBA CNEL is required. The required interior noise level reduction at lots 33–50, 89–96, 131–144, 152–164, and 198–222 adjacent to Bundy Canyon Road can be accomplished with a "windows closed" condition, requiring a means of mechanical ventilation and standard dual-glazed windows with a minimum Sound Transmission Class (STC) rating of 26 at first-floor elevations and upgraded dual-glazed windows with a minimum Sound Transmission Class (STC) rating of 29 at second-floor elevations.

Additionally, lots 1–3, 145–151, 173, 197, and 223–224, will require a "windows closed" condition, requiring a means of mechanical ventilation and standard dual-glazed windows with a minimum Sound Transmission Class (STC) rating of 26 at first- and second-floor elevations. With these design features, the future interior noise levels will be below the City of Wildomar 45 dBA CNEL interior level standard. However, because the building designs of the homes are not known, mitigation measure **MM 3.5.1f** requires that a noise study be submitted with the building permit application for these lots to ensure that the architectural design allows the structure to meet the interior noise standards.

Mitigation Measures

MM 3.5.1a The project applicant shall construct at least a 6.5-foot-high decorative block wall or similarly effective noise barrier consistent with the design/wall guidelines of the specific plan for lots 33–50 adjacent to Bundy Canyon Road to mitigate for exterior noise impacts to residents. The designed noise screening may only be accomplished if the barrier's weight is at least 3.5 pounds per square foot of face area and has no decorative cutouts or line-of-sight openings between shielded areas and the roadways. The recommended noise control barrier may be constructed using one of the following alternative materials:

1. Masonry block
2. Stucco veneer over wood framing (or foam core), or 1-inch-thick tongue-and-groove wood of sufficient weight per square foot
3. Glass (1/4 inch thick), or other transparent material with sufficient weight per square foot
4. Earthen berm

5. Any combination of these construction materials

The recommended barrier must present a solid face from top to bottom. Unnecessary openings or decorative cutouts should not be made. All gaps (except for weep holes) should be filled with grout or caulking.

Timing/Implementation: *Prior to a Certificate of Occupancy for lots 33–50 (Phase 18 planning area)*

Enforcement/Monitoring: *City of Wildomar Planning and Building Departments*

MM 3.5.1b The project applicant shall construct a 6.0-foot-high decorative block wall or similarly effective noise barrier consistent with the design/wall guidelines of the specific plan for lots 89–96, 131–144, 150–164, and 198–222 adjacent to Bundy Canyon Road to mitigate for exterior noise impacts to residents. The designed noise screening may only be accomplished if the barrier's weight is at least 3.5 pounds per square foot of face area and has no decorative cutouts or line-of-sight openings between shielded areas and the roadways. The recommended noise control barrier may be constructed using one of the following alternative materials:

1. Masonry block
2. Stucco veneer over wood framing (or foam core), or 1-inch-thick tongue-and-groove wood of sufficient weight per square foot
3. Glass (1/4 inch thick), or other transparent material with sufficient weight per square foot
4. Earthen berm
5. Any combination of these construction materials

The recommended barrier must present a solid face from top to bottom. Unnecessary openings or decorative cutouts should not be made. All gaps (except for weep holes) should be filled with grout or caulking.

Timing/Implementation: *Prior to a Certificate of Occupancy for lots 89–96, 131–144, 150–164 (Phase 9 planning area) and 198–222 (Phase 17A planning area)*

Enforcement/Monitoring: *City of Wildomar Planning and Building Departments*

MM 3.5.1c The project applicant shall provide a "windows closed" condition, requiring a means of mechanical ventilation and standard dual-glazed windows with a minimum Sound Transmission Class (STC) rating of 26 at first-floor elevations, with upgraded dual-glazed windows with a minimum Sound Transmission Class (STC) rating of 29 at second-floor elevations for lots 33–50, 89–96, 131–144, 152–164, and 198–222.

Timing/Implementation: *Prior to a Certificate of Occupancy (as a part of building permit requirements) for lots 33–50, 89–96, 131–144, 152–164, and 198–222*

Enforcement/Monitoring: *City of Wildomar Planning and Building Departments*

MM 3.5.1d The project applicant shall provide a "windows closed" condition, requiring a means of mechanical ventilation and standard dual-glazed windows with a minimum Sound Transmission Class (STC) rating of 26 at first- and second-floor elevations for lots 1–3, 145–151, 173, 197, and 223–224.

Timing/Implementation: *Prior to a Certificate of Occupancy (as a part of building permit requirements) for lots 1–3, 145–151, 173, 197, and 223–224*

Enforcement/Monitoring: *City of Wildomar Planning and Building Departments*

MM 3.5.1e All window and door assemblies used throughout the project shall be free of cutouts and openings and shall be well fitted and well weather-stripped.

Timing/Implementation: *Prior to a Certificate of Occupancy (as a part of building permit requirements)*

Enforcement/Monitoring: *City of Wildomar Planning and Building Departments*

MM 3.5.1f A final noise study shall be prepared prior to obtaining building permits for lots 1–3, 33–50, 89–96, 131–151, 152–164, 173, and 197–224. This report will finalize the noise requirements based upon precise grading plans and actual building design specifications. The report may result in the need for additional building-specific architectural treatments to meet the interior noise specifications of the City.

Timing/Implementation: *As a part of building permit requirements*

Enforcement/Monitoring: *City of Wildomar Planning and Building Departments*

With implementation of mitigation measures **MM 3.5.1a** and **MM 3.5.1b**, the proposed project will meet the City of Wildomar 65 dBA CNEL exterior noise level standard for residential development. The noise study concluded that interior noise levels would be acceptable on the ground floor with window ratings of STC 26 and on the second floor with STC 29 windows as required in mitigation measures **MM 3.5.1c** through **MM 3.5.1e**. However, at this point it is uncertain whether any of the parcels indicated in the mitigation measures will have second floors, and there are not housing plans to examine to calculate the interior noise levels. Therefore, **MM 3.5.1f** requires that the design of the buildings being requested on certain lots be evaluated to ensure the interior noise standards can be met. With implementation of the above mitigation measures, both the exterior and interior noise levels can be reduced to a **less than significant** impact.

Exposure Excessive Groundborne Vibration or Noise (Standard of Significance 2)

Impact 3.5.2 The implementation of proposed project may expose persons to or generate minimal, short-duration groundborne vibration or groundborne noise levels. This impact is considered **less than significant.**

Construction methods used for the proposed project will involve graders, excavators, and various sized trucks as well as personal vehicles. **Table 3.5-15** illustrates the peak particle velocity for various types of equipment, including vibratory rollers, large tractors, and loaded trucks. Use of a vibratory roller is likely for roadway construction. As noted in the table, the velocity at 25 feet from the sources is 0.21 inches per second. **Table 3.5-14** notes that the vibration would be strongly perceptible as an intermittent source. The Caltrans acceptable vibration standard ranges from 0.30 to 0.50 for older and newer residential structures, respectively. Further, the maximum velocity will be at 25 feet or closer to the equipment. As there are no structures on site, and no structures within 25 feet of any area being developed as part of the proposed project, the actual ground vibration will be less. As the projected ground vibration is less than the acceptable standard, this impact is considered **less than significant**.

Mitigation Measures

None required.

Result in a Permanent Increase in Ambient Noise Levels (Standard of Significance 3)

Impact 3.5.3 Completion of the proposed project may result in a substantial permanent increase in ambient noise levels in the project vicinity. However, this potential increase in the ambient noise may be mitigated through the implementation of the mitigation measure listed below, resulting in a **less than significant impact with mitigation incorporated**.

To assess the off-site noise levels associated with development of the proposed project, noise level contour boundaries for the 55, 60, 65, and 70 dBA CNEL noise levels were developed for each of the alternatives included in the proposed project's traffic impact analysis (see **Appendix 3.3-1**). For noise impacts to be considered significant, the project traffic volumes must create a noise level increase of greater than 3 dBA on the study area roadway segments and the resulting noise level must exceed the City of Wildomar 65 dBA CNEL exterior noise level standard.

For the Opening Year 2015 and the Horizon Year 2035 scenarios, **Tables 3.5-11** and **3.5-12** show that potential traffic noise level impacts will range from 0.0 to 2.0 dBA CNEL; therefore, the proposed project's incremental off-site traffic noise level contributions will be considered barely perceptible (less than 3.0 dBA CNEL). There will be no significant impacts to the ambient noise levels due to increased traffic noise.

Future uses within the commercial area of the proposed project near the intersection of Bundy Canyon Road and Sunset Avenue have the potential to produce unacceptable operational noise levels. Typical noise impacts associated with the operation of a commercial center include truck maneuvering and unloading, air conditioning units, trash compactors, and speakerphones. However, it is not possible to calculate the specific noise impacts at the specific project level without final plans and the location of the potential noise sources. At the time that site plans or building permits are proposed for uses within the commercial site, the following mitigation measure will be implemented, resulting in a **less than significant** impact.

Mitigation Measures

MM 3.5.3 The project applicant shall ensure that future commercial uses do not result in exterior noise levels at the nearest sensitive receptor that exceeds 65 dB or interior noise levels that exceed 45 dB. Examples of design features that can be used to reduce noise impacts associated with any future commercial use include, but are not limited to, noise barriers (walls), limited hours of operation, reconfiguration of site design, or restriction of uses or types of use.

Timing/Implementation: *Prior to approval of a Plot Plan or Conditional Use Permit for any commercial development within the Phase 19 planning area*

Enforcement/Monitoring: *City of Wildomar Planning Department*

With implementation of mitigation measure **MM 3.5.3**, the project's impact on ambient noise levels will be **less than significant.**

Result in a Temporary Increase in Ambient Noise Levels (Standard of Significance 4)

Impact 3.5.4 Construction of the proposed project may result in a temporary increase in ambient noise levels in the project vicinity. This temporary impact will be reduced through the implementation of the mitigation measures listed below, resulting in a **less than significant impact with mitigation incorporated**.

The proposed project site is surrounded by existing single-family homes at varying distances. To estimate the construction noise impacts, typical reference construction noise level sources were placed within the project site and then used to estimate the potential noise impacts on the neighboring noise-sensitive land uses. Using a drop-off rate of 6 dBA per doubling of distance, noise levels are estimated at 83 dBA L_{eq} at 100 feet, at 77 dBA at 200 feet, and at 71 dBA at 400 feet. This noise level impact represents a worst-case condition when grading equipment is operating near the project boundaries and adjacent to the noise-sensitive residential areas adjacent to the project site. To reduce the noise impacts to the adjacent noise-sensitive residential community, several noise mitigation measures are provided below.

Mitigation Measures

MM 3.5.4a Pursuant to Section 9.48.020 of the City of Wildomar Municipal Code establishing noise regulations, from June through September, construction can occur from 6:00 AM through 6:00 PM. During the period of October through May, construction activities can occur from 7:00 AM through 6:00 PM (Municipal Code Section 9.48.020I(1)(2)). Hours of construction during these seasons shall be limited to these time frames.

Timing/Implementation: *During construction*

Enforcement/Monitoring: *City of Wildomar Planning and Building Departments*

MM 3.5.4b During all project site excavation and grading, construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The

construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise-sensitive receptors nearest the project site.

Timing/Implementation: *During construction*

Enforcement/Monitoring: *City of Wildomar Planning and Building Departments*

MM 3.5.4c The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment. To the extent feasible, haul routes shall not pass sensitive land uses or residential dwellings.

Timing/Implementation: *During construction*

Enforcement/Monitoring: *City of Wildomar Planning and Building Departments*

MM 3.5.4d Homeowners adjacent to project construction areas shall be notified via US mail and postings on the construction site at least 24 hours prior to the commencement of major construction-related noise impacts, such as grading, which may affect them.

Timing/Implementation: *During construction*

Enforcement/Monitoring: *City of Wildomar Planning Department and Public Works Department*

The mitigation measures above recognize that construction noise is of short-term duration and will not present any long-term impacts on the project site or surrounding area. Therefore, with implementation of mitigation measures **MM 3.5.4a** through **MM 3.5.4d**, this impact will be **less than significant**.

3.5.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The geographic extent of the cumulative setting for noise consists of the proposed project site and the surrounding areas along Bundy Canyon Road within the City of Wildomar. Cumulative development conditions could result in increased cumulative roadway noise levels and could also result in increased noise associated with future development. As noted earlier, ambient noise levels in the proposed project area are influenced by traffic noise emanating from area roadways, particularly Bundy Canyon Road. The land uses allowed in the area are residential and rural residential in nature and would not be expected to result in stationary sources of noise. There are no industrial or large commercial projects existing or proposed within the project area, and neither the existing general plan designations nor the zoning would allow for nonresidential development. Potential noise from the small commercial property considered as part of the proposed project is addressed in mitigation measure **MM 3.5.3**. Therefore, the only factor affecting cumulative noise within the project area is future traffic noise levels.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Contribution to Cumulative Noise Levels

Impact 3.5.5 Implementation of the proposed project will not result in a substantial contribution to cumulative noise levels. The impact would be considered **less than cumulatively considerable.**

The proposed project's contribution to the cumulative traffic noise levels along area roadways was determined by comparing the predicted noise levels with and without project-generated traffic. Traffic projections for Horizon Year (2035) with Project conditions were derived from the Riverside County Transportation Analysis Model (RivTAM) using accepted procedures for model forecast refinement and smoothing. The No Project column in **Table 3.5-12** is based on forecasts reflecting the area-wide growth in traffic anticipated between existing conditions and Horizon Year (2035) conditions. Predicted increases in future cumulative traffic noise levels along primarily affected roadways are depicted in **Tables 3.5-11** and **3.5-12**. Predicted distances to future cumulative traffic noise contours are identified in **Table 3.5-10**.

As noted in the tables, area-wide growth will result in most of the increase in noise affecting the proposed project. Implementation of the proposed project would result in predicted increases of 0.0 to 1.0 dB in 2035, and such low levels of increase are considered barely perceptible (Urban Crossroads 2012). The proposed project would not result in a substantial increase in traffic noise levels along primarily affected area roadways. It is important to note that the existing traffic noise levels presented in **Table 3.5-2** do not take into account noise reductions provided by existing structures, barriers, or terrain. Given that the proposed project would not result in a significant contribution to traffic noise levels, the proposed project's cumulative contribution to ambient noise levels would be considered **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

Caltrans (California Department of Transportation). 2002. *Transportation Related Earthborne Vibrations*.

———. 2004. *Transportation- and Construction-Induced Vibration Guidance Manual.*

———. 2011. "IS/EA Annotated Outline." Accessed February 8. http://www.dot.ca.gov/ser/vol1/sec4/ch31ea/ chap31ea.htm.

EPA (US Environmental Protection Agency). 1971. *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.*

FICON (Federal Interagency Committee on Noise). 2000. *Discussion of Methodologies of Measuring Noise Impact*.

FTA (Federal Transit Administration). 2006. *Transit Noise and Vibration Impact Assessment*.

OPR (State of California Office of Planning and Research). 2003. *General Plan Guidelines.*

Urban Crossroads. 2012. *Oak Creek (T.T.M. 36388) Noise Impact Analysis, City of Wildomar, California*.

3.6 Geology and Soils

This section describes the current geologic and soil conditions of the proposed Oak Creek Canyon Development project site and general vicinity and analyzes issues such as potential exposure of people and property to seismic and geologic hazards such as ground rupture, settlement, and landslides. The types of soils that have been identified on the project site and their properties as they relate to the proposed project are also discussed. Impacts associated with erosion during construction and operation of the proposed project are discussed in Section 3.7, Hydrology and Water Quality, of this Draft EIR. Much of the information in this section is based on the Preliminary Geotechnical Investigation report prepared for the Oak Creek Canyon Residential Development (LGC 2012), included as **Appendix 3.6-1.**

3.6.1 EXISTING SETTING

TOPOGRAPHY AND GEOLOGY

The project site is located regionally within the Peninsular Ranges Geomorphic Province of California. Characterized by steep, elongated valleys that tend west to northwest, the topography of the northwest-trending Peninsular Ranges is controlled by the Elsinore fault zone, which extends from the San Gabriel River Valley southeasterly to the United States/Mexico border.

The mountainous regions of the Peninsular Ranges Geomorphic Province are underlain by Pre-Cretaceous, metasedimentary and metavolcanic rocks, and Cretaceous plutonic rocks of the Southern California Batholith. Tertiary and Quaternary rocks generally comprise non-marine sediments consisting of sandstone, mudstones, conglomerates, and occasionally volcanic units.

Locally, the project site is located in an area of shallow alluvium underlain by gabbroic bedrock. Several rock piles and outcrops occur throughout the site. Areas of artificial fill (undocumented) were observed adjacent to the existing roadways and within a borrow area north of the existing residential tract, generally north of the intersection of Harvest Way East and Deep Well Drive. Additional localized areas of artificial fill (undocumented) were observed throughout the project site (LGC 2012).

The topography of the site consists of moderate to steeply sloping terrain, with natural drainage channels in canyon areas, and a general elevation of the property of 1,700 to 1,950 feet above mean sea level (amsl). Local drainage generally follows toward the east and northeast (LGC 2012). (See **Figure 3.6-1**)

SOIL AND MINERAL RESOURCES

The earth materials on the site are composed of artificial fill, undocumented or previously placed by others, topsoil, Quaternary alluvium, Quaternary older alluvium, and Cretaceous gabbro bedrock. The location of each of these underlying soil types is included in **Appendix 3.6-2,** and a general description of the soil and bedrock materials observed on the site follows.

- **Artificial Fill, Undocumented (map symbols Afu and Afo):** Undocumented artificial fill materials were encountered and mapped throughout the site. These materials are typically locally derived from the native materials and consist generally of brown silty sand with gravel and large rock (locally). These materials are generally inconsistent, poorly consolidated fills and road fills.

- **Topsoil (not a mapped unit):** Topsoil was encountered mantling the bedrock throughout the site. This unit generally consists of reddish brown to brown, dry to moist, loose, silty to clayey sands. Typically, the topsoil was noted with scattered rocks and rootlets.

- **Quaternary Alluvium (map symbol Qal):** Quaternary alluvium was encountered in the drainage channels throughout the site. This alluvial unit consists predominantly of brown to red brown silty sand to poorly graded sand. This unit is generally moist and loose to medium dense in condition.

- **Quaternary Older Alluvium (map symbol Qoal):** Quaternary older alluvium consisted of dark brown to reddish brown, damp to moist, medium dense silty sand to clayey sand with scattered gravel and cobbles.

- **Cretaceous Gabbro (map symbol Kgb):** Cretaceous age granitic rocks composed of gabbro make up this unit. This rock unit was mapped generally throughout the site and underlies the other units at varying depths. Gabbroic rocks were observed to be light brown and reddish brown, fine to medium grained, unweathered to intensely weathered, and in a soft to very hard state.

A December 2011 field investigation also included the excavation of 24 test pits. The depth of the test pits ranged from approximately 5 to 18 feet. During the subsurface investigation, representative bulk and relatively undisturbed samples were retained for laboratory testing. Laboratory testing was performed on representative soil samples and included moisture and density tests, maximum dry density and optimum moisture content, Expansion Index, direct shear, and corrosion. The results and a discussion of these tests are contained in **Appendix 3.6-1.**

SEISMIC HAZARDS

In populated areas, the greatest potential for loss of life and property damage could come as a result of ground shaking from a nearby earthquake. The degree of damage depends on many interrelated factors. Among these are the Richter magnitude, focal depth, distance from the causative fault, source mechanism, duration of shaking, high rock accelerations, type of surficial deposits or bedrock, degree of consolidation of surficial deposits, presence of high groundwater, topography, and design, type, and quality of building construction.

No known faults are shown on the current available geologic maps as crossing the project site. The project site is not located within a designated Alquist-Priolo Earthquake Fault Zone. According to the Fault Activity Map of California and Adjacent Areas prepared by the California Geological Survey, the closest Quaternary fault to the site is the Elsinore-Temecula fault located approximately 4.5 miles from the site. As demonstrated in **Figure 3.6-2**, other faults within 20 miles of the subject site that may result in shaking to the site include the Elsinore-Glen Ivy, San Jacinto-San Jacinto Valley, Chino-Central Avenue (Elsinore Strand), San Jacinto-San Bernardino, and San Jacinto-Anza faults, among others (LGC 2012).

GROUNDWATER

Groundwater was not encountered within the test pits during the field investigation. However, seasonal perched groundwater is expected to be encountered within the canyon areas where Quaternary alluvial deposits were noted (LGC 2012).

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EXISTING TOPOGRAPHY

Source: City of Wildomar

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Figure 3.6-1
Existing Topo

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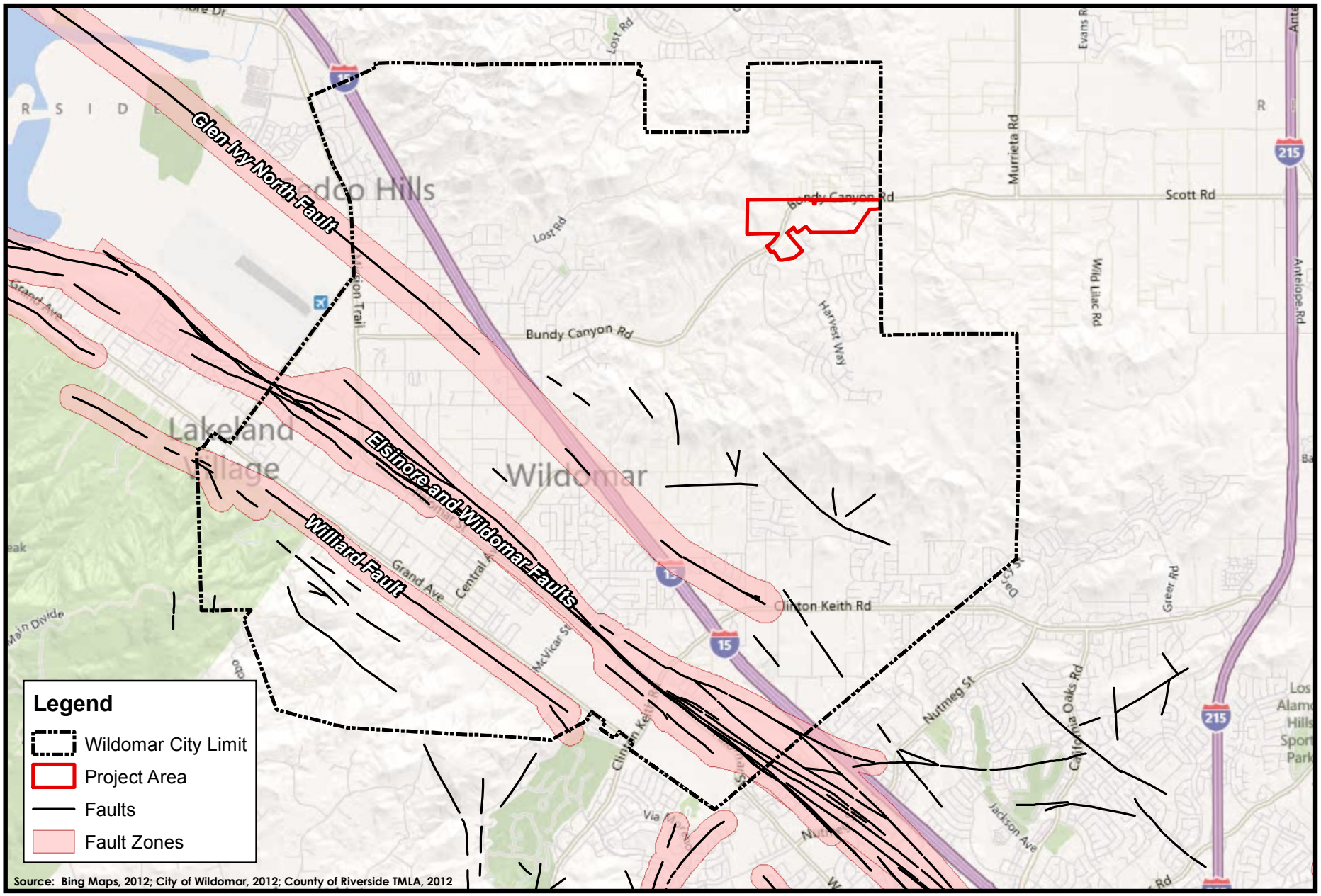

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Figure 3.6-2
Fault Zones within the City of Wildomar

T:_GIS\RIVERSIDE_COUNTY\MXDS\WILDOMAR\OAK_CREEK\FIGURE 3.6-2 FAULT.MXD - 8/2/2012 @ 10:10:08 AM

LANDSLIDES

Review of geologic literature and geologic mapping did not indicate the presence of landslides on or adjacent to the site. The potential for the existence of landslides is considered insignificant since the site is underlain by hard to very hard gabbroic bedrock, which is generally not susceptible to landslides (LGC 2012).

LIQUEFACTION

Liquefaction is a seismic phenomenon in which loose, saturated, granular soils behave similarly to a fluid when subject to high-intensity ground shaking. Liquefaction occurs when three general conditions exist: shallow groundwater; low-density non-cohesive (granular) soils; and high-intensity ground motion. Studies indicate that saturated, loose to medium dense, near-surface cohesionless soils exhibit the highest liquefaction potential, while dry, dense, cohesionless soils and cohesive soils exhibit low to negligible liquefaction potential. In general, cohesive soils are not considered susceptible to liquefaction. Cohesive soils may be susceptible to liquefaction if they meet all of the following criteria, commonly referred to as the "Chinese Criteria" (LGC 2012):

- Clay content (defined as percent finer than 0.005 mm) less than 15 percent;
- Liquid limit less than 35 percent;
- In situ moisture content greater than 0.9 times the liquid limit.

Effects of liquefaction on level ground include settlement, sand boils, and bearing capacity failures below structures.

Due to the remedial grading and dense nature of on-site Cretaceous gabbro bedrock, the potential for liquefaction is considered nil, and the possibility of liquefaction-related damages is expected to be remote (LGG 2012).

3.6.2 REGULATORY FRAMEWORK

STATE

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 (originally enacted as the Alquist-Priolo Special Studies Zones Act and renamed in 1994) and is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The main purpose of the law is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The law only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Alquist-Priolo Act requires the State Geologist to establish regulatory zones known as Earthquake Fault Zones around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities, counties, and state agencies for their use in planning efforts. Local agencies must regulate most development projects within the zones. Projects include all land divisions and most structures for human occupancy. There are no Earthquake Fault Zones subject to the Alquist-Priolo Earthquake Fault Zoning Act in the area of the project site (LGC 2012).

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act addresses nonsurface fault rupture earthquake hazards, including liquefaction and seismically induced landslides. Passed by the California legislature in 1990, this law was codified in the California Public Resources Code as Division 2, Chapter 7.8A, and became operative in April 1991. The Seismic Hazards Mapping Act resulted in a mapping program that is intended to reflect areas that have the potential for liquefaction, landslide, strong earth ground shaking, or other earthquake and geologic hazards. In Riverside County, only Murietta has an official seismic-hazard zone map. The City of Wildomar is shown as a planned mapping area as of the date of the map in 2008.

California Building Standards Code

The State of California provides minimum standards for building design through the California Building Standards Code (CBSC [California Code of Regulations, Title 24]). The CBSC is based on the Uniform Building Code (UBC), which is used widely throughout the United States (generally adopted on a state-by-state or district-by-district basis) and has been modified for conditions in California. State regulations and engineering standards related to geology, soils, and seismic activity in the UBC are reflected in the CBSC requirements. Through the CBSC, the State of California provides a minimum standard for building design and construction. The CBSC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control. Wildomar enforces the CBSC through its Municipal Code. The City Building Code (Wildomar Municipal Code, Title 8) incorporates the CBSC, including recent changes.

LOCAL

City of Wildomar General Plan and The Farm Specific Plan

The General Plan includes policies designed to ensure that planning of land uses and new development is compatible with the local geologic and soil resources. **Appendix 3.6-1** includes applicable geology and soils policies and an evaluation of the consistency of the proposed amendment to The Farm Specific Plan with those policies. While this Draft EIR analyzes the proposed project's consistency with the City of Wildomar General Plan pursuant to California Environmental Quality Act (CEQA) Section 15125(d), the City of Wildomar City Council will ultimately make the determination of the project's consistency with the General Plan.

City of Wildomar Development Standards

The City requires that all grading conform to the California Building Code and to City of Wildomar Ordinance 457 governing grading in the city. The City also requires a grading permit before any grading can occur that involves 50 or more cubic yards. As part of the grading permit process, dust control measures are identified and incorporated into the permit. The permit also requires control-landscape plans for manufactured slopes greater than 3 feet in vertical height signed by a registered landscape architect and bonded per the requirements of Ordinance 457. The grading permit must be accompanied by a geotechnical soils reports to the City Engineer for review and approval prior to issuance.

3.6.3 PROJECT IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, a geology, soils, or mineral resources impact is considered significant if project implementation would result in any of the following:

1) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, involving:

    i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to California Geological Survey (formerly Division of Mines and Geology) Special Publication 42.

    ii) Strong seismic ground shaking.

    iii) Seismic-related ground failure, including liquefaction.

    iv) Landslides.

2) Result in substantial soil erosion or the loss of topsoil.

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.

4) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

5) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

Impacts associated with erosion and loss of topsoil are discussed in Section 3.7, Hydrology and Water Quality. Therefore, Standard of Significance 2 from the above list will not be addressed in this section. The project will tie into the existing sewer system for the Wildomar area, rather than use septic systems. Because septic systems are not being implemented, impacts associated with soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems will not affect the project site. Therefore, Standard of Significance 5 from the above list will not be addressed in the Draft EIR.

METHODOLOGY

The analysis in this section is based on review of the Preliminary Geotechnical Investigation (LGC 2012). The purpose of the investigation was to evaluate the pertinent geotechnical conditions at the site and to provide geotechnical design criteria for, but not limited to, grading, construction, foundation design, retaining walls, pavement design, and other relevant aspects relative to the proposed development of the site.

PROJECT IMPACTS AND MITIGATION MEASURES

Impacts Associated with Fault Rupture and Strong Seismic Ground Shaking (Standard of Significance 1)

Impact 3.6.1 The potential for the project site to be exposed to hazards associated with fault rupture or strong seismic ground shaking is considered unlikely. Therefore, this impact is considered **less than significant**.

As discussed in the Existing Setting subsection above, there are no known active faults in the vicinity of the project site nor are there any Alquist-Priolo Special Earthquake Study Zones on or near the site (LGC 2012). Secondary effects of seismic shaking resulting from large earthquakes on the major faults in the Southern California region, which may affect the site, include soil liquefaction and dynamic settlement. Other secondary seismic effects include shallow ground rupture, seiches, and tsunamis. In general, these secondary effects of seismic shaking are a possibility throughout Southern California; severity is dependent on the distance between the site and the causative fault and the on-site geology. The major active fault that could produce these secondary effects is the Elsinore-Temecula fault located approximately 4.5 miles from the site. Other faults within 20 miles of the subject site include the Elsinore-Glen Ivy, San Jacinto-San Jacinto Valley, Chino-Central Avenue (Elsinore Strand), San Jacinto-San Bernardino, and San Jacinto-Anza faults, among others. However, as no known faults exist at the project site, the potential for ground rupture from a fault and associated strong seismic ground shaking is considered to be low. Furthermore, the proposed project would be designed in accordance with CBSC requirements that address structural seismic safety. Therefore, impacts associated with ground rupture of a known earthquake fault or strong seismic shaking are considered to be **less than significant**.

Mitigation Measures

None required.

Exposure to Seismic-Related Ground Failure, Including Liquefaction and Unstable Soils (Standard of Significance 1)

Impact 3.6.2 The project site does not include soils which may be subject to seismic-related ground failure, including liquefaction and landslide. This impact is considered **less than significant**.

Liquefaction is a seismic phenomenon in which loose, saturated, granular soils behave similarly to a fluid when subject to high-intensity ground shaking. Liquefaction occurs when three general conditions exist: shallow groundwater; low-density non-cohesive (granular) soils; and high-intensity ground motion. Studies indicate that saturated, loose to medium dense, near surface cohesionless soils exhibit the highest liquefaction potential, while dry, dense, cohesionless soils and cohesive soils exhibit low to negligible liquefaction potential. In general, cohesive soils are not considered susceptible to liquefaction. Cohesive soils may be susceptible to liquefaction if they meet all of the Chinese Criteria.

A review of geologic literature and geologic mapping did not include the presence of landslides on or adjacent to the site. As noted in Section 2.3 of **Appendix 3.6-1**, the proposed project is underlain by very hard gabbroic bedrock, which is generally not susceptible to landslides (LGC 2012, p. 6). The potential for liquefaction or landslide is considered **less than significant**.

Mitigation Measures

None required.

Impacts Associated with Liquefaction or Collapse (Standard of Significance 3)

Impact 3.6.3 Within the project site, areas of undocumented artificial fills, alluvium, and portions of the old alluvium may become unstable as a result of the project. These areas of unsuitable, undocumented fill may be excavated, allowing for this impact to be **less than significant impact with mitigation incorporated**.

The proposed project site is located in an area of shallow alluvium underlain by gabbroic bedrock. The earth materials on the site are composed of artificial fill, undocumented or previously placed by others, topsoil, Quaternary alluvium, Quaternary older alluvium, and Cretaceous gabbro bedrock. The areas of undocumented artificial fill, alluvium, and portions of the old alluvium are not suitable to support the structures of the proposed project. Furthermore, all the earth materials on the project site are prone to potential settlement. This potential could result in a significant impact if the soils in question are not over-excavated to the underlying competent Cretaceous gabbro within the areas of the proposed structures, fill, or improvements. By over-excavating the building foundation areas, undocumented fill is removed and the foundations can be placed on more stable material. Mitigation measure **MM 3.6.3** requires over-excavation of undocumented artificial fill and old alluvium to ensure more stable foundations. The excavated material may be re-compacted under the direction of a qualified geotechnical engineer. The project engineer considers the amount of excavated material in the calculation of the cut and fill balance for the site. No excavated material will leave the proposed project site.

Mitigation Measures

MM 3.6.3 All existing undocumented artificial fill, topsoil, Quaternary alluvium, Quaternary older alluvium, and unsuitable upper intensely weathered Cretaceous gabbro should be over-excavated to underlying competent Cretaceous gabbro within the areas of proposed structures, fill, or improvements. Anticipated removal depths range from approximately 2 to 14 feet below the existing surface.

Timing/Implementation: *During grading and building activities*

Enforcement/Monitoring: *City of Wildomar City Public Works and Building Departments*

Implementation of mitigation measure **MM 3.6.3** will reduce this impact to **less than significant**.

Expansive Soils (Standard of Significance 4)

Impact 3.6.4 Soils testing indicates that non-expansive and expansive soils are present within the proposed project site. Identification and excavation of expansive soils located within the proposed project site will allow this impact to be **less than significant with mitigation incorporated**.

Laboratory testing indicates that some of the soils may be prone to expansion. Section 4.0 of the geotechnical report provides recommendations on foundations consistent with the soil

conditions found on the project site. These recommendations involve excavation depths and widths, as well as ensuring that excavations into compacted fill are adequate. The measures included in the report represent conventional construction techniques. The City also requires that site-specific soils reports accompany a building permit application request, which ensures that the type of building proposed is consistent with the actual soils present on the proposed building location. The City evaluates each foundation plan separately using information from the building permit and site-specific soils analysis. While Section 4.2 of **Appendix 3.6-1** lists several methods of addressing expansive soils and building foundations, numerous other methods may also be applied after consultation with the City and soils engineers. The precise method will be determined based on building and soils type and approved by the City as part of the building permit process. Adherence to the recommendations in **Appendix 3.6-1**, as well as compliance with mitigation measure **MM 3.6.3**, will result in a **less than significant** impact regarding expansive soils.

Mitigation Measures

None required.

3.6.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

Geotechnical impacts tend to be site-specific rather than cumulative in nature. For example, seismic events may damage or destroy a building on the project site, but the construction of a development project on one site would not cause any adjacent parcels to become more susceptible to seismic events, nor can a project affect local geology in such a manner as to increase risks regionally.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Soil Stability and Seismic Impacts

Impact 3.6.5 Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the City of Wildomar and nearby areas of Riverside County, would not contribute to cumulative geologic and soils impacts. The proposed project's incremental contribution would be **less than cumulatively considerable**.

Soils associated with the project site are similar to others in the area. The proposed project will grade parts of the property to result in buildable lots and supporting infrastructure. The resulting project site will be visually and topographically different from the other lands surrounding the proposed project site. While some grading occurred for the surrounding homes, much of the prior development occurred with minimal or building pad–specific grading only. As shown in **Figure 2.0-3**, the realigned Bundy Canyon Road will generally be lower that the surrounding development. Along Bundy Canyon Road, there are locations where the use of a retaining wall is necessary to allow for a more productive use of the area occupied by the slope. A retaining wall is shown in **Figure 2.0-8** between Harvest Way East and Sunset Street. The wall is necessary to provide for storm drainage basins in Unit 4 and to allow more of the commercial land in Unit 5 to be available for development.

The proposed project will either ensure that grading at the periphery is a match to existing topography to avoid subsidence or erosion, or provide appropriate engineered retaining walls at the project boundary. With compliance with existing codes and standards, including the California Building Code and implementation of mitigation measure **MM 3.6.3**, the proposed project's contribution to cumulative impacts related to the area's geology would be **less than cumulatively considerable.**

Mitigation Measures

None required.

REFERENCES

California Department of Conservation. 2012a. Alquist-Priolo Earthquake Fault Zone Maps. Accessed July 2012. http://www.quake.ca.gov/gmaps/ap/ap_maps.htm.

———. 2012b. Seismic Hazards Zonation Program. Accessed July 2012. http://gmw.consrv.ca.gov/shmp/html/pdf_maps_so.html.

LGC Inland. 2012. *Preliminary Geotechnical Investigation for the Oak Creek Canyon Residential Development, Assessor's Parcel Numbers (APNs): 362-070-001. -003, -006, -010, 013, -018, 021, -023, -024; 362-008-004, -005, -007, -008, -009, -012; 362-090-004, -009, and -015 in the City of Wildomar, County of Riverside, California.*

3.7 Hydrology and Water Quality

This section describes surface water and groundwater features for the proposed project site and relevant surrounding areas and addresses potential issues associated with drainage, erosion, and flooding associated with increased stormwater runoff and water quality. Draft EIR Section 3.10, Public Services and Utilities, discusses impacts related to water supplies and the provision of water service to residents and businesses.

3.7.1 EXISTING SETTING

REGIONAL HYDROLOGY

Water on the project site drains naturally to two separate receiving watersheds, the Santa Ana Watershed and the Santa Margarita Watershed, as shown in **Figure 3.7-1**.

Santa Ana Watershed

The Santa Ana Watershed (SAW) is located in the northwestern corner of Riverside County. The SAW is bounded on the south by the Santa Margarita Watershed, on the east by the Salton Sea Watershed, on the southwest by Orange County, and on the northwest by San Bernardino County. The SAW, including the San Jacinto River sub-watershed, encompasses 1,603 square miles (22 percent of the 7,300 square miles within Riverside County) and includes one of the 28 cities within Riverside County (Riverside County 2011, pp. 2-8 and 2-10).

Because the SAW is arid, there is little natural perennial surface water. Surface waters start in the upper erosion zone of the watershed—primarily the San Bernardino, Santa Ana, and San Jacinto mountains. This upper zone has the highest gradient and soils/geology that do not allow large quantities of percolation of surface water into the ground. Flows consist mainly of snowmelt and storm runoff from the lightly developed San Bernardino National Forest. From the City of San Bernardino to the City of Riverside, the Santa Ana River flows perennially, mostly due to treated discharges from wastewater treatment plants. From the City of Riverside to Prado Dam, the flow in the Santa Ana River consists of highly treated wastewater and groundwater discharges, potable water transfers, irrigation runoff, groundwater forced to the surface by shallow/rising bedrock, and minor amounts of urban stormwater runoff, which provides a proportionately greater contribution to the flow of the river during significant storm events. Lake Elsinore is the only natural freshwater lake of any size in the SAW. A variety of water storage reservoirs (e.g., Lake Perris, Canyon Lake, and Lake Mathews) and flood control areas (Prado Dam area) have been created to hold surface water in Riverside County (Riverside County 2011, p. 2-11).

Climate and Precipitation

The climate of the SAW is Mediterranean with hot, dry summers and cooler, wetter winters. Average annual precipitation ranges from 10 to 13 inches per year in the inland alluvial valleys, reaching 36 inches or more in the San Bernardino and San Jacinto mountains. Most of the precipitation in the SAW occurs between November and March in the form of rain, with variable amounts of snow in the higher elevations. The climate cycle of the Santa Ana Watershed results in high surface water flows in the spring and early summer, followed by low flows during the dry season. Winter and spring floods generated by storms are not uncommon in wet years (Riverside County 2011, pp. 2-10 and 2-11).

Santa Margarita River Watershed

The Santa Margarita Watershed (SMW) covers approximately 746 square miles, split into a mountainous highland (upper drainage basin) and a broad, flat-topped sea terrace (coastal

drainage basin). The boundary between the upper drainage basin and the coastal drainage basin transitions at the county line between Riverside and San Diego counties.

The upper drainage basin is formed almost solely by Murrieta Creek, which has a drainage area of 222 square miles and is a major tributary of the greater 750-square-mile Santa Margarita Watershed. This watershed consists of three major portions: the Murrieta Creek sub-watershed to the north, the Temecula Creek sub-watershed to the southeast, and the Santa Margarita River to the southwest. The SMW currently contains three major water storage reservoirs: Lake Skinner and the recently completed Diamond Valley Reservoir, which are part of the Murrieta Creek sub-watershed, and Vail Lake, which is part of the Temecula Creek sub-watershed. These reservoirs control over 50 percent of the SMW. Runoff entering the reservoirs is initially stored and excess flows (depending on available storage volume) are discharged downstream. The combined reservoirs have a substantial storage capacity capable of significantly reducing downstream flows from the natural condition.

Temecula and Murrieta creeks join along the Elsinore fault zone at the head of Temecula Canyon to form the Santa Margarita River. Temecula Canyon is approximately 5 miles long and is a steep, narrow, and rocky canyon. The San Diego-Riverside county line crosses Temecula Canyon. From here, the river traverses 27 miles to the Pacific Ocean (Riverside County 2006, pp. 2-15 and 2-17).

Climate and Precipitation

The climate of the SMW is typically Mediterranean, characterized by warm dry summers and cool rainy winters. About 75 percent of the precipitation occurs during the four-month period from December through March. Mean seasonal precipitation ranges from less than 10 inches near Vail Reservoir to over 40 inches west of Palomar Observatory, varying with elevation and topographic influences. Precipitation increases with increasing elevation to the summit of the Coastal Range. Shading effects of the Coastal Range lead to a marked decrease in precipitation throughout the lower portions of the inland area. Precipitation increases again farther away from the Coastal Range in the northeastern area of the inland area (Riverside County 2006, p. 2-17).

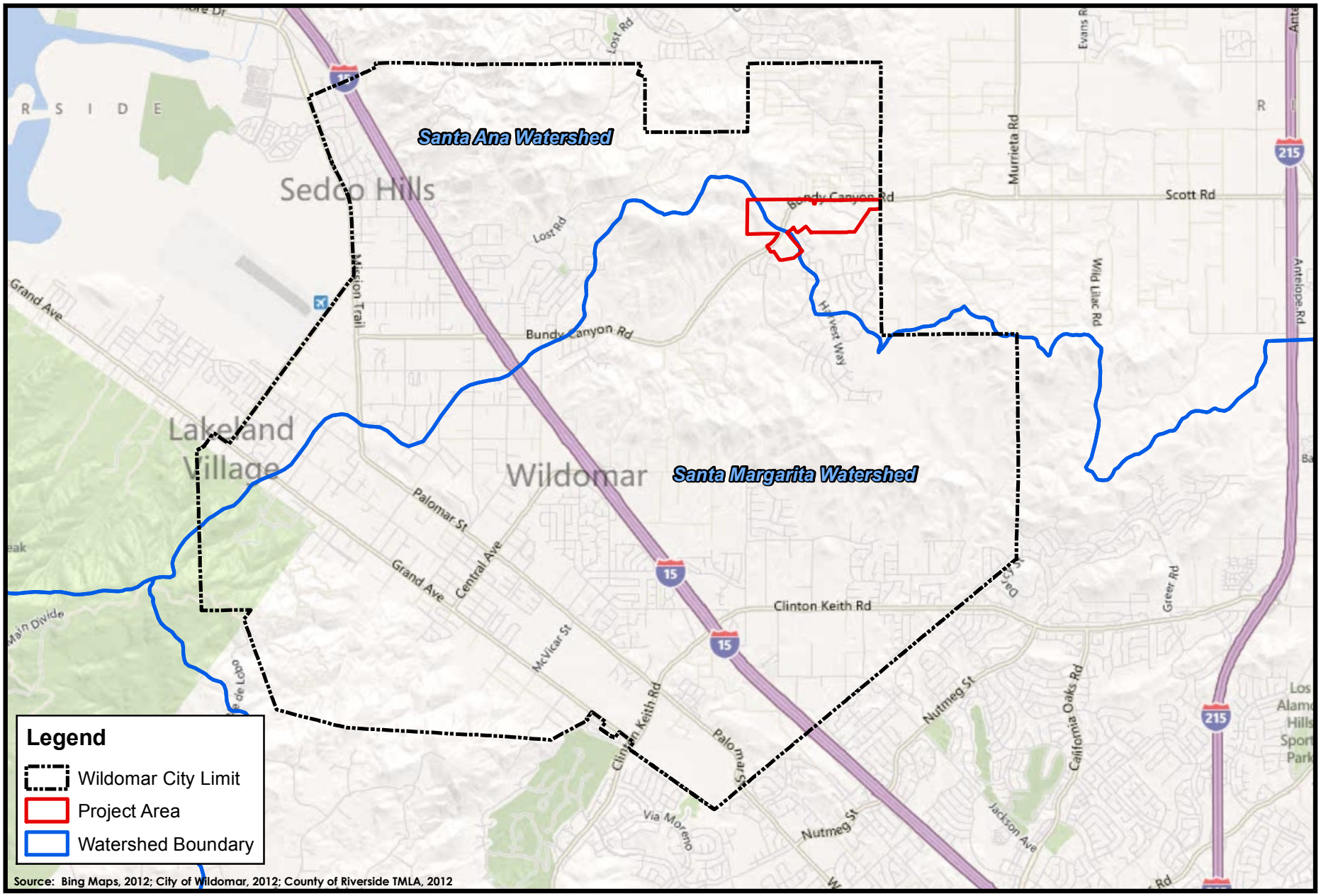

Figure 3.7-1
Watershed Map

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Project Site Topography and Drainage Conditions

The topography of the site is varied, ranging from relatively flat-lying areas with gentle slopes to moderately sloping foothills to steep sloping hillsides with stream-cut valleys. The relatively flat areas located on the south side of Bundy Canyon Road are the result of agricultural land uses that have taken place for decades. All natural topographic irregularities have long been eliminated by seasonal plowing and disking. The elevation through the majority of the central portion of the site is between the 1,720- and 1,740-foot contours. The elevation along the base of the foothills is between 1,740 and 1,760 feet, and is also the result of past agricultural land uses. The highest elevation (1,950 feet) is present in the rugged northwest corner of the site. The southern portion of the site slopes downward to the north and includes three areas with elevations above 1,800 feet (Principe and Associates 2010, p. 4).

The project site is not currently developed with any storm drain improvements; drainage therefore flows naturally within the canyons and swales on the site. As stated above, the project site drains to two separate receiving watersheds, the Santa Margarita Watershed and the Santa Ana Watershed. Within those watersheds, the project site drains to six receiving waters, including Murrieta Creek, the Santa Margarita River, and Santa Margarita Lagoon in the Santa Ana Watershed, and the San Jacinto River, Canyon Lake, and Lake Elsinore in the Santa Margarita Watershed.

The climate of the City of Wildomar is dry-subtropical or Mediterranean, characterized by mild winters and hot, dry summers as defined on the Koppen climate classification system. Mild sea breezes carry pollutants from urbanized Los Angeles to inland areas such as Riverside. Temperature inversion is the prime factor that allows contaminants to accumulate in the South Coast Air Basin. An inversion occurs when warm air masses lie over cool moist marine layer, often forming a cap, preventing pollutants from escaping upward. Temperature inversions are stronger in the summer than in winter due to calm wind conditions. Rainfall in the project area averages from 11 to 15 inches per year.

FLOODING

According to Flood Insurance Rate Map (FIRM) Panel 06065 C2063G, published by the Federal Emergency Management Agency (FEMA), for Riverside County dated August 28, 2008, the project site is designated as Zone X. Zone X is defined by FEMA as an area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. FIRM panels are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than 1 foot or drainage areas less than 1 square mile. **Figure 3.7-2** depicts the FEMA-designated flood zones within and adjacent to the project site.

GROUNDWATER AND SOILS

According to the preliminary geotechnical investigation performed for the proposed project (LGC 2012), groundwater was not encountered within the test pits during the field investigation (see **Appendix 3.6-1**). However, seasonal perched groundwater is expected to be encountered in the canyon areas where Quaternary alluvial deposits were noted (LGC 2012).

Hydrologic soil groups are based on estimates of runoff potential. Soils are divided into one of four groups (A, B, C, and D) according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration

storms. The existing soil classifications for the project site consists of Group A, Group B, and Group D, as described below (JLC 2011a, p. 4):

- Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

- Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

- Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

WATER QUALITY

Five of the six receiving waters for the project site are included on the 2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments requiring total maximum daily loads (TMDL). A TMDL is a quantifiable assessment of potential water quality issues, contributing sources, and load reductions or control actions needed to restore or protect bodies of water. TMDLs are discussed further under the Regulatory Framework subsection below. **Tables 3.7-1** and **3.7-2** detail the pollutants that are impairing the water bodies and the status of the TMDLs.

TABLE 3.7-1
RECEIVING WATERS FOR URBAN RUNOFF FROM SITE – SANTA MARGARITA WATERSHED

Receiving Water	303(d) List Impairments	TMDL Status
Murrieta Creek	Phosphorus, Nitrogen, Iron, Manganese	TMDL needed
Santa Margarita River	Phosphorus	TMDL needed
Santa Margarita Lagoon	Eutrophic	TMDL needed

Source: JLC 2011b

TABLE 3.7-2
RECEIVING WATERS FOR URBAN RUNOFF FROM SITE – SANTA ANA WATERSHED

Receiving Water	303(d) List Impairments	TMDL Status
San Jacinto River	None	N/A
Canyon Lake	Nutrients, Pathogens	Approved 2004
Lake Elsinore	Nutrients, Organic Enrichment – Low Dissolved Oxygen, Sediment/Siltation, Unknown Toxicity, Polychlorinated Biphenyls	Approved 2004

Source: JLC 2011b

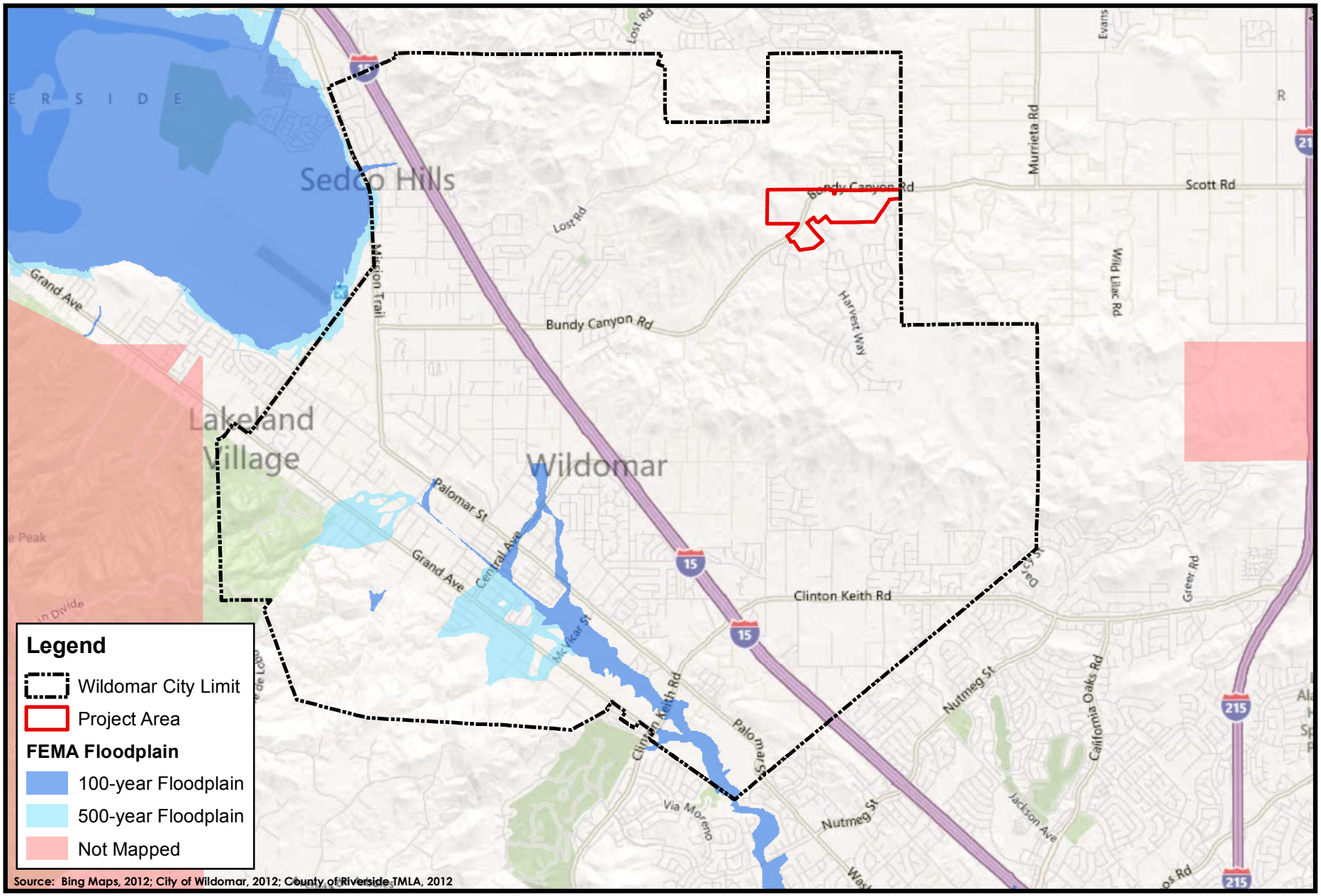

Figure 3.7-2
FEMA Floodplain Map

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3.7.2 REGULATORY FRAMEWORK

FEDERAL AND STATE

Clean Water Act

The federal Clean Water Act (CWA) gives states the primary responsibility for protecting and restoring water quality. In California, the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) are the agencies with the primary responsibility for implementing federal CWA requirements, including developing and implementing programs to achieve water quality standards. Water quality standards include designated beneficial uses of water bodies, criteria or objectives (numeric or narrative) which are protective of those beneficial uses, and policies to limit the degradation of water bodies. The project site is located in a portion of the state that is regulated by the San Diego Regional Water Quality Control Board (SDRWQCB), and the water quality standards for water bodies in the San Diego region are primarily contained in the *Water Quality Control Plan for the San Diego Basin* (Basin Plan) (SDRWQCB 1994), which is discussed in more detail below.

Sections 401 and 404 of the CWA

Sections 401 and 404 of the CWA are administered through the Regulatory Program of the US Army Corps of Engineers (USACE) and regulate the water quality of all discharges of fill or dredged material into waters of the United States, including wetlands and intermittent stream channels. Section 401, Title 33, Section 1341 of the Clean Water Act sets forth water quality certification requirements for any applicant applying for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters.

Section 404, Title 33, Section 1344 of the Clean Water Act in part authorizes the USACE to:

- Set requirements and standards pertaining to such discharges: subparagraph (e);
- Issue permits "for the discharge of dredged or fill material into the navigable waters at specified disposal sites:" subparagraph (a);
- Specify the disposal sites for such permits: subparagraph (b);
- Deny or restrict the use of specified disposal sites if "the discharge of such materials into such area would have an unacceptable, adverse effect on municipal water supplies and fishery areas:" subparagraph (c);
- Specify type of and conditions for non-prohibited discharges: subparagraph (f);
- Provide for individual state or interstate compact administration of general permit programs: subparagraphs (g), (h), and (j);
- Withdraw approval of such state or interstate permit programs: subparagraph (i);
- Ensure public availability of permits and permit applications: subparagraph (o);
- Exempt certain federal or state projects from regulation under this section: subparagraph (r); and

- Determine conditions and penalties for violation of permit conditions or limitations: subparagraph (s).

National Pollutant Discharge Elimination System

As authorized by Section 402(p) of the CWA, the National Pollutant Discharge Elimination System (NPDES) Permit Program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. The State Water Resources Control Board issues NPDES permits to cities and counties through the RWQCBs, and it is the responsibility of the RWQCBs to preserve and enhance the quality of the state's waters through the development of water quality control plans and the issuance of waste discharge requirements. Waste discharge requirements for discharges to surface waters also serve as NPDES permits. The SDRWQCB and applicable NPDES permit are discussed in more detail below.

General Construction Activity Storm Water Permits and Stormwater Pollution Prevention Plans

In accordance with NPDES regulations, the SWRCB has issued a Statewide General Permit (Water Quality No. 2009-0009-DWQ, as amended by Order No. 2010-0014-DWQ) for construction activities within the state. The Construction General Permit (General Permit) is implemented and enforced by the RWQCBs. The General Permit applies to any construction activity affecting 1 acre or more and requires those activities to minimize the potential effects of construction runoff on receiving water quality. Performance standards for obtaining and complying with the General Permit are described in NPDES General Permit No. CAS000002, Waste Discharge Requirements, Order No. 2009-0009-DWQ, as amended by Order No. 2010-0014-DWQ.

General Permit applicants are required to submit to the appropriate regional board Permit Registration Documents for the project, which include a Notice of Intent, a risk assessment, a site map, a signed certification statement, an annual fee, and a stormwater pollution prevention plan (SWPPP). The permit program is risk based wherein a project's risk is based on the project's potential to cause sedimentation and the risk of such sedimentation on the receiving waters. A project's risk determines its water quality control requirements, ranging from Risk Level 1, which consists of only narrative effluent standards, implementation of best management practices (BMPs), and visual monitoring, to Risk Level 3, which consists of numeric effluent limitations, additional sediment control measures, and receiving water monitoring. Additional requirements include compliance with post-construction standards focusing on low impact development (LID), preparation of rain event action plans, increased reporting requirements, and specific certification requirements for certain project personnel.

The SWPPP must include implementing best management practices to reduce construction effects on receiving water quality by implementing erosion control measures and reducing or eliminating non-stormwater discharges. Examples of typical construction best management practices included in SWPPPs include, but are not limited to, using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; and installing sediment control devices such as gravel bags, inlet filters, fiber rolls, or silt fences to reduce or eliminate sediment and other pollutants from discharging to the drainage system or receiving waters.

Total Maximum Daily Loads

Under CWA Section 303(d) and California's Porter-Cologne Water Quality Control Act of 1969 (discussed below), the State of California is required to establish beneficial uses of state waters and to adopt water quality standards to protect those beneficial uses. Section 303(d) establishes

the total maximum daily load (TMDL) process to assist in guiding the application of state water quality standards, requiring the states to identify waters whose water quality is "impaired" (affected by the presence of pollutants or contaminants) and to establish a TMDL or the maximum quantity of a particular contaminant that a water body can assimilate without experiencing adverse effects on the beneficial use identified. The establishment of TMDLs is generally a stakeholder-driven process that involves investigation of sources and their loading (pollution input), estimation of load allocations, and identification of an implementation plan and schedule. Where stakeholder processes are not effective, total maximum daily loads can be established by the RWQCBs or the US Environmental Protection Agency (EPA). TMDLs are adopted as amendments to the Basin Plan.

As discussed in the Existing Setting subsection above and shown in **Tables 3.7-1** and **3.7-2**, the project site would discharge into five Section 303(d) listed impaired waterways**.** TMDLs have been established for only two of those—Canyon Lake and Lake Elsinore.

Porter-Cologne Water Quality Control Act

In 1969, the California legislature enacted the Porter-Cologne Water Quality Control Act to preserve, enhance, and restore the quality of the state's water resources. The CWA and the Porter-Cologne Water Quality Control Act are similar in many ways, with the fundamental purpose of both laws being to protect the beneficial uses of water. An important distinction between the two is that the Porter-Cologne Water Quality Control Act addresses both groundwater and surface water, while the CWA addresses surface water only.

The Porter-Cologne Water Quality Control Act established the SWRCB and the nine RWQCBs as the principal state agencies with the responsibility for controlling water quality in California. Under the act, water quality policy is established, water quality standards are enforced for both surface water and groundwater, and the discharges of pollutants from point and nonpoint sources are regulated. The act authorizes the SWRCB to establish water quality principles and guidelines for long-range resource planning, including groundwater and surface water management programs and control and use of recycled water.

REGIONAL

The project site is actually within the jurisdictional boundaries of two RWQCBs—the San Diego RWQCB and the Santa Ana RWQCB. However, in 2010 the Santa Ana and San Diego Regional Water Quality Control Boards agreed to a jurisdictional exchange to reduce the complexity of Small Municipal Separate Storm Sewer System (MS4) Permit administration and compliance. Under this exchange, the cities of Wildomar and Murrieta, including the proposed project site, are regulated wholly by the SDRWQCB and are required to comply with the SDRWQCB MS4 Permit (NPDES No. CA S0108766, Order No. R9-2010-0016).

Regional Water Quality Control Board, San Diego Region

The San Diego Regional Water Quality Control Board (SDRWQCB) has responsibility for controlling water quality in San Diego County, Imperial County, and parts of Riverside County. As previously stated, the water quality standards for water bodies in the San Diego region are primarily contained in the *Water Quality Control Plan for the San Diego Basin* (SDRWQCB 1994). Water quality standards for the Santa Ana watershed are managed with the *Riverside County Drainage Area Management Plan, Santa Ana Region* (Riverside County 2011).

Water Quality Control Plan for the San Diego Basin (Basin Plan)

The *Water Quality Control Plan for the San Diego Basin* designates beneficial uses for water bodies in the San Diego region and establishes water quality objectives and implementation plans to protect those beneficial uses. Specifically, the Basin Plan (1) designates beneficial uses for surface water and groundwater; (2) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy; (3) describes implementation programs to protect the beneficial uses of all waters in the region; and (4) describes surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan.

The San Diego RWQCB issues permits, called waste discharge requirements and master reclamation permits, which require that waste and reclaimed water not be discharged in a manner that would cause an exceedance of applicable water quality objectives or adversely affect beneficial uses designated in the Basin Plan. The SDRWQCB enforces these permits through a variety of administrative means.

Waste Discharge Requirements for Riverside County MS4s (Order No. R9-2010-0016)

The federal CWA was amended in 1987 to address stormwater runoff from municipal and industrial dischargers. One requirement of the amendment was that many municipalities throughout the United States were obligated for the first time to obtain NPDES permits for discharges of stormwater runoff from their municipal separate storm sewer system (MS4). In response to the CWA amendment (and the pending federal NPDES regulations which would implement the amendment), the SDRWQCB issued a municipal stormwater permit, Order No. 90-46, in July 1990 to the co-permittees for their MS4 discharges. NPDES No. CAS0108766, Order No. R9-R9-2010-0016 (Waste Discharge Requirements for Discharges from the MS4s Draining the County of Riverside, the Incorporated Cities of Riverside County, and the Riverside County Flood Control and Water Conservation District within the San Diego Region) is the fourth iteration of the stormwater permit for MS4s in the Riverside County portion of the San Diego region.

The order specifies requirements necessary for the co-permittees to reduce the discharge of pollutants in stormwater to the maximum extent practicable and to achieve water quality standards. Some of the requirements, such as the revised Watershed Water Quality Workplan (Watershed Workplan) section, are designed to specifically address high priority water quality problems. Other requirements, such as for unpaved roads, are a result of the SDRWQCB's identification of water quality problems through investigations and complaints during the previous permit period. Other requirements address program deficiencies that have been noted during audits, report reviews, and other SDRWQCB compliance assessment activities. The proposed project would be required to comply with all applicable provisions of the order.

LOCAL

Riverside County Stormwater/Urban Runoff Management and Discharge Controls Ordinance (County Ordinance No. 754.2)

The purpose of the Riverside County Stormwater/Urban Runoff Management and Discharge Controls Ordinance is to reduce pollutants in stormwater discharges to the maximum extent practicable, regulate illicit connections and discharges to the storm drain system, and regulate non-stormwater discharges to the storm drain system. The ordinance requires new development projects to control stormwater runoff so as to prevent any deterioration of water quality that would impair subsequent or competing uses of the water via best management practices

(BMPs) that may, among other things, require new developments or redevelopments to increase permeable areas, direct runoff to permeable areas, and maximize stormwater storage for reuse. The ordinance is implemented through the *Riverside County Stormwater Quality Best Management Practice Design Handbook* (Riverside County Flood Control and Water Conservation District 2006).

3.7.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. A project is considered to have significant impacts if implementation of the project will:

1) Violate any water quality standards or waste discharge requirements.

2) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

3) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.

4) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

5) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

6) Otherwise substantially degrade water quality.

7) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

8) Place within a 100-year flood hazard area structures which would impede or redirect flood flows.

9) Expose people or structures to a significant loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

10) Inundation by seiche, tsunami, or mudflow.

Based on the elevation of the project site above sea level and the lack of nearby enclosed bodies of water, the potential for inundation by seiche, tsunami, or mudflow is nonexistent. Therefore, no impact would occur, and these issues (Standard of Significance 10) will not be addressed further in this Draft EIR.

Riverside County identifies dam inundation hazard areas throughout the county. A review of records maintained at the California Office of Emergency Services provided potential failure inundation maps for 23 dams affecting Riverside County; these maps were compiled into geographic information system digital coverage of potential dam inundation zones. The county's dam inundation zones are identified in Figure S-10 of the Riverside County General Plan. According to Figure S-10, the project site is not within any dam inundation hazard zones. In addition, the project is not in the vicinity of any levees. Therefore, no impact would occur, and these issues (Standard of Significance 9) will not be addressed further in this Draft EIR.

METHODOLOGY

The hydrology and water quality analysis presented below is based on a review of published information, reports, and plans regarding regional and local hydrology, climate, topography, and geology obtained from private and governmental agencies as well as from Internet websites. Primary sources include the project's preliminary and supplemental hydrology and hydraulic studies (JLC 2011a, 2012), the SDRWQCB's Basin Plan, and NPDES No. CAS0108766, Order No. R9-2010-0016.

Drainage

JLC Engineering & Consulting Inc. (2011a) prepared the *Preliminary Hydrology and Hydraulic Study for Tentative Tract Map 3688,* which is the area covered by the proposed project (see **Appendix 3.7-1**). The project's preliminary and supplemental hydrology and hydraulic studies (JLC 2011a, 2012) were prepared to determine anticipated changes to the existing drainage patterns on the site as well as the adequacy of the proposed drainage system in terms of capacity and water quality treatment. It should be noted that the existing condition hydrology analyses were performed for four watershed areas designated as Areas A, B, C, and D, which are referenced in **Tables 3.7-3** through **3.7-8** below. The off-site hydrology analyses were performed in order to determine the maximum peak 100-year flow rate of stormwater to the project site from the existing off-site areas and to appropriately size the storm drain facilities conveying the off-site flows. The total pre-project watershed is approximately 870 acres. Area A, the westerly watershed, crosses Bundy Canyon Road from north to south. Area B crosses Bundy Canyon Road from north to south and has a downstream terminus at Bundy Canyon Road and Palm Avenue. Area C is a small area (approximately 28 acres) adjacent to Bundy Canyon Road between Palm Avenue and Club Avenue. Area D is the easterly watershed area that discharges at Bundy Canyon Road. Areas A, B C, and D are shown on **Figure 3.7-3**.

Water Quality

The project's preliminary and supplemental hydrology and hydraulic studies (JLC 2011a, 2012) and Preliminary Water Quality Management Plan (JLC 2011b) were reviewed to determine potential sources and types of pollutants that could be generated by project construction and/or operation. The SWRCB statewide permit and SDRWQCB permit requirements were reviewed to determine if water quality would be sufficiently protected or if further mitigation would be required.

Flooding

The FEMA Flood Insurance Rate Map covering the site was reviewed to determine if any portion of the project site is designated as a flood hazard zone, and the proposed site plans were reviewed to determine if any development is proposed in such areas.

IMPACTS AND MITIGATION MEASURES

Degrade Water Quality or Violate Standards (Standards of Significance 1 and 6)

Impact 3.7.1 Construction and operation of the proposed project will not result in erosion and water quality degradation of downstream surface water and groundwater resources. This impact would be **less than significant with mitigation incorporated**.

When land is in a natural or undeveloped condition, most stormwater (rainwater) slowly infiltrates into the soil and is stored either temporarily or permanently on the surface or in underground layers of soil. When the rate of rainfall exceeds the infiltration capacity of the soil or when impervious surfaces are introduced, the rainwater begins to flow over the surface of the land to low-lying areas, ditches, channels, streams, and rivers. Rainwater that flows off of a site is defined as stormwater runoff. As stormwater runoff flows over the land, it picks up and carries sediment, chemicals, trash, etc., that are eventually discharged to local waterways. As such, stormwater is a major contributor to water quality degradation.

Project Construction

During construction activities, erosion potential and the possibility of water quality impacts are always present and occur when protective vegetative cover is removed and soils are disturbed. Construction activities can result in sediment runoff rates, which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. In addition to sediment, stormwater flowing over a construction site can carry various pollutants such as nutrients, bacteria and viruses, oil and grease, heavy metals, organics, pesticides, gross pollutants, and miscellaneous waste into receiving waters. These pollutants can originate from soil disturbances, construction equipment, building materials, and workers.

In the case of the proposed project, grading of the site, along with other construction activities, may introduce sediments and other contaminants typically associated with construction into stormwater runoff, potentially resulting in the degradation of downstream surface water and groundwater. The proposed project has the potential to result in the generation of new dry weather runoff containing these pollutants and to increase the concentration and/or total load of the pollutants in wet weather stormwater runoff. Dry weather urban runoff in the storm drain system occurs when there is no measurable precipitation. It originates from human activities, including car washing, landscape irrigation, street washing, dewatering during construction activities, and natural groundwater seepage that discharges to the storm drain system. Dry weather urban runoff can contain high levels of pollutants, as the water typically flows over paved or highly developed surfaces.

The SWRCB is responsible for implementing the Clean Water Act and has issued a Statewide General Permit (Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ) for construction activities within the state (see the Regulatory Framework subsection above). In the project area, the Construction General Permit (CGP) is implemented and enforced by the SDRWQCB. In accordance with the requirements of the CGP, prior to construction of the proposed project, a risk assessment must be prepared and submitted to the SDRWQCB to determine the project's risk level and associated water quality control requirements. These requirements will, at a minimum, include the preparation and implementation of a stormwater pollution prevention plan identifying specific BMPs to be implemented and maintained on the site in order to comply with the applicable narrative effluent standards.

The best management practices that must be implemented as part of a SWPPP can be grouped into two major categories: (1) erosion and sediment control BMPs and (2) non-stormwater management and materials management BMPs. Erosion and sediment control BMPs fall into four main subcategories:

- Erosion controls
- Sediment controls
- Wind erosion controls
- Tracking controls

Erosion controls include practices to stabilize soil, to protect the soil in its existing location, and to prevent soil particles from migrating. Examples of erosion control BMPs are preserving existing vegetation, mulching, and hydroseeding. Sediment controls are practices to collect soil particles after they have migrated, but before the sediment leaves the site. Examples of sediment control BMPs are street sweeping, fiber rolls, silt fencing, gravel bags, sand bags, storm drain inlet protection, sediment traps, and detention basins. Wind erosion controls prevent soil particles from leaving the site in the air. Examples of wind erosion control BMPs include applying water or other dust suppressants to exposed soils on the site. Tracking controls prevent sediment from being tracked off site via vehicles leaving the site to the extent practicable. A stabilized construction entrance not only limits the access points to the construction site but also functions to partially remove sediment from vehicles prior to leaving the site.

Non-stormwater management and material management controls reduce non-sediment-related pollutants from potentially leaving the construction site to the extent practicable. The Construction General Permit prohibits the discharge of materials other than stormwater and authorized non-stormwater discharges (such as irrigation and pipe flushing and testing). Non-stormwater BMPs tend to be management practices with the purpose of preventing stormwater from coming into contact with potential pollutants. Examples of non-stormwater BMPs include preventing illicit discharges and implementing good practices for vehicle and equipment maintenance, cleaning, and fueling operations, such as using drip pans under vehicles. Waste and materials management BMPs include implementing practices and procedures to prevent pollution from materials used on construction sites. Examples of materials management BMPs include:

- Good housekeeping activities such as storing of materials covered and elevated off the ground, in a central location;
- Securely locating portable toilets away from the storm drainage system and performing routine maintenance;
- Providing a central location for concrete washout and performing routine maintenance;
- Providing several dumpsters and trash cans throughout the construction site for litter/floatable management; and
- Covering and/or containing stockpiled materials and overall good housekeeping on the site.

The Construction General Permit also requires that construction sites be inspected before and after storm events and every 24 hours during extended storm events. The purpose of the inspections is to identify maintenance requirements for the BMPs and to determine the

effectiveness of the BMPs that are being implemented. The SWPPP is a "living document" and as such can be modified as construction activities progress. Additional requirements include compliance with post-construction standards focusing on low impact development (LID) and preparation of rain event action plans.

The SWRCB has also issued a Statewide General Permit (Water Quality Order R5-2008-0081, NPDES No. CAG995001) for dewatering and other low-threat discharges to surface waters within the state. Should construction of the proposed project require dewatering, the project applicant would be required to submit a Notice of Intent, as well as a Best Management Practices Plan, to comply with the general permit. The BMP Plan would include disposal practices to ensure compliance with the general permit, such as the use of sediment basins or traps, dewatering tanks, or gravity or pressurized bag filters. Monitoring and reporting would also be performed to ensure compliance with the permit. Mitigation measure **MM 3.7.1** requires preparation of a stormwater pollution prevention plan (SWPPP) and indicates the types of BMPs that are typically required as part of the permit.

Project Operation

The proposed project would convert approximately 91.8 acres of the site's 167.95 acres from naturally vegetated open space to urban uses. This conversion will substantially increase the impervious surface area of the site through the introduction of new and improved roads and driveways, parking areas, rooftops, and other surfaces. An increase in impervious surface area would substantially increase runoff potentially containing urban pollutants. Runoff from the proposed landscape areas could also contribute pollutants from fertilizers and pesticides. Expected pollutants for the project site include sediment/turbidity, nutrients, organic compounds (petroleum hydrocarbons), trash and debris, oxygen demanding substances, bacteria and viruses, oil and grease, pesticides, and metals.

As identified above, water on the project site drains to two separate receiving watersheds: the Santa Margarita Watershed and the Santa Ana Watershed. Within those watersheds, the project site drains to six receiving waters, some of which are Section 303(d) listed impaired waterways as detailed in **Table 3.7-1** and **Table 3.7-2**. The expected pollutants that would contribute to the Section 303(d) impaired water bodies are shown in **Table 3.7-3**.

TABLE 3.7-3
EXPECTED URBAN RUNOFF POLLUTANTS AND 303(D) IMPAIRMENTS

Expected Pollutant	Expected or Potential Source	303(d) Listing
Sediment/Turbidity	Attached & Detached Residential Development, Streets	Yes
Nutrients	Attached & Detached Residential Development	Yes
Organic Compounds (Petroleum Hydrocarbons and Polychlorinated Biphenyls)	Automotive Repair Shops, Parking Lots, Streets	Yes
Trash and Debris	Attached & Detached Residential Development, Commercial Development, Parking Lots, Streets	No
Oxygen-Demanding Substances	Detached Residential Development, Restaurants	No
Bacteria and Viruses	Detached Residential Development, Restaurants	Yes
Oil and Grease	Attached Residential Development, Commercial Development, Parking Lots, Streets	No

Expected Pollutant	Expected or Potential Source	303(d) Listing
Pesticides	Attached & Detached Residential Development	No
Metals	Parking Lots, Streets	Yes

Source: JLC 2011b

The project proposes to collect all on-site stormwater flows via four major subsurface storm drain systems that will convey the flows to one of eight on-site extended detention basins (see **Figure 3.7-3**). The stormwater basins will slow the speed of the runoff and allow debris and sediment to settle to the bottom of the basin or to be trapped and later removed during routine maintenance. Stormwater from the basins will be allowed to flow into a storm drain line located in Bundy Canyon Road. The stormwater would eventually flow into Canyon Lake and Lake Elsinore, consistent with the Drainage Area Management Plan for the Santa Ana Watershed (JLC 2011b, p. A-20).

The proposed storm drain system is designed to adequately reduce stormwater flows for the required water quality volume and mitigate flows to pre-project levels. As discussed further under Impact 3.7.3 below, according to the preliminary hydrology and hydraulic study (JLC 2011a), the proposed extended detention basins have been designed to adequately treat the on-site flows for water quality purposes as well as to mitigate flows for increased runoff.

Water Quality

A Preliminary Water Quality Management Plan (WQMP) (JLC 2011b) was prepared for the proposed project (**Appendix 3.7-2**), which is enforceable under the Riverside County Stormwater/Urban Runoff Management and Discharge Controls Ordinance (County Ordinance No. 754.2). A subsequent final WQMP will be prepared for the project if it is approved and will replace the preliminary WQMP. The WQMP identifies a series of specific best management practices to be incorporated into the design to achieve four goals of the program: (1) minimize urban runoff; (2) minimize impervious footprint; (3) conserve natural areas; and (4) minimize directly connected impervious areas. Measures for design of the project in the preliminary WQMP include:

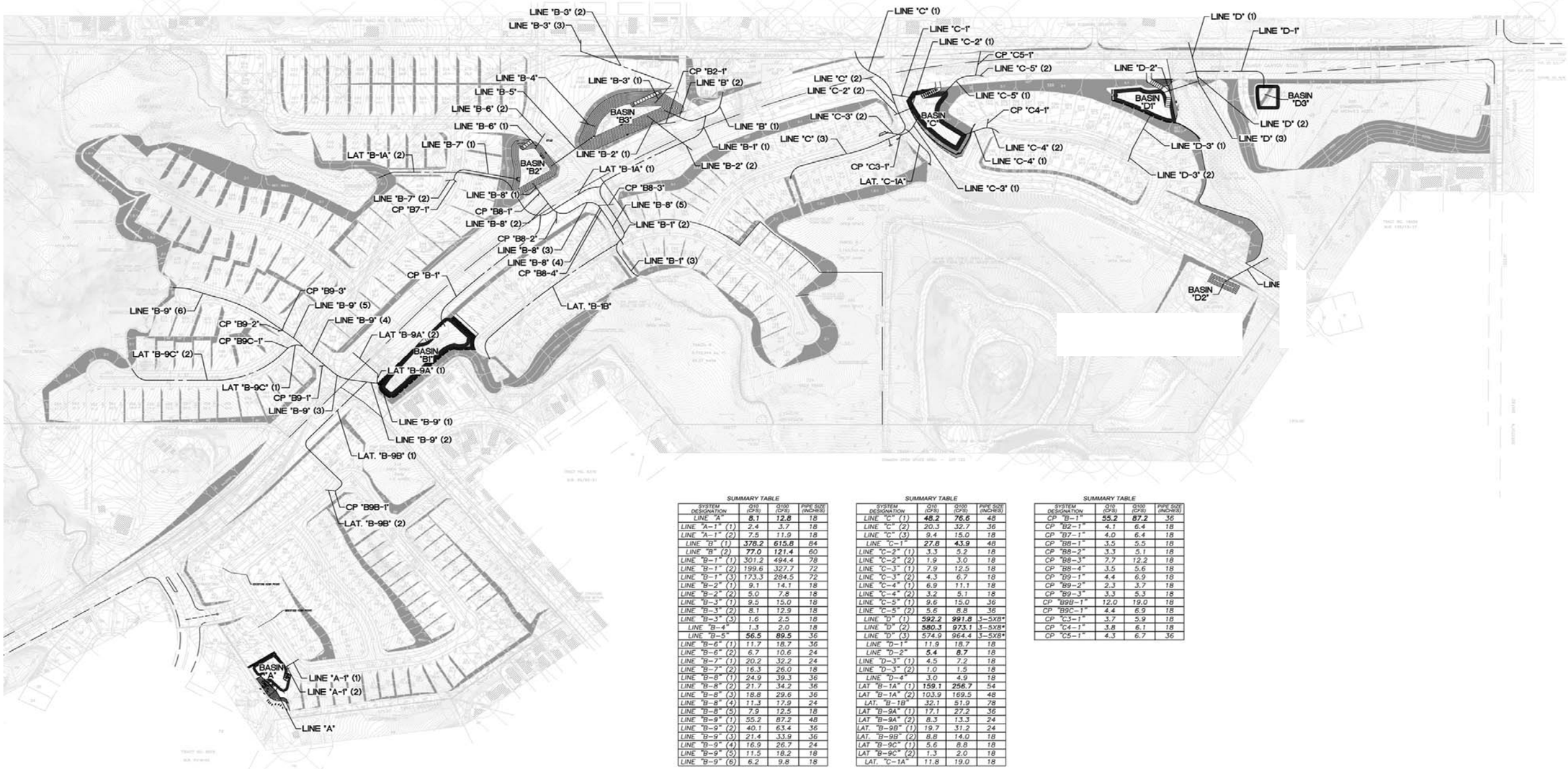
Site Design Concept 1 – Minimize Urban Runoff

- Maximize the permeable area.
- Incorporate landscaped buffer areas between sidewalks and streets.
- Maximize canopy interception and water conservation by preserving existing native trees and shrubs, and planting additional native or drought-tolerant trees and large shrubs.
- Use natural drainage systems.
- Where soils conditions are suitable, use perforated pipe or gravel filtration pits for low flow infiltration.
- Construct on-site ponding areas or retention facilities to increase opportunities for infiltration consistent with vector control objectives.

TENTATIVE TRACT MAP NO. 36388

IN THE CITY OF WILDOMAR, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

DRAINAGE FACILITIES MAP



SUMMARY TABLE

SYSTEM DESIGNATION	Q15 (CFS)	Q100 (CFS)	PIPE SIZE (INCHES)
LINE "A"	**8.1**	**12.8**	18
LINE "A-1" (1)	2.4	3.7	18
LINE "A-1" (2)	7.5	11.9	18
LINE "B" (1)	**378.2**	**615.8**	84
LINE "B" (2)	**77.0**	**121.4**	60
LINE "B-1" (1)	301.2	494.4	78
LINE "B-1" (2)	199.6	327.7	72
LINE "B-1" (3)	173.3	284.5	72
LINE "B-2" (1)	9.1	14.1	18
LINE "B-2" (2)	5.0	7.8	18
LINE "B-3" (1)	9.5	15.0	18
LINE "B-3" (2)	8.1	12.9	18
LINE "B-3" (3)	1.6	2.5	18
LINE "B-4"	1.3	2.0	18
LINE "B-5"	**56.5**	**89.5**	36
LINE "B-6" (1)	11.7	18.7	36
LINE "B-6" (2)	6.7	10.6	24
LINE "B-7" (1)	20.2	32.2	24
LINE "B-7" (2)	16.3	26.0	18
LINE "B-8" (1)	24.9	39.3	36
LINE "B-8" (2)	21.7	34.2	36
LINE "B-8" (3)	18.8	29.6	36
LINE "B-8" (4)	11.3	17.9	24
LINE "B-8" (5)	7.9	12.5	18
LINE "B-9" (1)	55.2	87.2	48
LINE "B-9" (2)	40.1	63.4	36
LINE "B-9" (3)	21.4	33.9	36
LINE "B-9" (4)	16.9	26.7	24
LINE "B-9" (5)	11.5	18.2	18
LINE "B-9" (6)	6.2	9.8	18

SUMMARY TABLE

SYSTEM DESIGNATION	Q15 (CFS)	Q100 (CFS)	PIPE SIZE (INCHES)
LINE "C" (1)	**48.2**	**76.6**	48
LINE "C" (2)	20.3	32.7	36
LINE "C" (3)	9.4	15.0	18
LINE "C-1"	**27.8**	**43.9**	48
LINE "C-2" (1)	3.3	5.2	18
LINE "C-2" (2)	1.9	3.0	18
LINE "C-3" (1)	7.9	12.5	18
LINE "C-3" (2)	4.3	6.7	18
LINE "C-4" (1)	6.9	11.1	18
LINE "C-4" (2)	3.2	5.1	18
LINE "C-5" (1)	9.6	15.0	36
LINE "C-5" (2)	5.6	8.8	36
LINE "D" (1)	**592.2**	**991.8**	3-5X8*
LINE "D" (2)	**580.3**	**973.1**	3-5X8*
LINE "D" (3)	574.9	964.4	3-5X8*
LINE "D-1"	11.9	18.7	18
LINE "D-2"	**5.4**	**8.7**	18
LINE "D-3" (1)	4.5	7.2	18
LINE "D-3" (2)	1.0	1.5	18
LINE "D-4"	3.0	4.9	18
LAT "B-1A" (1)	**159.1**	**256.7**	54
LAT "B-1A" (2)	103.9	169.5	48
LAT. "B-1B"	32.1	51.9	78
LAT "B-9A" (1)	17.1	27.2	36
LAT "B-9A" (2)	8.3	13.3	24
LAT. "B-9B" (1)	19.7	31.2	24
LAT. "B-9B" (2)	8.8	14.0	18
LAT "B-9C" (1)	5.6	8.8	18
LAT "B-9C" (2)	1.3	2.0	18
LAT. "C-1A"	11.8	19.0	18

SUMMARY TABLE

SYSTEM DESIGNATION	Q15 (CFS)	Q100 (CFS)	PIPE SIZE (INCHES)
CP "B-1"	**55.2**	**87.2**	36
CP "B2-1"	4.1	6.4	18
CP "B7-1"	4.0	6.4	18
CP "B8-1"	3.5	5.5	18
CP "B8-2"	3.3	5.1	18
CP "B8-3"	7.7	12.2	18
CP "B8-4"	3.5	5.6	18
CP "B9-1"	4.4	6.9	18
CP "B9-2"	2.3	3.7	18
CP "B9-3"	3.3	5.3	18
CP "B9B-1"	12.0	19.0	18
CP "B9C-1"	4.4	6.9	18
CP "C3-1"	3.7	5.9	18
CP "C4-1"	3.8	6.1	18
CP "C5-1"	4.3	6.7	36

Source: City of Wildomar

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FEET

N

Figure 3.7-3
Stormwater System

PMC®

T:_CS\Work\Wildomar, City of\Figures for Oak Creek Canyon EIR 28-0047A-11-0261

Site Design Concept 2 – Minimize Impervious Footprint

- Maximize the permeable area.
- Construct walkways, trails, patios, overflow parking lots, alleys, driveways, low-traffic streets, and other low-traffic areas with open-jointed paving materials or permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, and granular materials.
- Construct streets, sidewalks, and parking lot aisles to the minimum widths necessary, provided that public safety and a walkable environment for pedestrians are not compromised.
- Reduce widths of street where off-street parking is available.
- Minimize the use of impervious surfaces, such as decorative concrete, in the landscape design.

Site Design Concept 3 – Conserve Natural Areas

- Conserve natural areas.
- Maximize canopy interception and water conservation by preserving existing native trees and shrubs, and planting additional native or drought-tolerant trees and large shrubs.
- Use natural drainage systems.

Site Design Concept 4 – Minimize Directly Connected Impervious Areas

- Residential and commercial sites must be designed to contain and infiltrate roof runoff or direct roof runoff to vegetative swales or buffer areas, where feasible.
- Where landscaping is proposed, drain impervious sidewalks, walkways, trails, and patios into adjacent landscaping.
- Increase the use of vegetated drainage swales in lieu of underground piping or imperviously lined swales.
- Rural swale system: street sheet flows to vegetated swale or gravel shoulder, curbs at street corners, culverts under driveways and street crossings.
- Urban curb/swale system: street slopes to curb; periodic swale inlets drain to vegetated swale/biofilter.
- Where landscaping is proposed in parking areas, incorporate landscape areas into the drainage design.
- Overflow parking (parking stalls provided in excess of the co-permittee's minimum parking requirements) may be constructed with permeable paving.

A variety of design features intended to ensure water quality may be included in the final WQMP adopted for the proposed project. The land uses proposed with the project are conventional urban land uses involving personal and delivery vehicles, homes, landscaping, and a small amount of commercial construction. There is nothing inherent in the land uses that would

suggest increased pollutants or different types of pollutants to those found in existing development in the City of Wildomar. The permitted commercial uses are listed in Chapter 17.80 of the Wildomar Municipal Code and are retail or service commercial in nature. The more intensive commercial uses that might generate additional runoff, including gas stations and automobile repair, are conditional uses and subject to design-specific water quality protection features as part of the conditional use permit process.

The preliminary WQMP notes that the proposed project will construct eight detention basins as shown on **Figure 3.7-3**. The WQMP designates the Basins A, B1, B2, B3, C, D1, D2, and D3. With the exception of Basin B3, all of the detention basins will treat the flows for the required water quality volume, as well as mitigate flows for increased runoff. Basin B3 will only treat for water quality purposes, then discharge into Basin B2 where it will be mitigated for increased runoff. The flows will ultimately discharge back into the natural stream (JLC 2011b, p. A-10). It is the long-term plan that as much stormwater as possible be conveyed downstream into Canyon Lake and Lake Elsinore, consistent with the Drainage Area Management Plan for the Santa Ana Watershed (JLC 2011b, p. A-20).

The proposed project includes the following design features intended to achieve water quality standards:

- Use of County of Riverside guidelines to determine the minimum pavement width for public streets, driveways, and minimum sidewalks, as well as evaluations of low impact development methods such as landscape buffers.

- The proposed project incorporates landscaped areas between the developments and street areas.

- The proposed project uses the natural drainage systems where feasible for the off-site areas. The project uses the minimal amount of subsurface storm drain required for the project site.

- Education materials will be provided to property owners, occupants, operators, and employees at the time of purchase, occupancy, or hire.

- Activity restrictions, including prohibitions on power washing, dumping of oil, discharges of fertilizer, pesticides, or animal wastes, etc., will be enforced.

Additional BMPs will be incorporated within the project where feasible during final engineering. The project would also be required to implement BMPs to increase permeable areas, direct runoff to permeable areas, and maximize stormwater storage for reuse consistent with requirements of the Riverside County Stormwater/Urban Runoff Management and Discharge Controls Ordinance.

Mitigation Measures

MM 3.7.1 Prior to the approval of the grading permit for future development on the project site, the project applicant(s) shall be required to prepare a stormwater pollution and prevention plan (SWPPP) consistent with the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2010-0014-DWQ), which is to be administered through all phases of grading and project construction. The SWPPP shall incorporate best management practices (BMPs) to ensure that

potential water quality impacts during construction phases are minimized. The SWPPP shall be submitted to the Regional Water Quality Control Board and to the City of Wildomar for review. A copy of the SWPPP must be kept accessible on the project site at all times. In addition, the project applicant(s) will be required to submit, and obtain City approval of, a Water Quality Management Plan prior to the issuance of any building or grading permit for future development on the project site in order to comply with the Areawide Urban Runoff Management Program. The project shall implement site design BMPs, source control BMPs, and treatment control BMPs as identified in the Water Quality Management Plan. Site design BMPs shall include, but are not limited to, landscape buffer areas, on-site ponding areas, roof and paved area runoff directed to vegetated areas, and vegetated swales. Source control BMPs shall include, but are not limited to, education, landscape maintenance, litter control, parking lot sweeping, irrigation design to prevent overspray, and covered trash storage. Treatment control BMPs shall include vegetated swales and a detention basin, or an infiltration device. The project will be responsible for maintenance of the basins.

Timing/Implementation: *Prior to the issuance of a grading permit*

Enforcement/Monitoring: *City of Wildomar Engineering Department*

The project's proposed storm drain system, as well as implementation of the project's WQMP and applicable requirements, including implementation of appropriate BMPs post-construction, would remove sediment and pollutants from site runoff and minimize impacts to downstream surface water and groundwater resources. This impact would therefore be considered **less than significant**.

Interference with Groundwater Recharge Impacts (Standard of Significance 2)

Impact 3.7.2 The proposed project would introduce impervious surfaces in the form of structures and parking lots to a previously undeveloped piece of land. This would result in an incremental reduction in recharge of the local groundwater aquifer. This impact is considered **less than significant**.

The proposed project has large areas of open space and storm drainage basins designed to collect and detain stormwater runoff from the project. As the proposed project is primarily residential in nature the site will not have large areas of continuous impervious surface. The 5.21-acre commercial site represents approximately 3 percent of the total site area, and even if fully covered with impervious surface, would not result in significant coverage of the project area. The open space areas will remain undeveloped, although some small percentage may be covered by trails. Because the coverage will be limited, there is a large amount of open space, the WQMP includes BMPs to minimize the imperious footprint, and the proposed project will be outside of the planning area for the Lake Elsinore Groundwater Management Plan this impact is considered **less than significant.**

Mitigation Measures

None required.

Alter Drainage Patterns/Increase Stormwater Runoff (Standards of Significance 3, 4, and 5)

Impact 3.7.3 Development of the proposed project will alter the existing drainage pattern of the site and may impact stormwater runoff rates and volumes compared to existing conditions. This impact is considered **less than significant**.

As previously explained, stormwater on undeveloped sites generally infiltrates into the soil to be stored either temporarily or permanently on the surface or underground. However, the natural drainage pattern of a site is altered when it is developed. Buildings, roads, and parking lots introduce impervious surfaces, such as asphalt, concrete, and roofing materials, to the landscape, resulting in a reduction in infiltration and an increase in the rate and volume of stormwater runoff. The increased flow rates and volumes of stormwater runoff may result in downstream erosion and/or flooding if not properly mitigated.

New development associated with the proposed project would alter drainage on the site and increase stormwater runoff rates and volumes by introducing 275 residential lots, a 5.21-acre commercial development, three parks, 12 local roadways, and other impervious surfaces and by providing improved storm drainage facilities for stormwater conveyance.

The project proposes to collect all on-site stormwater flows via four major subsurface storm drain systems that will convey the flows to one of eight detention basins (see **Figure 3.7-3**). The basins are intended to protect the project site from flood, treat on-site flows for water quality purposes by removing sediment and debris, and mitigate flows for increased runoff due to development of the project as described above. The proposed project's storm drain system will intercept runoff from an off-site area comprising approximately 578 acres. The accepted runoff flows from off-site will be conveyed via a subsurface storm drain system to the downstream discharge points within the watershed boundaries. As the project's stormwater can only enter the stormwater system after passing through the basins, the off-site flows will remain separate from the on-site flows until the on-site flows have been treated for water quality purposes.

In order to determine the required storm drain placements, alignments, and sizes required to adequately protect the project site from on- and off-site flows, as well as to determine the required storage volume within the extended detention basins to adequately treat the flows for the required water quality and volume and mitigate flows to pre-project levels, a preliminary hydrology and hydraulic study (JLC 2011a) was completed for the project (see **Appendix 3.7-1** and **Appendix 3.7-3**).

The required water quality volume was sized using the *Riverside County Stormwater Quality Best Management Practice Design Handbook* (Riverside County Flood Control and Water Conservation District 2006), Worksheet 1, for volume-based BMPs. In addition, the *Drainage Area Management Plan, Santa Ana Region* (Riverside County 2011) recommends that stormwater volume not be infiltrated and rather allowed to be conveyed downstream to Canyon Lake and Lake Elsinore because those lakes are impacted by insufficient volume. As the proposed project will convey stormwater to underground pipes that are not designed for infiltration, this criterion would be implemented in the proposed project.

According to the preliminary hydrology and hydraulic study (JLC 2011a), the proposed storm drain alignments will provide flood protection to the project site for 100-year storm events, the proposed extended detention basins have been designed to adequately treat the on-site flows for water quality purposes as well as mitigate flows for increased runoff, and the off-site flows will be conveyed through a storm drain in Bundy Canyon Road constructed as part of the proposed project without adversely impacting the project site.

In addition, the supplemental preliminary hydrology and hydraulic study (JLC 2012) (**Appendix 3.7-4**) prepared for the project included a basin routing analysis to demonstrate that after implementation of the proposed project, stormwater flow rates would be less than the pre-project (existing) condition. The difference between the basin-routed flow rates and the pre-project flow rates is shown in **Table 3.7-4**.

TABLE 3.7-4
BASIN ROUTED FLOW RATES VS. PRE-PROJECT FLOW RATES

Area	Pre-Project Flow Rate (ft^3/s)			Basin Routing (ft^3/s) (Post-Project)			Difference		
	2 Yr, 24 Hr	10 Yr, 24 Hr	100 Yr, 24 Hr	2 Yr, 24 Hr	10 Yr, 24 Hr	100 Yr, 24 Hr	2 Yr, 24 Hr	10 Yr, 24 Hr	100 Yr, 24 Hr
A	0.2	1.4	12.2	0.2	1.0	0.2	0.0	-0.4	-12.0
B1	1.1	14.6	104.8	1.0	11.8	32.8	0.1	-2.8	-72.0
B3	1.4	17.9	125.0	1.1	13.0	6.7	0.3	-4.9	-118.3
C	0.5	6.2	43.9	0.4	4.9	1.1	0.1	-1.3	-42.8
D1	0.1	1.2	8.4	0.1	0.1	0.1	0.0	-1.1	-8.3
D2	0.1	0.7	6.0	0.0	0.3	0.4	0.0	-0.4	-5.6
D3	1.2	2.6	17.9	1.0	1.8	16.4	0.2	0.8	-1.4

Basin B2 is implemented for water quality purposes, during peak rainfall events flow will be directed to Basin B3.
Source: JLC 2012

Moreover, comparison analyses were performed at three locations where the existing culverts identified by **Figure 3.7-3** cross Bundy Canyon Road and at a point where on-site stormwater flows leave the project site boundary (Nodes 225, 304, and 408). The City Engineer selected these areas in order to address and compare the pre-project and post-project stormwater volumes, duration, and flow rates leaving the project site. As stated above, the project does not have to address volume, as Lake Elsinore has a waiver for mitigating volume because the lake is impaired for runoff volume. However, velocity was evaluated in order to demonstrate that the project would not adversely impact downstream watercourses. The results of the analyses are shown in **Tables 3.7-5** through **3.7-7**.

TABLE 3.7-5
DRAINAGE AREA B AT NODE 225
100-YEAR CONDITION FOR OFF-SITE PEAK FLOWS & ON-SITE ROUTED PEAK FLOW RATE
(UNIT OF FLOW RATE IS FT^3/S)

Area	100 Year, 1 Hour
Total Pre-Project Area B Flow Rate	**667.26**
Post-Project Basin B1 Routed Flow	32.8
Post-Project Basins B2 & B3 Routed Flow	6.7
Post-Project Area B Off-site Flow	494.4
Total Post-Project Area B Flow Rate	**533.9**

Source: JLC 2012

TABLE 3.7-6
DRAINAGE AREA C AT NODE 304
100-YEAR CONDITION FOR OFF-SITE PEAK FLOWS & ON-SITE ROUTED PEAK FLOW RATE
(UNIT OF FLOW RATE IS FT^3/S)

Area	100 Year, 1 Hour
Total Pre-Project Area C Flow Rate	**71.27**
Post-Project Basin C Routed Flow	1.1
Post-Project Area C Off-site Flow	32.7
Total Post-Project Area C Flow Rate	**33.8**

Source: JLC 2012

TABLE 3.7-7
DRAINAGE AREA D AT NODE 408
100-YEAR CONDITION FOR OFF-SITE PEAK FLOWS & ON-SITE ROUTED PEAK FLOW RATE
(UNIT OF FLOW RATE IS FT^3/S)

Area	100 Year, 1 Hour
Total Pre-Project Area D Flow Rate	**973.1**
Post-Project Basin D1 Routed Flow	0.1
Post-Project Basin D2 Routed Flow	0.4
Post-Project Basin D3 Routed Flow	8.2
Post-Project Area D Off-site Flow	964.4
Total Post-Project Area D Flow Rate	**973.1**

Source: JLC 2012

In addition, the total flow rates for the on-site area leaving the project site during the 10-year and 2-year 24-hour storm events were computed for the pre-project and post-project conditions. These results are included in **Table 3.7-8**.

TABLE 3.7-8
DRAINAGE AREA B, NODE 225
10-YEAR & 2-YEAR, 24-HOUR CONDITION ON-SITE PEAK FLOW RATE & ON-SITE ROUTED PEAK FLOW RATE
(UNIT OF FLOW RATE IS FT^3/S)

Area	Pre-Project		Post Project	
	10 Year, 24 Hour	2 Year, 24 Hour	10 Year, 24 Hour	2 Year, 24 Hour
Basin B1	14.6	1.1	11.8	1
Basin B2	17.9	1.4	13.1	1.1
Total Basin B	**32.5**	**2.5**	**24.9**	**2.1**
Total Basin C	**6.2**	**0.5**	**4.9**	**0.4**
Basin D1	1.2	0.1	0.1	0.1
Basin D2	0.7	0.1	0.3	0
Basin D3	2.6	1.2	1.7	1

Area	Pre-Project		Post Project	
	10 Year, 24 Hour	2 Year, 24 Hour	10 Year, 24 Hour	2 Year, 24 Hour
Total Basin D	**4.5**	**1.4**	**2.1**	**1.1**

Source: JLC 2012

The results of the basin routing indicate that the project does not increase the flow rate for the post-project conditions and in fact reduces it in most cases.

As demonstrated by both the preliminary and supplemental hydrology studies completed for the project, the proposed storm drain system would mitigate flows for increased runoff and the off-site flows will be conveyed through the subsurface storm drain without adversely impacting the project site. Therefore, the project would not result in downstream erosion and/or flooding impacts as a result of increased flow rates and volumes leading to Lake Elsinore will not be reduced. This impact is considered to be **less than significant**.

Mitigation Measures

None required.

Flooding Hazards (Standards of Significance 7 and 8)

Impact 3.7.4 The project site is not within the 100-year floodplain or in an area designated by FEMA as a special flood hazard area. In addition, the project includes a storm drain system that will provide flood protection to the project site. This impact would therefore be **less than significant.**

As described in the Existing Setting subsection above, the project site is designated by FEMA as Zone X, indicating that the project site is in an area of minimal flood hazard. Furthermore, as described under Impact 3.7.3, the proposed project includes a storm drain system that will provide flood protection to the project site for 100-year storm events. Therefore, the project would not place development within the 100-year floodplain and would not expose people or structures to significant risk of flooding. Therefore, the proposed project would have a **less than significant** impact.

Mitigation Measures

None required.

3.7.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for hydrology and water quality includes the Santa Margarita and Santa Ana watersheds as described in detail in the Existing Setting subsection above.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts to Hydrology and Water Quality

Impact 3.7.5 The proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the Santa Margarita and Santa Ana

watersheds, could alter drainage conditions, rates, volumes, and water quality, which could result in potential erosion, flooding, and water quality impacts within the overall watersheds. This is considered a **less than cumulatively considerable** impact.

The proposed project, when considered in combination with existing, approved, proposed, and reasonably foreseeable development in the Santa Margarita and Santa Ana watersheds, would alter cumulative drainage conditions, rates, volumes, and water quality, which could result in potential flooding and stormwater quality impacts within the overall watersheds. However, as discussed in Impacts 3.7.1 through 3.7.4, the proposed project's storm drain system and implementation of a Water Quality Management Plan would reduce the project's contributions to cumulative runoff, water quality, and flooding impacts. As demonstrated by the preliminary and supplemental hydrology studies completed for the project, the proposed project does not increase the flow rate for the post-project conditions and in fact reduces it in most cases. As such, the project is rendered non-contributory to cumulative hydrology impacts. The proposed project includes a series of drainage basins that both reduce the velocity of runoff and serve to remove debris and contaminants from the stormwater runoff. Stormwater can only enter the storm drainage lines after passing through these basins. In many cases, the stormwater also travels along vegetated aboveground pathways leading to the basin and/or drop inlets. The vegetated paths help remove contaminants and debris from the stormwater before it enters the basins and ultimately the storm drain system. The proposed project's contribution to cumulative water quality, runoff, and flooding impacts is considered to be **less than cumulatively considerable.**

Mitigation Measures

None required.

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3.8 Biological and Natural Resources

This section describes the biological natural resources present within and immediately surrounding the project site and includes a discussion of the special-status species and sensitive habitats potentially occurring in the area. This section analyzes impacts that could occur to biological resources due to project implementation and provides appropriate mitigation measures to reduce or avoid these impacts. The analysis of biological resources presented in this section is based on a review of the current project description, previous biological investigations, and reports prepared for the project site, as well as maps and available literature from federal, state, and local agencies. These materials are available in **Appendix 3.8-1**. Related discussions are found in Section 3.7, Hydrology and Water Quality, and Section 3.1, Land Use.

3.8.1 EXISTING SETTING

Information in this subsection is based on the report prepared by Principe and Associates (2010a) titled *Western Riverside County Multiple Species Habitat Conservation Plan Consistency Analysis, Previous Tract 28416*.

TOPOGRAPHY, HYDROGRAPHY, AND SOILS

Topography of the site is varied, ranging from relatively flat-lying areas with gentle slopes to moderately sloping foothills to steep sloping hillsides with stream-cut valleys. The relatively flat areas located on the south side of Bundy Canyon Road are the result of seasonal plowing and disking. The elevation through the majority of the central portion of the site is between the 1,720- and 1,740-foot contours. Elevations along the base of the foothills range between 1,740 and 1,760 feet and are also the result of past agricultural land uses. The highest elevation is present in the rugged northwest corner of the site at 1,940 feet. There is a 190-foot change in elevation along the west property line (1,940 to 1,750). The southern portion of the site slopes downward to the north and includes three areas with elevations above 1,800 feet.

Review of the Soil Survey of Western Riverside Area, California, revealed that the surficial soils at the site are included in the Cajalco-Temescal-Las Posas Association (Soils Map) (see **Appendix 3.8-1**). Within this association, 12 soil types have been mapped on the site:

- AyF – Auld cobbly clay, 8 to 50 percent slopes
- CaD2 – Cajalco fine sandy loam, 8 to 15 percent slopes, eroded
- CbF2 – Cajalco rocky fine sandy loam, 15 to 50 percent slopes, eroded
- LaC – Las Posas loam, 2 to 8 percent slopes
- LaC2 – Las Posas loam, 5 to 8 percent slopes, eroded
- LaD2 – Las Posas loam, 8 to 15 percent slopes, eroded
- LaE3 – Las Posas loam, 8 to 25 percent slopes, severely eroded
- PoC – Poterville clay, 0 to 8 percent slopes
- TeG – Terrace escarpments
- WyC2 – Wyman loam, 2 to 8 percent slopes, eroded
- YbC – Yokohl loam, 2 to 8 percent slopes
- YbE3 – Yokohl loam, 8 to 25 percent slopes, severely eroded

VEGETATION ASSOCIATIONS

Based on the Habitat Accounts in Volume 2 of the *Western Riverside County Multiple Species Habitat Conservation Plan* (MSHCP; Riverside County 2003b), the vegetation associations present on the project site consist of chaparral (87.15 acres), grasslands (71.55 acres), and riparian forest/woodland/scrub (4.55 acres). The area of each vegetation association and the percentage of the project site they occupy are shown in **Table 3.8-1** below. In addition, **Figure 3.8-1** depicts the extent of each association within the project area.

TABLE 3.8-1
VEGETATION ASSOCIATIONS IDENTIFIED ON THE PROJECT SITE

Vegetation Associations	Area (Acres)	Percentage of Project Site
Chaparral	87.15	53.4%
Grasslands	71.55	43.8%
Riparian Forest/Woodland/Scrub	4.55	2.8%
Total	**163.25**	**100%**

The following discussion describes the vegetative associations listed in **Table 3.8-1**. Included in the discussion is a description of the species composition, community structure, and coverage of each association identified on site.

Chaparral

Chaparral vegetation is the most abundant and widespread vegetation type in western Riverside County, covering approximately 35 percent (435,000 acres) of the MSHCP Plan Area (Plan Area). Large contiguous stands of chaparral occur along the Santa Ana Mountains in the western portion of the Plan Area and along the San Bernardino, San Jacinto, and Agua Tibia mountains in the eastern and southern portions.

Four types of chaparral have been mapped for the Plan Area based on variation in species composition: chamise chaparral, red shank chaparral, semi-desert chaparral, and chaparral (undifferentiated). Most of the chaparral vegetation in the Plan Area is mapped as undifferentiated chaparral. This vegetation covers approximately 363,000 acres and encompasses 29 percent of the Plan Area.

Chaparral (Undifferentiated)

Chaparral (undifferentiated) is the mapped sub-association present on the project site. It is dominated by a more diverse mixture of species rather than being dominated solely by chamise (*Adenostoma fasciculatum* var. *fasciculatum*). It was previously divided into large and small patches by agricultural land uses. In the more undisturbed mesic areas, there are still typical large dense stands of 3- to 4-meter-high evergreen, sclerophyllous chaparral species. However, many of the smaller patches have been reduced to remnants. Where separated and isolated by agricultural land uses, the dominant chaparral species are stressed and dying (Principe and Associates 2010a). The growth form is open, and the understory comprises a high percentage of non-native grasses and weeds that have succeeded from the surrounding grasslands.

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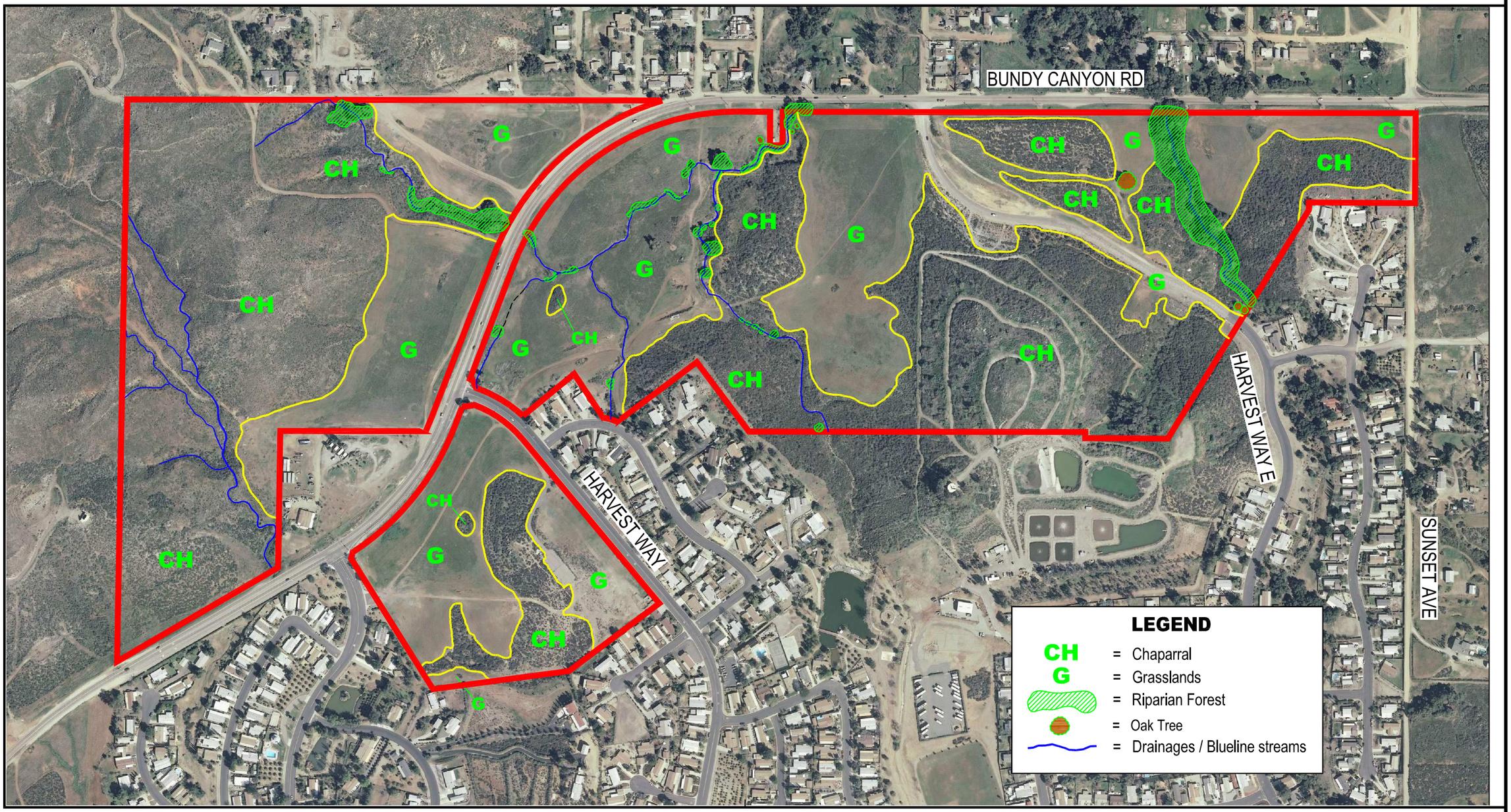

Source: Principe and Associates, 2010

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Figure 3.8-1
Biological Resources Map

The mixture of chaparral species growing on the site includes coastal sagebrush (*Artemisia californica*), thick-leaved lilac (*Ceanothus crassifolius* var. *crassifolius*), hairy lilac (*Ceanothus oliganthus* var. *oliganthus*), sand pygmy-stonecrop (*Crassula connata*), valley cholla (*Cylindropuntia californica*), California witch's hair (*Cuscuta californica* var. *californica*), interior California buckwheat (*Eriogonum fasciculatum* subsp. *foliolosum*), yellow bush-penstemon (*Keckiella antirrhinoides* subsp. *antirrhinoides*), tree tobacco (*Nicotiana glauca*), prickly pear (*Opuntia xvaseyi*), spiny redberry (*Rhamnus crocea*), black sage (*Salvia mellifera*), Mexican elderberry (*Sambucus mexicana*), purple needlegrass (*Stipa pulchra*), and chaparral yucca (*Yucca whipplei*).

Understory species include cultivated oats, shortpod mustard, brome grasses, tocalote, bull thistle (*Cirsium vulgare*), jimsonweed (*Datura wrightii*), fascicled tarplant, long-stemmed golden yarrow (*Eriophyllum confertiflorum* var. *confertiflorum*), California everlasting (*Gnaphalium californicum*), California matchweed (*Gutierrezia californica*), slender sunflower (*Helianthus gracilentus*), weedy cudweed, Coastal deerweed *(Lotus scoparius* subsp. *scoparius),* caterpillar phacelia *(Phacelia cicutaria),* and granny's hairnet (*Pterostegia drymarioides*).

Grasslands

Grasslands occur throughout most of western Riverside County and cover approximately 11.8 percent (154,421 acres) of the Plan Area. The grassland vegetation sub-association growing on the project site is non-native grassland. Non-native grassland occurs throughout the majority of the Plan Area (11.6 percent), usually in close proximity to urbanized or agricultural land uses.

Non-native grasslands primarily are composed of annual grass species introduced from the Mediterranean basin and other Mediterranean climate regions, with variable presence of non-native and native herbaceous species. Species composition of non-native grasslands may vary over time and place based on grazing or fire regimes, soil disturbance, and annual precipitation patterns. Non-native grasslands typically produce deep layers of organic matter, which is inversely related to the abundance of non-native and native forbs. Non-native grasslands also typically support an array of annual forbs from the Mediterranean climate regions. Low abundances of native species are sometimes present within non-native grasslands. These species usually include disturbance specialists with several different growth forms (i.e., subshrubs, succulents, and herbaceous annuals).

Non-native grassland is now present in seven separate patches scattered throughout the project site. Native chaparral, coastal sage scrub, and valley and foothill grassland were likely cleared in the past for agricultural land uses. It appears that dry crops were grown at the site (oat hay). In recent years, agricultural production has ceased. Because agricultural areas are quickly succeeded by non-native grasses and weeds, they are mowed or disked periodically for fire prevention purposes. Areas located adjacent to Bundy Canyon Road and the existing homes are cleared more often and are basically maintained as bare ground. Less critical areas are left fallow and now support a mixture of cultivated oats *(Avena sativa)* and non-native grasses and weeds.

Species include cultivated oats, shortpod mustard (*Brassica geniculata*), brome grasses (*Bromus diandrus and B. madritensis* subsp. *rubens*), tocalote (*Centaurea melitensis*), common horseweed (*Conyza canadensis*), dove weed (*Croton setigerus*), fascicled tarplant (*Deinandra fasciculata*), grassland goldenbush (*Ericameria palmeri*), leafy daisy (*Erigeron foliosus* var. *foliosus*), eucalyptus (*Eucalyptus* sp.), weedy cudweed (*Gnaphalium luteo-album*), alkali heliotrope (*Heliotropium curassavicum* subsp. *oculatum*), telegraph weed (*Heterotheca grandiflora*), California juniper (*Juniperus californica*), prickly lettuce (*Lactuca serriola*), common

horehound (*Marrubium vulgare*), oleander (*Nerium oleander*), Russian thistle (*Salsola tragus*), Peruvian pepper tree (*Schinus molle*), Mediterranean schismus (*Schismus barbatus*), common groundsel (*Senecio vulgaris*), virgate wreathplant (*Stephanomeria virgata* subsp. *virgata*), vinegar weed (*Trichostema lanceolatum*), and rattail fescue (*Vulpia myuros* var. *myuros*).

Riparian Forest/Woodland/Scrub

Riparian forest/woodland/scrub subtypes are spatially distributed in drainages throughout much of western Riverside County and cover approximately 1.1 percent (14,545 acres) of the MSHCP Plan Area. Southern cottonwood/willow riparian forest makes up the largest proportion of the riparian vegetation in the Plan Area, comprising nearly one-half of the acreage (6,610 acres). Large complexes containing several of the riparian forest, woodland, and scrub types are located in several portions in the Plan Area. The stream channels within the San Mateo Canyon watershed and the Cleveland National Forest generally support riparian forest, southern sycamore/alder riparian woodland, and riparian scrub in connected stands. The Temecula area supports a diversity of riparian vegetation types among urban and agricultural land uses along Temecula Creek, Sandia Canyon, and portions of Wolf Valley.

Based on species composition, the mapped sub-association occurring on the project site is the riparian forest. Riparian forest can include any combination of riparian tree and shrub species along perennial stream channel banks, including alder, willows, cottonwood, sycamore, oaks, bay laurel, and black walnut. Where the stream channel receives perennial flows in some years but intermittent flows in others, white alder drops out of the vegetation. Where the stream channel receives only intermittent flow, willow species and western cottonwood become less common and western sycamore, coast live oak, and California bay laurel tend to move down into the channel. Along ephemeral stream channels, coast live oak and Southern California black walnut can grow within the channel as a continuum or ecotone from uplands on north-facing slopes.

On the project site, coast live oak trees (*Quercus agrifolia* var. *agrifolia*) dominate the riparian forest vegetation. Other associated riparian species include Western ragweed (*Ambrosia psilostachya* var. *californica*), mule fat (*Baccharis salicifolia*), giant wildrye (*Elymus condensatus*), California flowering ash (*Fraxinus dipetala*), western sunflower (*Helianthus annuus*), toyon (*Heteromeles arbutifolia*), sourclover (*Melilotus indicus*), tree tobacco, western cottonwood (*Populus fremontii* subsp. *fremontii),* California scrub oak (*Quercus berberidifolia*), narrow-leaved willow (*Salix exigua*), red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis* var. *lasiolepis*), Mexican elderberry (*Sambucus mexicana*), Mediterranean tamarisk (*Tamarix ramosissima*), poison oak (*Toxicodendron diversilobum*), hoary nettle (*Urtica dioica* subsp. *holosericea*), and cocklebur (*Xanthium strumarium* var. *canadense)*.

JURISDICTIONAL FEATURES

Information in this subsection is based on the report prepared by Principe and Associates (2010b) titled *Jurisdictional Delineation of Waters and Wetlands, Previous Tract 28416.*

Three reaches of intermittent blueline streams designated on the United States Geological Survey (USGS) Romoland Quadrangle are present on the site. These streams are ephemeral in nature. Two of them originate in the relatively undeveloped Sedco Hills located west and northwest of the site. The other, Cottonwood Canyon Creek, originates in the Menifee Hills located south of the site and passes through a small portion of The Farm. Water was flowing in an approximately 240-foot-long reach of the creek during surveys conducted by Principe and Associates in November 2010, with urban runoff as its source. Eight more ephemeral

watercourses are present on the site. Five originate in the Sedco Hills and have confluences with the two blueline streams. Two originate in the Menifee Hills and have confluences with one of the blueline streams. The upstream reaches of these watercourses have been significantly altered by existing development at The Farm. The last one appears to have developed from stormwater runoff along Bundy Canyon Road. The channel is not incised through the middle reach of this watercourse, but it does have a confluence with one of the blueline streams.

Wetlands were not delineated on the site. Two of the three blueline streams and the eight watercourses showed no evidences of hydrophytic vegetation, typical hydric soils, and wetland hydrology. The presence of flowing water at the soil surface in an approximately 240-foot-long reach of Cottonwood Canyon Creek is an indication of wetland hydrology, but there was an absence of more than 50 percent hydrophytic vegetation and typical hydric soils.

US Army Corps of Engineer (USACE) jurisdiction within the site totals 0.719 acres of waters of the United States. California Department of Fish and Game (CDFG) jurisdiction totals 3.831 acres of waters of the State and associated riparian habitat located contiguous to the watercourses. A summary of the jurisdictional waters occurring within the project site is included in **Table 3.8-2**, and the location of those same jurisdictional waters is shown on **Figure 3.8-2.**

TABLE 3.8-2
SUMMARY OF POTENTIAL JURISDICTIONAL WATERS

Drainage	Length (ft)	Average USACE Width (ft)	Average CDFG Width (ft)	USACE Acreage	CDFG Acreage
Blueline Stream 1	900	9.9	97.7	0.205	2.019
Blueline Stream 2a	1,026	2.7	36.1	0.040	0.850
Blueline Stream 2b	1,601	2.2	11.7	0.082	0.430
Blueline Stream 3	1,825	4.0	4.0	0.167	0.167
Watercourse A	1,431	3.0	6.4	0.097	0.211
Watercourse B	731	2.0	1.2	0.033	0.020
Watercourse C	623	1.2	3.5	0.011	0.050
Watercourse D	436	2.0	2.0	0.020	0.020
Watercourse E	304	1.5	1.5	0.010	0.010
Watercourse F	689	1.7	1.7	0.027	0.027
Watercourse G	211	1.5	1.5	0.007	0.007
Watercourse H	582	1.5	1.5	0.020	0.020
TOTALS	**10,359**			**0.719**	**3.831**

SENSITIVE HABITATS

Sensitive habitats include areas of special concern to resource agencies, areas protected under the California Environmental Quality Act (CEQA), areas designated as sensitive natural communities by the CDFG, areas outlined in Section 1600 of the California Fish and Game Code, areas regulated under Section 404 of the Clean Water Act (CWA), areas protected under Section 401 of the CWA, and areas protected under local regulations and policies.

The US Fish and Wildlife Service (USFWS) defines critical habitat as a specific area that is essential for the conservation of a federally listed species and which may require special management considerations or protection. There are no designated critical habitat areas within or immediately adjacent to the project site (see **Appendix 3.8-1**).

While the site does not support any specific sensitive habitat types, it is within the local management and fee areas of a small number of species and concerns.

- The site is located within the Stephens' Kangaroo Rat Mitigation Fee Area (Riverside County Ordinance 663).
- The site provides suitable foraging and nesting habitat for various bird species afforded protection under the Migratory Bird Treaty Act of 1918 (MBTA).
- The site is located within the MSHCP Mitigation Fee Area (Riverside County Ordinance 810.2).
- The site is located within the Burrowing Owl Survey Area (Figure 6-4 of the MSHCP). A nesting season survey following the Burrowing Owl Survey Instructions for Western Riverside Multiple Species Habitat Conservation Plan Area was prepared by Principe and Associates and is available in **Appendix 3.8-3**.
- A total of 0.26 acres of the 163.25-acre site is located within Cell #5046 of Cell Group J of the Sedco Hills Subunit (SU4) of the Elsinore Area Plan.

WILDLIFE CORRIDORS

Wildlife corridors are established migration routes commonly used by resident and migratory species for passage from one geographic location to another. Corridors are present in a variety of habitats and link otherwise fragmented acres of undisturbed area. Maintaining the continuity of established wildlife corridors is important to sustain species with specific foraging requirements, preserve a species' distribution potential, and retain diversity among many wildlife populations. Therefore, resource agencies consider wildlife corridors to be a sensitive resource. Irrigation channels and agricultural land may provide enough cover to function as a migratory corridor for some species. The riparian corridors along the waterways within the project site serve as an aquatic and terrestrial wildlife migration corridor for areas within and surrounding the project site. Within the project site, Cottonwood Canyon Creek provides a wildlife movement corridor for migrations, foraging, and finding a mate between the Menifee Hills and Sedco Hills.

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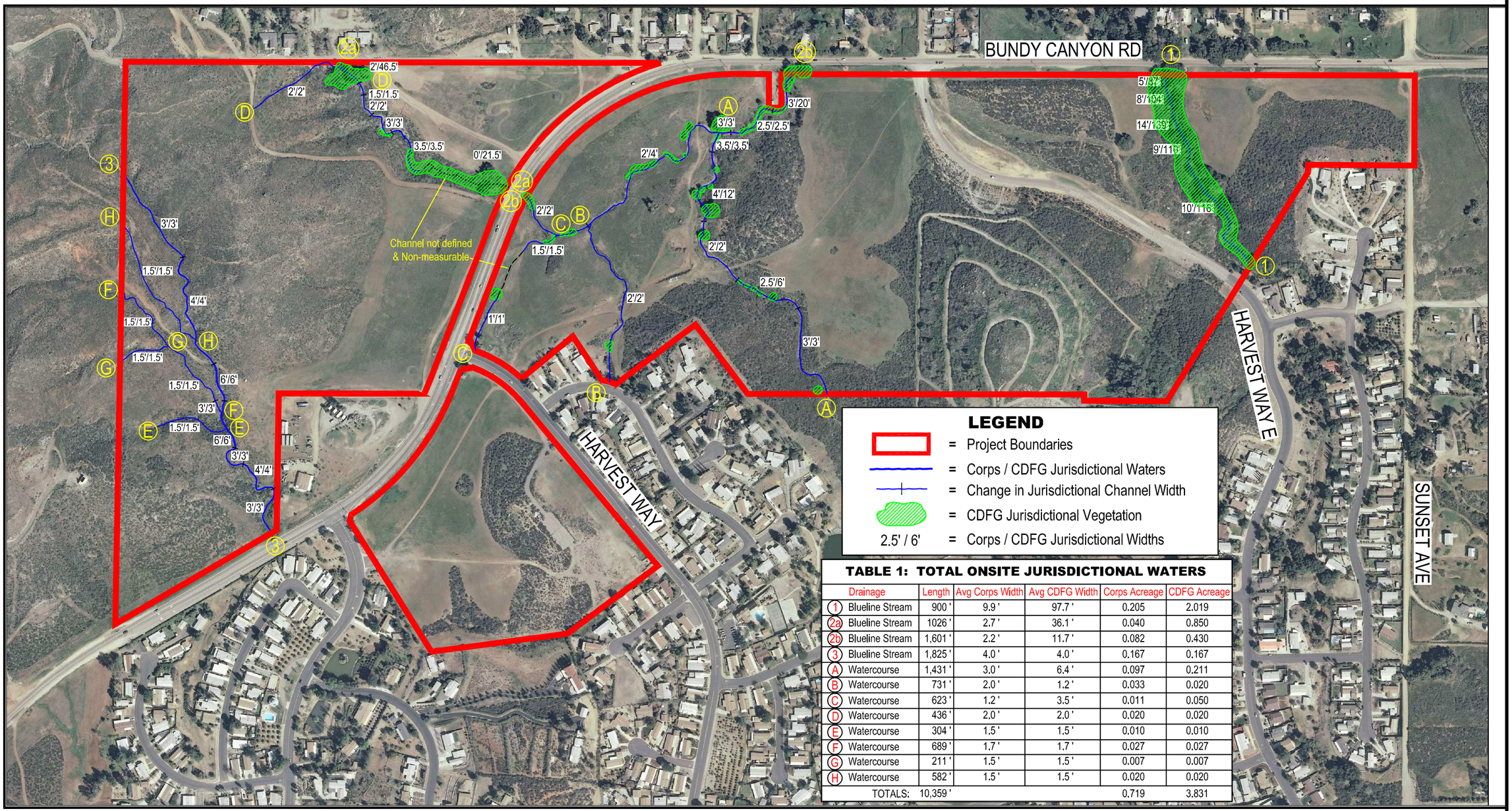

TABLE 1: TOTAL ONSITE JURISDICTIONAL WATERS

Drainage	Length	Avg Corps Width	Avg CDFG Width	Corps Acreage	CDFG Acreage
1 Blueline Stream	900 '	9.9 '	97.7 '	0.205	2.019
2a Blueline Stream	1026 '	2.7 '	36.1 '	0.040	0.850
2b Blueline Stream	1,601 '	2.2 '	11.7 '	0.082	0.430
3 Blueline Stream	1,825 '	4.0 '	4.0 '	0.167	0.167
A Watercourse	1,431 '	3.0 '	6.4 '	0.097	0.211
B Watercourse	731 '	2.0 '	1.2 '	0.033	0.020
C Watercourse	623 '	1.2 '	3.5 '	0.011	0.050
D Watercourse	436 '	2.0 '	2.0 '	0.020	0.020
E Watercourse	304 '	1.5 '	1.5 '	0.010	0.010
F Watercourse	689 '	1.7 '	1.7 '	0.027	0.027
G Watercourse	211 '	1.5 '	1.5 '	0.007	0.007
H Watercourse	582 '	1.5 '	1.5 '	0.020	0.020
TOTALS:	10,359 '			0.719	3.831

Source: Principe and Associates, 2010

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Figure 3.8-2
Jurisdictional Assessment

LISTED AND SPECIAL-STATUS PLANT AND ANIMAL SPECIES

Special-status species are commonly characterized as species that are at potential risk or actual risk to their persistence in a given area or across their native habitat (locally, regionally, or nationally) and are identified by a state and/or federal resource agency as such. These agencies include governmental agencies such as the California Department of Fish and Game (CDFG) and US Fish and Wildlife Service (USFWS) or private organizations such as the California Native Plant Society (CNPS). The degree to which a species is at risk of extinction is the limiting factor on a species' status designation. Risk factors to a species' persistence or population's persistence include habitat loss, increased mortality factors (take, electrocution, etc.), invasive species, and environmental toxins. In context of environmental review, special-status species are defined by the following codes:

- Species that are listed, proposed, or candidates for listing under the federal Endangered Species Act (ESA) (50 CFR 17.11 – listed; 61 Federal Register [FR] 7591, February 28, 1996 candidates);
- Species that are listed or proposed for listing under the California Endangered Species Act (CESA) (Fish and Game Code [FGC] 1992 Section 2050 et seq.; 14 California Code of Regulations [CCR] Section 670.1 et seq.);
- Species that are designated as Species of Special Concern by the CDFG;
- Species that are designated as Fully Protected by the CDFG (FGC Sections 3511, 4700, 5050, 5515);
- Species that meet the definition of rare or endangered under the California Environmental Quality Act (14 CCR Section 15380); and
- Protected under other regulations (e.g., local policies); or
- Otherwise receive consideration during environmental review.

A review of the Riverside County Integrated Project (RCIP) Conservation Summary Report Generator; California Natural Diversity Database; USFWS Information, Planning, and Conservation System; and CNPS Inventory of Rare and Endangered Plants databases was completed to identify special-status species with the potential to occur in the project vicinity. The potential for each species to occur within the project area was evaluated based on known occurrences within a 1-mile and 5-mile radius. **Figure 3.8-3** shows the previously recorded occurrences of special-status species within 1 mile of the project, and **Table 3.8-3** provides a summary of all special-status species identified within 5 miles of the project.

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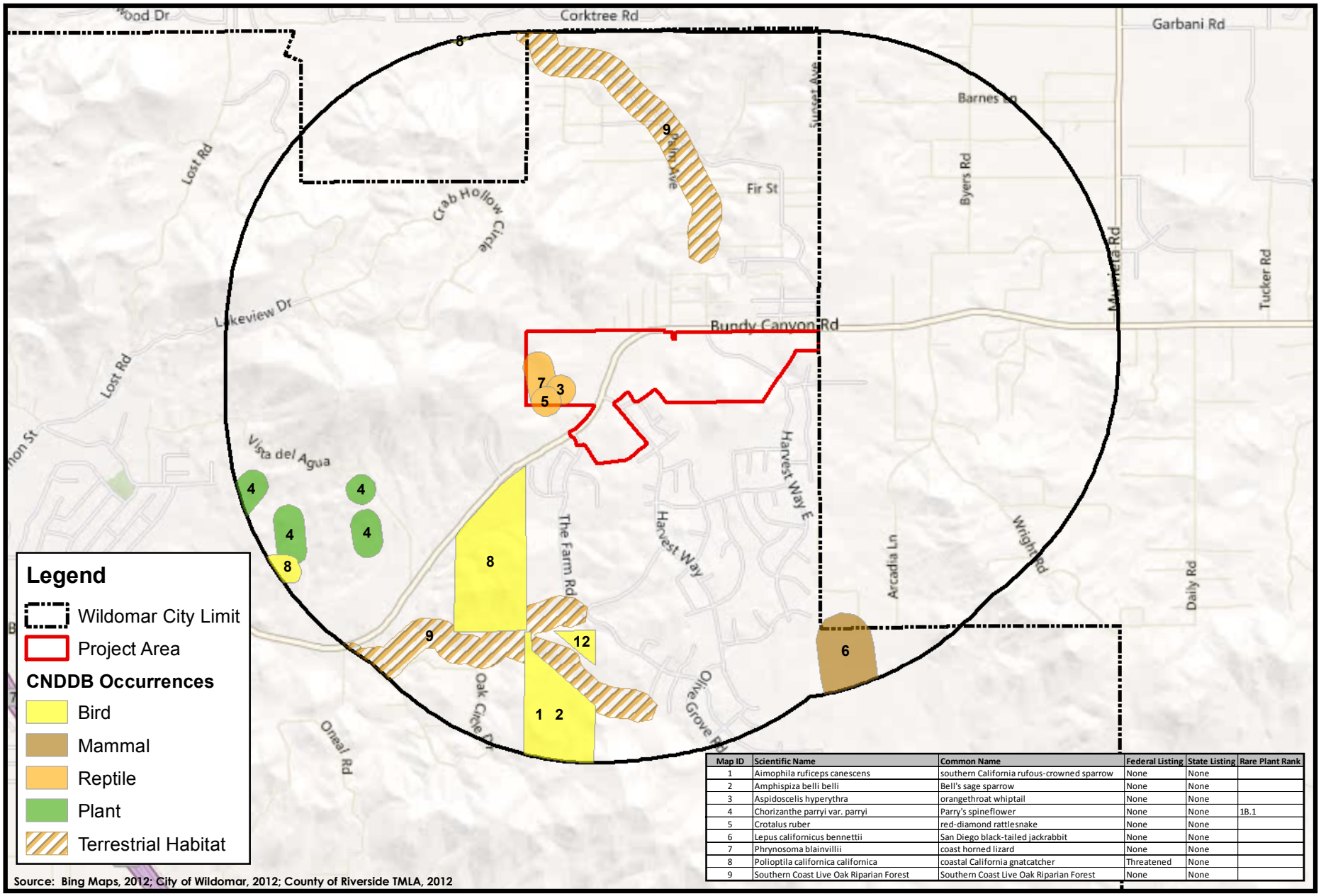

Map ID	Scientific Name	Common Name	Federal Listing	State Listing	Rare Plant Rank
1	Aimophila ruficeps canescens	southern California rufous-crowned sparrow	None	None	
2	Amphispiza belli belli	Bell's sage sparrow	None	None	
3	Aspidoscelis hyperythra	orangethroat whiptail	None	None	
4	Chorizanthe parryi var. parryi	Parry's spineflower	None	None	1B.1
5	Crotalus ruber	red-diamond rattlesnake	None	None	
6	Lepus californicus bennettii	San Diego black-tailed jackrabbit	None	None	
7	Phrynosoma blainvillii	coast horned lizard	None	None	
8	Polioptila californica californica	coastal California gnatcatcher	Threatened	None	
9	Southern Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest	None	None	

Figure 3.8-3

Previously Recorded Occurrences of Special-status Species within One-mile of the Project Area

TABLE 3.8-3
SPECIAL-STATUS SPECIES CONSIDERED IN THE IMPACT ANALYSIS

Scientific Name	Common Name	Federal/State Listing Rare Plant Rank	MSHCP Covered Species Adequately Conserved
Plants			
Allium munzii	Munz's onion	FE/ST/1B.1	Yes
Atriplex coronata var. *notatior*	San Jacinto Valley crownscale	FE/–/1B.1	Yes
Atriplex serenana var. *davidsonii*	Davidson's saltscale	–/–/1B.2	Yes
Brodiaea filifolia	thread-leaved brodiaea	FT/SE/1B.1	Yes
California macrophylla	round-leaved filaree	–/–/1B.1	Yes
Calochortus weedii var. *intermedius*	intermediate mariposa-lily	–/–/1B.2	Yes
Centromadia pungens ssp. *laevis*	smooth tarplant	–/–/1B.1	Yes
Chorizanthe parryi var. *parryi*	Parry's spineflower	–/–/1B.1	Yes
Chorizanthe polygonoides var. *longispina*	long-spined spineflower	–/–/1B.2	Yes
Dodecahema leptoceras	slender-horned spineflower	FE/SE/1B.1	Yes
Harpagonella palmeri	Palmer's grapplinghook	–/–/4.2	Yes
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	–/–/1B.1	Yes
Navarretia fossalis	spreading navarretia	FT/–/1B.1	Yes
Orcuttia californica	California Orcutt grass	FE/SE1.B.1	Yes
Invertebrates			
Branchinecta lynchi	vernal pool fairy shrimp	FT/–	Yes
Euphydryas editha quino	Quino checkerspot butterfly	FE/–	Yes
Streptocephalus woottoni	Riverside fairy shrimp	FE/–	Yes
Amphibians			
Spea hammondii	western spadefoot	–/SSC	Yes
Taricha torosa	Coast Range newt	–/SSC	Yes
Reptiles			
Aspidoscelis hyperythra	orangethroat whiptail	–/SSC	Yes
Crotalus ruber	red-diamond rattlesnake	–/SSC	Yes
Emys marmorata	western pond turtle	–/SSC	Yes
Phrynosoma blainvillii	coast horned lizard	–/SSC	Yes
Birds			
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	–/SSC	Yes
Amphispiza belli belli	Bell's sage sparrow	–/SSC	Yes

Scientific Name	Common Name	Federal/State Listing Rare Plant Rank	MSHCP Covered Species Adequately Conserved
Aquila chrysaetos	golden eagle	–/SSC	Yes
Athene cunicularia	burrowing owl	–/SSC	Yes
Buteo regalis	ferruginous hawk	–/SSC	Yes
Empidonax traillii extimus	southwestern willow flycatcher	FE/SE	Yes
Eremophila alpestris actia	California horned lark	–/SSC	Yes
Lanius ludovicianus	loggerhead shrike	–/SSC	Yes
Polioptila californica californica	coastal California gnatcatcher	FT/SSC	Yes
Vireo belli pusillus	least Bell's vireo	FE/SE	Yes
Mammals			
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	–/SSC	Yes
Dipodomys merriami parvus	San Bernardino Merriam's kangaroo rat	FE/SSC	Yes
Dipodomys stephensi	Stephens' kangaroo rat	FE/ST	Yes
Lepus californicus bennettii	San Diego black-tailed jackrabbit	–/SSC	Yes

Source: USFWS 2011; CDFG 2011a, 2011b; CNPS 2011

Code Designations

Federal	State	CNPS Rank
FT = Federally Threatened **FE** = Federally Endangered	**ST** = State Threatened **SE** = State Endangered **SSC** = Species of Special Concern	**1B** = Plant species that are rare, threatened, or endangered in California and elsewhere **0.1** = Seriously threatened in California (over 80% of occurrences threatened/high degree of immediacy of threat **0.2** = Fairly threatened in California (moderate degree/immediacy of threat)

Special-Status Plant Species

Federal and/or state-listed endangered and threatened plant and animal species known to occur in similar habitats present in the Wildomar area were not identified at the project site. Also, the site is not located within critical habitats for endangered and threatened species as identified by the USFWS. Typical clay and/or saline-alkali soils were not mapped at the site. Therefore, growing habitats for clay and/or saline-alkali endemic plant species are not present.

Federal and/or state-listed endangered, threatened, rare or candidate for federal and/or state-listed endangered, threatened, or rare plant and animal species known to occur in similar habitats present in the Wildomar area were not identified at the site (see **Appendix 3.8-1**).

3.8.2 REGULATORY FRAMEWORK

This section lists specific environmental review and consultation requirements and identifies permits and approvals that must be obtained from local, state, and federal agencies before implementation of the proposed project.

FEDERAL

Endangered Species Act

The federal Endangered Species Act (ESA) protects threatened and endangered plants and animals and their critical habitat. Candidate species are those proposed for listing; these species are usually treated by resource agencies as if they were actually listed during the environmental review process. Procedures for addressing impacts to federally listed species follow two principal pathways, both of which require consultation with the USFWS, which administers the ESA for all terrestrial species. The first pathway, Section 10(a) incidental take permit, applies to situations where a non-federal government entity must resolve potential adverse impacts to species protected under the ESA. The second pathway, Section 7 consultation, applies to projects directly undertaken by a federal agency or private projects requiring a federal permit or approval.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the Fish and Game Code (FGC).

All raptors and their nests are protected from take or disturbance under the MBTA (16 United States Code [USC], Section 703 et seq.) and California statute (FGC Section 3503.5). The golden eagle and bald eagle are also afforded additional protection under the Eagle Protection Act, amended in 1973 (16 USC, Section 669 et seq.).

Clean Water Act

Section 401 of the federal Clean Water Act (CWA) requires any applicant for a federal license or permit that is conducting any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. The appropriate Regional Water Quality Control Board (RWQCB) regulates Section 401 requirements.

Section 404 of the CWA prohibits the discharge of dredged or fill material into "waters of the United States" without a permit from the US Army Corps of Engineers (USACE). The USACE and the US Environmental Protection Agency (EPA) administer the Clean Water Act. In addition to streams with a defined bed and bank, the definition of waters of the United States includes wetland areas "that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 Code of Federal Regulations [CFR] 328.3 7b). The lateral extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM) [33 CFR Section 328.4(c)(1)].

If adjacent wetlands occur, the limits of jurisdiction extend beyond the ordinary high water mark to the outer edge of the wetlands. The presence and extent of wetland areas are normally determined by examination of the vegetation, soils, and hydrology of a site. The majority of jurisdictional wetlands exhibit three wetland criteria, including hydrophytic vegetation, wetland hydrology, and hydric soils.

Substantial impacts to jurisdictional wetlands may require an individual permit. Small-scale projects may require a nationwide permit, which typically has an expedited process compared to the individual permit process. Mitigation of wetland impacts is required as a condition of the 404 permit and may include on-site preservation, restoration, or enhancement and/or off-site restoration or enhancement. The characteristics of the restored or enhanced wetlands must be equal to or better than those of the affected wetlands to achieve no net loss of wetlands.

Executive Order 13112 – Invasive Species

Executive Order 13112 – Invasive Species directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species. The order further directs federal agencies to prevent the introduction of invasive species, control and monitor existing invasive species populations, restore native species to invaded ecosystems, research and develop prevention and control methods for invasive species, and promote public education on invasive species. As part of the proposed action, the USFWS and USACE issue permits and are responsible for ensuring that the proposed action complies with Executive Order 13112 and does not contribute to the spread of invasive species.

STATE

California Endangered Species Act

Under the California Endangered Species Act (CESA), the California Department of Fish and Game has the responsibility for maintaining a list of endangered and threatened species (Fish and Game Code – FGC 2070). Sections 2050 through 2098 of the FGC outline the protection provided to California's rare, endangered, and threatened species. Section 2080 of the FGC prohibits the taking of plants and animals listed under the CESA. Section 2081 established an incidental take permit program for state-listed species. The CDFG maintains a list of "candidate species," which are species that the CDFG formally notices as being under review for addition to the list of endangered or threatened species.

Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the area and determine whether the proposed project will have a potentially significant impact on such species. In addition, the CDFG encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of the CESA. "Take" of protected species incidental to otherwise lawful management activities may be authorized under FGC Section 206.591. Authorization from the CDFG would be in the form of an Incidental Take Permit.

Native Plant Protection Act

The Native Plant Protection Act of 1977 (FGC Section 1900 et seq.) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered (as defined by the CDFG). An exception to this prohibition in the act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify the CDFG and give that state agency at least 10 days to come and retrieve (and presumably replant) the plants before they are plowed under or otherwise destroyed (FGC Section 1913 exempts from take prohibition "the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right of way"). Project impacts to these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the proposed project.

California Department of Fish and Game

The CDFG also maintains lists of "species of special concern," which serve as species "watch lists." The CDFG has also identified many species of special concern. Species with this status have limited distribution or the extent of their habitats has been reduced substantially, such that their populations may be threatened. Thus, their populations are monitored, and they may receive special attention during environmental review. While they do not have statutory protection, they may be considered rare under CEQA and thereby warrant specific protection measures.

Sensitive species that would qualify for listing but are not currently listed are afforded protection under CEQA. CEQA Guidelines Section 15065 (Mandatory Findings of Significance) requires that a substantial reduction in numbers of a rare or endangered species be considered a significant effect. CEQA Guidelines Section 15380 (Rare or Endangered Species) provides for assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria for listing. Unlisted plant species on the California Native Plant Society's (CNPS) Lists 1A, 1B, and 2 would typically be considered under CEQA.

Sections 3500 to 5500 of the FGC outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. The CDFG cannot issue permits or licenses that authorize the take of any fully protected species, except under certain circumstances such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock.

Under Section 3503.5 of the FGC it is unlawful to take, possess, or destroy any birds in the orders of Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.

State and local public agencies are subject to Section 1602 of the FGC, which governs construction activities that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the CDFG. Under Section 1602, a discretionary Streambed Alteration Agreement permit from the CDFG must be issued by the CDFG to the project developer prior to the initiation of construction activities within lands under CDFG jurisdiction. As a general rule, this requirement applies to any work undertaken within the 100-year floodplain of a stream or river containing fish or wildlife resources.

LOCAL

Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County MSHCP is a comprehensive, multijurisdictional habitat conservation plan (HCP) focusing on conservation of species and their associated habitats in western Riverside County. This plan is one of several large, multijurisdictional habitat-planning efforts in Southern California with the overall goal of maintaining biological and ecological diversity within a rapidly urbanizing region. The MSHCP will allow Riverside County and its cities to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of the state and federal endangered species acts. The MSHCP serves as a habitat conservation plan pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act of 1973 (16 USC 1531 et seq.), as well as a natural community conservation plan (NCCP) under the NCCP Act of 2001 (Fish and Game Code, Section 2800 et seq.). The MSHCP allows the participating jurisdictions to authorize "take" of plant and wildlife species identified within the plan area. The USFWS and the CDFG have authority to regulate the take of threatened, endangered, and rare species. Under the MSHCP, the wildlife agencies have granted "take authorization" for otherwise lawful actions, such as public and private development that may incidentally take or harm individual species or their habitat outside of the MSHCP conservation area, in exchange for the assembly and management of a coordinated MSHCP conservation area. The MSHCP is a criteria-based plan and does not rely on a hardline preserve map. Instead, within the MSHCP Plan Area, the MSHCP reserve will be assembled over time from a smaller subset of the Plan Area referred to as the Criteria Area. The Criteria Area consists of Criteria Cells (Cells) or Cell Groupings, and flexible guidelines (criteria) for the assembly of conservation within the Cells or Cell Groupings. Cells and Cell Groupings also may be included within larger units known as Cores, Linkages, or Non-Contiguous Habitat Blocks.

City of Wildomar General Plan

The General Plan includes the following policies to address effects of prospective development on biological resources. The following proposed General Plan policies will directly or indirectly address the direct mortality of individuals of listed, proposed, or candidate species or loss of habitat occupied by such species. The effectiveness of the policies at reducing such impacts is analyzed below and mitigation measures are provided to reduce the effects of future development on biological resources.

Open Space Policy 5.1: Substantially alter floodways or implement other channelization only as a "last resort," and limit the alteration to: (a) that necessary for the protection of public health and safety only after all other options are exhausted; (b) essential public service projects where or other feasible construction method or alternative project location exists; or (c) projects where primary function is improvement of fish and wildlife habitat.

Open Space Policy 5.2: If substantial modification to a floodway is proposed, design it to reduce adverse environmental effects to the maximum extent feasible, considering the following factors: (a) stream scour; (b) erosion protection and sedimentation; (c) wildlife habitat and linkages; (d) groundwater recharge capability; (e) adjacent property; (f) design (a natural effect, examples could include soft riparian bottoms and gentle bank slopes, wide and shallow floodways, minimization of visible use of concrete, and landscaping with native plants to the maximum extent possible). A site-specific hydrologic study may be required.

Open Space Policy 5.3: Based upon site-specific study, all development shall be set back from the floodway boundary a distance adequate to address the following issues:

a) Public safety;

b) Erosion;

c) Riparian or wetland buffer;

d) Wildlife movement corridor or linkage; and

e) Slopes.

Open Space Policy 5.5: Development shall preserve and enhance existing native riparian habitat and prevent obstruction of natural watercourses. Incentives shall be utilized to the maximum extent possible.

Open Space Policy 5.6: Identify and, to the maximum extent feasible, conserve remaining upland habitat adjacent to wetland and riparian areas that are critical to the feeding, hibernation, or nesting of wildlife species associated with those wetland and riparian areas.

Open Space Policy 5.7: Where land is prohibited from development due to its retention as natural floodways, floodplains and water courses, incentives should be available to the owner of such the land including density transfer and other mechanisms as may be adopted. These incentives will be provided for the purpose of encouraging the preservation of natural watercourses without creating undue hardship on the owner of properties following these policies.

Open Space Policy 6.1: During the development review process, ensure compliance with the Clean Water Act's Section 404 in terms of wetlands mitigation policies and policies concerning fill material in jurisdictional wetlands.

Open Space Policy 6.2: Preserve buffer zones around wetlands where feasible and biologically appropriate.

Open Space Policy 8.1: Cooperate with Federal and State agencies to achieve the sustainable conservation of forest land as a means of providing open space and protecting natural resources and habitat lands included in the MSHCPs.

Open Space Policy 9.3: Maintain and conserve superior examples of native trees, natural vegetation, stands of established trees, and other features for ecosystem, aesthetic, and water conservation purposes.

Open Space Policy 17.1: Enforce the provisions of applicable MSHCPs, if adopted, when conducting review of development applications.

Open Space Policy 17.2: Enforce the provisions of applicable MSHCPs, if adopted, when developing transportation or infrastructure projects that have been designated as covered activities in the applicable MSHCPs.

Open Space Policy 17.3: Enforce the provisions of applicable MSHCPs, if adopted, when conducting review of possible general plan amendments and/or zoning changes.

Open Space Policy 18.1: Preserve multi-species habitat resources in the County of Riverside through the enforcement of the provisions of applicable MSHCPs, if adopted.

Open Space Policy 18.2: Provide incentives to landowners that will encourage the protection of significant resources in the County beyond the preservation and/or conservation required to mitigate project impacts.

Ordinance No. 559 Regulating the Removal of Trees

No person shall remove any living native tree on any parcel or property greater than one-half acre in size, located in an area above 5,000 feet in elevation and within the unincorporated area of the County of Riverside, without first obtaining a permit to do so. The elevation of the proposed project site ranges between 1,700 and 1,940 feet above sea level.

3.8.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The CEQA mandatory finding of significance applies if the project has the potential to:

- Substantially reduce the habitat of a fish or wildlife species;
- Cause a fish or wildlife population to drop below self-sustaining levels;
- Threaten to eliminate a plant or animal community; and/or
- Substantially reduce the number or restrict the range of an endangered species.

Effects that would be inconsistent with the terms and conditions of the MSHCP or Stephen's Kangaroo Rate Habitat Conservation Plan (SKR HCP) also are considered potentially significant because such effects would interfere with or preclude the implementation of the conservation plans that cover potentially affected habitats and species in the project area. Implementation of the MSHCP and SKR HCP is the primary means for avoiding, reducing, and mitigating potentially significant effects of the proposed project on biological resources because the MSHCP and SKR HCP are approved conservation plans anticipated in the revised language of Section 15065 of State CEQA Guidelines; that is, the plans:

- Are being implemented by the City and other agencies in the project area;
- Have been approved by the USFWS and the CDFG;
- Have been analyzed in environmental impact reports; and
- Preserve, restore, or enhance sufficient habitat to mitigate a reduction in habitat and number of the affected species to below a level of significance.

The MSHCP and SKR HCP have been analyzed under CEQA. Project compliance with these plans fully mitigates for impacts on covered species. For purposes of this DEIR, the above considerations are combined into the following significance criteria.

The impact is potentially significant if the project would:

1) Have a substantial adverse effect on a listed species, a candidate for state listing, or a federal or state fully protected species.

   a. If the project is consistent with the MSHCP (see 4 below), and sensitive species impacts associated with the project are covered species of the MSHCP or SKR HCP, then these impacts are less than significant. Non-covered species will be evaluated under this significance criterion.

2) Have a substantial adverse effect on a riparian, wetland, other special-status community, or proposed or designated critical habitat for a listed species.

3) Interfere substantially with the movement of any native resident or migratory introduce a land use that would result in substantial adverse modification or degradation of an existing conservation area, substantial edge effects on an existing conservation area, or would preclude the assembly of a proposed conservation area.

4) Conflict with the provisions of the MSHCP, SKR HCP, or other approved conservation plan.

5) Conflict with any local policies or ordinances protecting biological resources.

METHODOLOGY

Habitat Assessment

For areas within the project site, map layers depicting biological resources and soils were created using the GIS Arc mapping program based on aerial photograph interpretation and knowledge from reconnaissance-level surveys by Principe and Associates biologists. **Appendix 3.8-1** contains the full biological assessment.

Wetland Delineation

Prior to conducting delineation fieldwork, all available relevant literature and materials were reviewed by Principe and Associates, including 2010 Eagle Aerial Photographs, 2006 Rancho California Water District 2-foot interval topographic maps, the USGS Romoland Quadrangle, and the Soil Survey of Western Riverside County, California. A base map was produced prior to the site visit showing the site boundaries and topographic contours overlaid on an aerial photograph. In this case, the locations of the on-site watercourses were previously mapped during the preparation of the *Nesting Season Survey Burrowing Owl* (**Appendix 3.8-3**). Data was then collected on the vegetation association occurring within the watercourses and its overall species composition. The watercourses were determined to be jurisdictional at that time.

New field surveys of the on-site watercourses were conducted on November 10 and 19, and December 10, 2010, by Paul Principe and Jack Munroe to detail the jurisdictional characteristics of the watercourses. Surveys consisted of walking through the watercourses and measuring the widths of the channels based on identifiable jurisdictional features. Photographs were taken along the watercourses to show the variability in the on-site jurisdictional features. Point location and attribute data were collected using a 2002 Garmin GPS map 76S receiver to determine the lengths of the watercourses on the site.

Special-Status Species Assessment

Based on the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (March 29, 2006), an independent assessment was made of the presence of suitable burrowing owl habitat on the site, including a 150-meter (approximately 500 feet) buffer zone around the project boundary. This assessment is included in **Appendix 3.8-3**.

The methodology used to prepare the nesting season survey involved conducting complete visual and walk-over field surveys to determine if the site contained occupied habitat. Surveys were conducted by walking through suitable habitat on the site. Survey transects were spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines was no more than 30 meters (±100 feet).

Impact Analysis

The analysis of impacts to biological resources presented in this section is based on biological investigations and reports, as well as available literature and maps from federal, state, and local agencies, the project description (Section 2.0 of this Draft EIR), and the standards of significance described above. Although it is likely that some level of natural resources would be retained within future projects implemented under the proposed project, the location and extent of these resources cannot be determined. Therefore, a more conservative impact approach that assumed complete buildout was taken to ensure impacts are not underestimated. The impact analysis for the trails assumes that the bike trail will be located inside the right-of-way, so impacts were estimated from the right-of-way boundary to the existing edge of pavement. Impacts to vegetative communities and jurisdictional features may be less once the design of the trails is finalized.

PROJECT IMPACTS AND MITIGATION MEASURES

Impacts to Endangered, Threatened, and Other Listed Species (Standard of Significance 1)

Impact 3.8.1 Implementation of the proposed project will not result in impacts to endangered, threatened, and other listed species. This is a **less than significant** impact.

Specific special-status species associated with the project site are identified in **Table 3.8-3**. All of the special-status species associated with the project site are covered by the Western Riverside County MSHCP. The MSHCP and SKR HCP have been analyzed under CEQA. Upon city incorporation, the City of Wildomar agreed to implement the MSHCP. Implementation of the MSHCP as part of the project development review process fully mitigates for impacts for these covered species.

Mitigation Measures

None required.

Impacts to Non-Listed Sensitive Species (Standard of Significance 1)

Raptors and Migratory Birds

Impact 3.8.2 Implementation of the proposed project could result in the direct mortality or loss of habitat for raptors and migratory birds. This considered a **potentially significant** impact.

Habitats on and adjacent to the project site may provide suitable nesting habitat for birds protected under the Migratory Bird Treaty Act and Section 3503.5 of the California Fish and Game Code. Therefore, removal of trees and vegetation during construction activities could result in noise, dust, human disturbance, and other direct/indirect impacts to nesting raptors and migratory bird species in the project vicinity. Potential nest abandonment and mortality to eggs and chicks would be considered **potentially significant** impacts.

Mitigation Measures

MM 3.8.2 The project applicant shall conduct construction and clearing activities outside of the avian nesting season (January 15–August 31), where feasible. If clearing and/or construction activities occur during nesting season, then preconstruction surveys for nesting raptors and migratory birds shall be conducted by a qualified biologist, up to 14 days before initiation of construction activities. The qualified biologist shall survey the construction zone and a 250-foot radius surrounding the construction zone to determine whether the activities taking place have the potential to disturb or otherwise harm nesting birds.

If an active nest is located within 100 feet (250 feet for raptors) of construction activities, the project applicant shall establish an exclusion zone (no ingress of personnel or equipment) at a minimum radius of 100 feet or 250 feet, as appropriate, around the nest. Alternative exclusion zones may be established through consultation with the CDFG and the USFWS. The exclusion zones shall remain in force until all young have fledged.

Reference to this requirement and to the Migratory Bird Treaty Act shall be included in the construction specifications.

If construction activities or tree removal are proposed to occur during the non-breeding season (September 1–January 14), a survey is not required, no further studies are necessary, and no mitigation is required.

Timing/Implementation: *The project applicant shall incorporate requirements into all rough and/or precise grading plan documents. The project applicant's construction inspector shall monitor to ensure that measures are implemented during construction.*

Enforcement/Monitoring: *City of Wildomar Planning and Public Works Departments*

Implementation of mitigation measure **MM 3.8.2** would ensure that impacts to raptors and migratory birds would be avoided or mitigated to a **less than significant** level.

Burrowing Owl

Impact 3.8.3 Project implementation may also result in the loss of western burrowing owls through destruction of active nesting sites, as well as incidental burial of adults, young, and eggs, which would be considered a **potentially significant** impact.

Mitigation Measures

MM 3.8.3a Per MSHCP Species-Specific Objective 6, pre-construction presence/absence surveys for burrowing owl within the survey area where suitable habitat is present will be conducted for all covered activities through the life of the permit. Surveys will be conducted within 30 days prior to disturbance. Take of active nests will be avoided. Passive relocation (use of one-way doors and collapse of burrows) will occur when owls are present outside the nesting season.

The breeding period for burrowing owls is February 1 through August 31, with the peak being April 15 to July 15, the recommended survey window. Winter surveys may be conducted between December 1 and January 31. If construction is delayed or suspended for more than 30 days after the survey, the area shall be resurveyed.

Surveys shall be completed for occupied burrowing owl burrows within all construction areas and within 150 meters (500 feet) out from the project work areas (where possible and appropriate based on habitat). All occupied burrows will be mapped on an aerial photo.

Timing/Implementation: *30-days prior to any vegetation removal or ground-disturbing activities*

Enforcement/Monitoring: *City of Wildomar Planning Department*

MM 3.8.3b Based on the burrowing owl survey results, the City shall require the project applicant to take the following actions to offset impacts prior to ground disturbance if owls are found to be present:

- If paired owls are nesting in areas scheduled for disturbance or degradation, nest(s) shall be avoided from February 1 through August 31 by a minimum of a 75-meter (250 feet) buffer or until fledging has occurred. Following fledging, owls may be passively relocated by a qualified biologist.

- If impacts on occupied burrows in the non-nesting period are unavoidable, on-site passive relocation techniques may be used if approved by the CDFG to encourage owls to move to alternative burrows outside of the impact area. However, no occupied burrows shall be disturbed during the nesting season unless a qualified biologist verifies through noninvasive methods that the burrow is no longer occupied.

Foraging habitat for relocated pairs shall be provided in accordance with guidelines provided by the CDFG (2012).

- If relocation of the owls is approved for the site by the CDFG, the City shall require the developer to hire a qualified biologist to prepare a plan for relocating the owls to a suitable site. The relocation plan must include all of the following:
  - The location of the nest and owls proposed for relocation.
  - The location of the proposed relocation site.
  - The number of owls involved and the time of year when the relocation is proposed to take place.
  - The name and credentials of the biologist who will be retained to supervise the relocation.
  - The proposed method of capture and transport for the owls to the new site.
  - A description of site preparation at the relocation site (e.g., enhancement of existing burrows, creation of artificial burrows, one-time or long-term vegetation control).
  - A description of efforts and funding support proposed to monitor the relocation.
- If paired owls are present within 50 meters (160 feet) of a temporary project disturbance (i.e., parking areas), active burrows shall be protected with fencing/cones/flagging and monitored by a qualified biologist throughout construction to identify losses from nest abandonment and/or loss of reproductive effort (e.g., killing of young).

Timing/Implementation: *Prior to any vegetation removal or ground-disturbing activities*

Enforcement/Monitoring: *City of Wildomar Planning Department*

Implementation of mitigation measures **MM 3.8.3a** and **MM 3.8.3b** would ensure that impacts to burrowing owls could be avoided or mitigated to a **less than significant** level.

Impacts to Sensitive Biological Communities, Including Riparian Habitat (Standard of Significance 2)

Impact 3.8.4 Implementation of the proposed project could result in disturbance and degradation of riparian habitat identified in local or regional plans, policies, or regulations, or by the CDFG or the USFWS. This impact is considered **potentially significant**.

Sensitive habitats include those that are of special concern to resource agencies and those that are protected under the MSHCP, CEQA, Section 1600 of the FGC, and Section 404 of the CWA. Project grading to support development may result in the loss of riparian habitat from proposed

vegetation disturbance or removal. A 1602 Streambed Alteration Agreement for removal of or disturbance to riparian habitat and waters of the State (e.g., stream, lake, or river) from the CDFG may be required for the proposed project. This agreement would include measures to minimize and restore riparian habitat.

Mitigation Measures

MM 3.8.4 The project applicant shall ensure that the there is no net loss of riparian vegetation. Mitigation can include on-site restoration or purchase of mitigation credits at a US Army Corps of Engineers (USACE) approved or mitigation bank. Mitigation associated with regulatory permits issued through the CDFG, USACE, MSHCP, or the Water Resources Control Board may be applied to satisfy this measure.

Evidence of compliance with this mitigation measure shall be provided prior to construction and grading activities for the proposed project.

Timing/Implementation: *Prior to project vegetation removal or ground-disturbing activities*

Enforcement/Monitoring: *City of Wildomar Planning Department and Public Works Department*

Implementation of mitigation measure **MM 3.8.4** will ensure that impacts to riparian communities would be **less than significant**.

Impacts to Jurisdictional Wetlands (Standard of Significance 3)

Impact 3.8.5 Implementation of the proposed project would result in the loss of jurisdictional waters of the United States and waters of the State. This impact is considered **potentially significant**.

Although the jurisdictional delineation for the project has not been verified by any state or federal agency, potentially jurisdictional water features have been described on the project site. All water features mapped on the project site are assumed to be considered jurisdictional by the USACE, the Regional Water Quality Control Board (RWQCB), and the CDFG.

While the proposed project is designed to avoid jurisdictional features, the relocation of Bundy Canyon Road may impact on-site jurisdictional features. If a CWA Section 404 permit were to be required from the USACE, a CWA Section 401 permit would be also required from the RWQCB. If it is determined by a qualified wetland biologist through consultation with the RWQCB that on-site jurisdictional features qualify as waters of the State and would be affected by the proposed project, the applicant would be required to obtain an authorization from the RWQCB to fill/disturb these features prior to project implementation. Additionally, if on-site jurisdictional features qualify as waters of the State, authorization from the CDFG for impacts to these features would be required through the 1602 Streambed Alteration Agreement process. Furthermore, construction-related impacts to water quality would be mitigated through a National Pollutant Discharge Elimination System (NPDES) permit.

Mitigation Measures

MM 3.8.5a The jurisdictional delineation shall be verified by the USACE and submitted to the City for review.

Timing/Implementation: *Prior to any vegetation removal or ground-disturbing activities*

Enforcement/Monitoring: *City of Wildomar Planning Department and Public Works Department*

MM 3.8.5b The project applicant shall ensure that the project will result in no net loss of waters of the United States and waters of the State by providing mitigation through impact avoidance, impact minimization, and/or compensatory mitigation.

Compensatory mitigation may consist of (a) obtaining credits from a mitigation bank; (b) making a payment to an in-lieu fee program that will conduct wetland, stream, or other aquatic resource restoration, creation, enhancement, or preservation activities; these programs are generally administered by government agencies or nonprofit organizations that have established an agreement with the regulatory agencies to use in-lieu fee payments collected from permit applicants; and/or (c) providing compensatory mitigation through an aquatic resource restoration, establishment, enhancement, and/or preservation activity.

Evidence of compliance with this mitigation measure shall be provided prior to construction and grading activities for the proposed project.

Timing/Implementation: *Prior to any vegetation removal or ground-disturbing activities*

Enforcement/Monitoring: *City of Wildomar Planning Department and Public Works Department*

Implementation of mitigation measures **MM 3.8.5a** and **MM 3.8.5b** would reduce impacts to waters of the State and waters of the United States to a **less than significant** level.

Impacts to the Movement of Native Resident or Migratory Fish or Wildlife Species or within Established Migratory Corridor (Standard of Significance 4)

Impact 3.8.6 Implementation of the proposed project could interfere substantially with the movement of native resident or migratory fish or wildlife species. This is considered a **less than significant** impact.

Within the project site, Cottonwood Canyon Creek provides a wildlife movement corridor for migrations, foraging, and movement between the Menifee Hills and Sedco Hills. Cottonwood Canyon Creek is shown in **Figure 2.0-3** adjacent to the western edge of the proposed commercial site. As proposed, the project would avoid both Cottonwood Canyon Creek and its associated riparian area. The creek is currently crossed by Bundy Canyon Road, and the proposed project will widen Bundy Canyon Road consistent with Riverside County Transportation Commission plans for the thoroughfare. Widening the existing road crossing will affect the creek

as well as the riparian area. Mitigation measures **MM 3.8.5a** and **MM 3.8.5b** address the potential impacts to the creek and riparian area.

Mitigation Measures

None required.

Conflict with Any Local Policies or Ordinances Protecting Biological Resources, Such as a Tree Preservation Policy or Ordinance (Standard of Significance 5)

Impact 3.8.7 Implementation of the proposed project may result in a conflict with a local policy or ordinance protecting biological resources. This impact is considered **less than significant**.

There are native trees growing on the site. Upon city incorporation, the City of Wildomar adopted County Ordinance 559, as amended, regulating the removal of trees. The ordinance regulates tree removal above the 5,000-foot elevation. The project site is site below 2,000-foot elevation; therefore, a permit will not be required. Most of the trees on the project site are associated with riparian areas (Principe and Associates 2010a). Implementation of mitigation measure **MM 3.8.4** will ensure the project results in no net loss of riparian vegetation, thus providing mitigation for trees on the project site.

Mitigation Measures

None required.

Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local, Regional, or State Habitat Conservation Plan (Standard of Significance 5)

Impact 3.8.8 Implementation of the proposed project would result in disturbance and degradation of riparian/riverine habitat, as defined in Section 6.1.2 of the MSHCP. The project may result in impacts to riparian/riverine habitats, which could be considered **potentially significant**.

The MSHCP protects and preserves certain habitats and species in the region. The MSHCP delineates particular areas of concern through the identification of specific areas known as criteria cells. Areas identified as criteria cells typically contain certain restrictions on development and land alterations. A small portion of the proposed project (0.26 acre) is located within a portion of Cell #5046 of Cell Group J in the Sedco Hills Subunit (SU4) of the Elsinore Area Plan (**Figure 3.8-2**). Development in the portion of the project that occurs within a criteria cell would result in **potentially significant** impacts.

The proposed project is located within the Burrowing Owl Survey Area (Figure 6-4 of the MSHCP). A nesting season survey was conducted and a report was prepared, following the guidelines provided in the MSHCP (**Appendix 3.8-3**). As a result, project implementation may result in potentially significant impacts to the species. Incorporation of mitigation measures **MM 3.8.3a** and **MM 3.8.3b** will reduce the impacts to **less than significant**.

A final component of the MSHCP is Mitigation Fee Areas, which are land areas that occur within the MSHCP and require a fee for development activities to occur. These fees are utilized to fund the minimization to certain endemic species. The proposed project is located within the MSHCP

Mitigation Fee Area (Riverside County Ordinance 810.2) and the Stephens' Kangaroo Rat Mitigation Fee Area (Riverside County Ordinance 663). Mitigation measure **MM 3.8.8a** includes payment of these fees to comply with the overlying habitat conservation plan (the MSHCP).

Given the proposed project's impacts to the overlying habitat conservation plan area, implementation of the following mitigation measures is required.

Mitigation Measures

MM 3.8.8a If riparian/riverine habitats covered under the MSHCP cannot be avoided, the project applicant shall submit a Determination of Biological Equivalent or Superior Preservation (DBESP), as outlined in Section 4.2 of the MSHCP Permittee Implementation Guidance Manual, to the City for approval.

The project applicant shall ensure that the project will result in no net loss of riparian/riverine habitats by providing mitigation through impact avoidance, impact minimization, and/or compensatory mitigation for the impact, as determined in the DBESP. Mitigation accomplished under mitigation measure **MM 3.8.5b** may apply to meet the standards where appropriate.

Timing/Implementation: *Prior to any vegetation removal or ground-disturbing activities*

Enforcement/Monitoring: *City of Wildomar Planning Department and Public Works Department*

MM 3.8.8b The project applicant shall submit plans that illustrate how disturbance to the portion of the project site located within the portion of Cell #5046 of Cell Group J in the Sedco Hills Subunit (SU4) of the Elsinore Area Plan will be avoided for City for approval.

Timing/Implementation: *Prior to any vegetation removal or ground-disturbing activities*

Enforcement/Monitoring: *City of Wildomar Planning Department and Public Works Department*

MM 3.8.8c The project applicant shall submit fees to the City in accordance to the requirements of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Mitigation Fee Areas, including the MSHCP Mitigation Fee Area and the Stephens' Kangaroo Rat Mitigation Fee Area.

Timing/Implementation: *Prior to any vegetation removal or ground-disturbing activities*

Enforcement/Monitoring: *City of Wildomar Planning Department*

With implementation of mitigation measures **MM 3.8.8a** through **MM 3.8.8c**, impacts will be **less than significant**.

3.8.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting includes the project site as well as the still undeveloped areas surrounding the proposed project site where the impacts of urbanization and threats to biological diversity and sensitive biological resources are considered most serious. The impacts on biological resources are primarily the result of urbanization of the area, habitat fragmentation, water pollution, and conversion of natural land to residential, commercial, and recreational use.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts to Biological Resources

Impact 3.8.9 Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the immediate area of the proposed project, will result in the conversion of habitat and impact biological resources. This impact is considered **less than cumulatively considerable**.

The City, along with other jurisdictions in western Riverside County, participates in Multi-Species Habitat Conservation Plan (MSHCP). The MSHCP is designed to protect over 150 species and conserve over 500,000 acres in western Riverside County. Project compliance with the MSHCP and the Stephens' Kangaroo Rat Habitat Conservation Plan fully mitigates for impacts on covered species and ensures large segments of natural communities in western Riverside County will be preserved.

Implementation of mitigation measures **MM 3.8.8.a** through **MM 3.8.8c** ensures the project will be compliant with the MSHCP. As identified previously, implementation of mitigation measures **MM 3.8.4**, **MM 3.8.5a**, and **MM 3.8.5b** ensures no net loss of wetlands or waters of the State or waters of the United States. Implementation of mitigation measures **MM 3.8.2, MM 3.8.3a,** and **MM 3.8.3b** ensures that effects to nesting birds are minimized. Though the development of the proposed project will continue the urbanization of the area that began long before incorporation of the city, mitigation measures associated with the proposed project will reduce the project's contribution to cumulative impacts to a **less than cumulatively considerable** level.

Mitigation Measures

None required.

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3.9 Cultural and Paleontological Resources

This section considers and evaluates the potential impacts of the proposed Oak Creek Canyon Development project on historical, cultural, and paleontological resources. Cultural resources are defined as prehistoric and historic sites, structures, and districts or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, or religious reasons. Paleontological resources include fossil remains, as well as fossil localities and formations which have produced fossil material. Much of the information in this section is taken from or based on the *Phase I Cultural Resources Assessment for Tentative Tract Map 36388* (Keller 2012a) and *A Phase II Cultural Resources Test Investigation of Archaeological Site CA-RIV-8282 Located Within the Boundaries of Tentative Tract Map 36388* (Keller 2012b). (Note to reader: Per California Government Code Section 6254.10. cultural resources reports are considered confidential information and are not part of the publicly circulated EIR in order to protect sensitive sites.) As a result **Appendix 3.9-1** and **Appendix 3.9-2** are not included on the CD.

CONCEPTS AND TERMINOLOGY FOR EVALUATION OF CULTURAL RESOURCES

For analysis purposes, cultural resources may be categorized into four groups: archaeological resources (prehistoric and historical); historic properties, buildings, and districts; areas of importance to Native Americans; and paleontological resources (fossilized remains of plants and animals). Cultural resource impacts include those to existing historic resources (i.e., historic districts, landmarks, etc.) and to archaeological and paleontological resources.

The following definitions are common terms used to discuss the regulatory requirements and treatment of cultural resources:

Cultural resources is the term used to describe several different types of properties: prehistoric and historic archaeological sites; architectural properties such as buildings, bridges, and infrastructure; and resources of importance to Native Americans.

Historic properties is a term defined by the National Historic Preservation Act (NHPA) as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on, the National Register of Historic Places (NRHP), including artifacts, records, and material remains related to such a property.

Historical resource as described in the California Environmental Quality Act (CEQA) includes buildings, sites, structures, objects, or districts, each of which may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance and is eligible for listing or is listed in the California Register of Historical Resources (CRHR) or a local register of historical resources. The CRHR includes resources listed in, or formally determined eligible for listing in, the NRHP, as well as some California State Landmarks and Points of Historical Interest.

Paleontological resource is defined as including fossilized remains of vertebrate and invertebrate organisms, fossil tracks and trackways, and plant fossils. A unique paleontological site would include a known area of fossil-bearing rock strata.

3.9.1 EXISTING SETTING

Note to the reader: All text in this subsection has as its source the *Phase I Cultural Resources Assessment of Tentative Tract Map 36388* (Keller 2012a). Text citations to this source document are not included in individual paragraphs.

This section considers and evaluates the potential impacts of the proposed Oak Creek Canyon Development project on historical, cultural, and paleontological resources. Cultural resources are defined as prehistoric and historic sites, structures, and districts or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, or religious reasons. Paleontological resources include fossil remains, as well as fossil localities and formations which have produced fossil material. Much of the information in this section is taken from or based on the *Phase I Cultural Resources Assessment for Tentative Tract Map 36388* (Keller 2012a) and *A Phase II Cultural Resources Test Investigation of Archaeological Site CA-RIV-8282 Located Within the Boundaries of Tentative Tract Map 36388* (Keller 2012b). (Note to reader: Per California Government Code Section 6254.10. cultural resources reports are considered confidential information and are not part of the publicly circulated EIR in order to protect sensitive sites.) As a result **Appendix 3.9-1** and **Appendix 3.9-2** are no included on the CD.

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PREHISTORY

On the basis of currently available archeological research, occupation of Southern California by human populations is believed to have begun at least 10,000 years ago. Theories proposing much earlier occupation, specifically during the Pleistocene Age, exist but at this time the archeological evidence has not been fully substantiating. Therefore, for the purposes of this report, only human occupation within the past 10,000 years will be addressed.

A time frame of occupation may be determined on the basis of characteristic cultural resources. These comprise what are known as cultural traditions or complexes. It is through the presence or absence of time-sensitive artifacts at a particular site that the apparent time of occupation may be suggested.

In general, the earliest established tradition in Southern California is accepted to be the San Dieguito Tradition, first described by Malcolm Rogers in the 1920s. The San Dieguito people were nomadic large-game hunters whose tool assemblage included large domed scrapers, leaf sharpened knives and projectile points, stemmed projectile points, chipped stone crescentics, and hammerstones. The San Dieguito Tradition was further divided into three phases: San Dieguito I is found only in the desert regions, while San Dieguito II and III occur on both sides of the Peninsular Ranges. Rogers felt that these phases formed a sequence in which increasing specialization and refinement of tool types were the key elements. Although absolute dates for the various phase changes have not been hypothesized or fully substantiated by a stratigraphic sequence, the San Dieguito Tradition as a whole is believed to have existed from approximately 7,000 to 10,000 years ago (8000 to 5000 BC).

Throughout southwestern California, the La Jolla Complex followed the San Dieguito Tradition. The La Jolla Complex is recognized primarily by the presence of millingstone assemblages within shell middens. Characteristic cultural resources of the La Jolla Complex include basined millingstones, unshaped manos, flaked stone tools, shell middens, and a few Pinto-like projectile points. Flexed inhumations under stone cairns, with heads pointing north, are also present.

The La Jolla Complex existed from 5500 to 1000 BC. Although there are several hypotheses to account for the origins of this complex, it would appear that it was a cultural adaptation to climatic warming after c. 6000 BC. This warming may have stimulated movements to the coast of desert peoples who then shared their millingstone technology with the older coastal groups. The La Jollan economy and tool assemblage seems to indicate such an infusion of coastal and desert traits instead of a total cultural displacement.

The Pauma Tradition may be an inland variant of the La Jolla Complex, exhibiting a shift to a hunting and gathering economy, rather than one based on shellfish gathering. Implications of this shift are an increase in number and variety of stone tools and a decrease in the amount of shell. At this time it is not known whether the Pauma Complex represents the seasonal occupation of inland sites by La Jollan groups or whether it represents a shift from a coastal to a non-coastal adaptation by the same people.

The late period is represented by the San Luis Rey Complex, divided into two periods: San Luis Rey I (AD 1400–1750) and the San Luis Rey II (AD 1750–1850). The San Luis Rey I type component includes cremations, bedrock mortars, millingstones, small triangular projectile points with concave bases, bone awls, stone pendants, *Olivella* shell beads, and quartz crystals. The San Luis Rey II assemblage is the same as San Luis Rey I, but with the addition of pottery vessels, cremation urns, tubular pipes, stone knives, steatite arrow straighteners, red and black

pictographs, and such non-aboriginal items as metal knives and glass beads. Inferred San Luis Rey subsistence activities include hunting and gathering with an emphasis on acorn harvesting.

ETHNOGRAPHY

According to available ethnographic research, the proposed project area was included in the known territory of the Shoshonean-speaking Luiseño Indians during both prehistoric and historic times. The name Luiseño is Spanish in origin and was used in reference to those aboriginal inhabitants of Southern California associated with the Mission San Luis Rey. As far as can be determined, the Luiseño, whose language is of the Takic family (part of Uto-Aztecan linguistic stock), had no equivalent word for their nationality.

The territory of the Luiseño was extensive, encompassing over 1,500 square miles of coastal and inland Southern California. Known territorial boundaries extended on the coast from Aliso Creek on the north to Agua Hedionda Creek on the south, then inland to Santiago Peak, across to the eastern side of the Elsinore Fault Valley, southward to the east of Palomar Mountain, and finally, around the southern slope of the Valley of San Jose. Their habitat included every ecological zone from sea level to 6,000 mean feet above sea level.

Territorial boundaries of the Luiseño were shared with the Gabrieliño and Serrano to the north, the Cahuilla to the east, and the Cupeño and Ipai to the south. With the exception of the Ipai, these tribes shared similar cultural and language traditions. Although the social structure and philosophy of the Luiseño were similar to that of the neighboring tribes, they had a greater population density and correspondingly, a more rigid social structure.

HISTORIC CONTEXT

Four principle periods of historical occupation existed in Southern California: the Explorer Period (AD 1540–1768), the Colonial Spanish-Mission Period (AD 1769–1830), the Mexican Ranch-Pastoral/Landless Indian Period (AD 1830–1860), and the American Developmental/Indian Reservation Period (AD 1860–present).

In the general project area, the Colonial Spanish-Mission Period (AD 1769–1830) first represents historical occupation. Although earlier European explorers had traveled throughout Southern California, it was not until the 1769 "Sacred Expedition" of Captain Gaspar dé Portola and Franciscan Father Junipero Serra that there was actual contact with aboriginal inhabitants of the region. The intent of the expedition, which began in San Blas, Baja California, was to establish missions and presidios along the California coast, thereby serving the dual purpose of converting Indians to Christianity and expanding Spain's military presence in the "New World." Although the Portola and Serra expedition apparently bypassed the project area, there is a possibility that Pedro Fages, a lieutenant in Portola's Catalan Volunteers, may have stopped in the area while looking for deserters from San Diego in 1772. In addition, historian Phillip Rush credits Captain Juan Pablo Grijalva and his party with the first European discovery of the region in 1795. The first Europeans of record to enter the region were Father Juan Norberto de Santiago and Captain Pedro Lisalde. In 1797 their expedition party, comprising seven soldiers and five Indians (probably Juaneños from the Mission San Juan Capistrano) stopped briefly near Temecula on their journey to find another mission site. Upon leaving the valley, Fr. Santiago remarked in his journal that the expedition had encountered an Indian village called "Temecula."

In 1798 on the site Santiago had selected, the Mission San Luis Rey de Francia was founded and all aboriginals living within the mission's realm of influence became known as the "Luiseño."

Within a 20-year period, under the guidance of Fr. Antonio Peyro, the mission prospered to a degree that it was often referred to as the "King of the Missions." During this period, the Mission San Luis Rey de Francia claimed the entire region that is now western Riverside County and northern San Diego County as a cattle ranch, although records of the Mission San Juan Capistrano show this region as part of their holdings.

By 1818, the greater Temecula Valley had become the Mission San Luis Rey's principle producer of grain and was considered one of the mission's most important holdings. It was at approximately this time that a granary, chapel, and majordomo's home were built in Temecula. These were the first structures built by Europeans within the boundaries of Riverside County. The buildings were constructed at the original Indian village of Temecula on a high bluff at the southern side of Temecula Creek where it joins Murrieta Creek to form the Santa Margarita River. This entire area continued to be an abundant producer of grain, as well as horses and cattle, for the thriving Mission San Luis Rey until the region became part of Mexico on April 11, 1822. Following this event, the Spanish missions and mission ranches began a slow decline.

During the Mexican Ranch-Pastoral/Landless Indian period (AD 1830–1860), the first of the Mexican ranchos were established following the enactment of the Secularization Act of 1833 by the Mexican government. Mexican governors were empowered to grant vacant land to "contractors (*empresarios*), families, or private citizens, whether Mexicans or foreigners, who may ask for them for the purpose of cultivating or inhabiting them." Mexican governors granted approximately 500 ranchos during this period. Although legally a land grant could not exceed 11 square leagues (about 50,000 acres or 76 square miles) and absentee ownership was officially forbidden, neither edict was rigorously enforced. The proposed project area was not within any of the Spanish or Mexican land grants but it was located approximately 1.5 miles east of La Laguna Rancho.

The La Laguna Rancho, encompassing 3 square leagues (13,338.84 acres) at the northern end of the Temecula Valley, was granted to Julian Manriquez in June of 1844 by Governor Manuel Micheltorena. Manriquez apparently made no use of the land and when he died, his widow, Trinidad, and their two sons inherited the property. They subsequently sold it in 1852 to Abel Stearns, a land speculator and merchant from Los Angeles, for $4,215. On July 21, 1858, Stearns sold the land to Augustin Machado for $6,000, who built the first house near the shore of Lake Elsinore (Laguna Grande). Machado successfully operated the La Laguna Rancho as a cattle and sheep ranch until he died in 1865. His widow and their twelve children inherited the rancho and in June 1873 sold 12,832 acres to an Englishman named Charles Almon Sumner. Only one of Augustin Machado's children, Juan Machado, chose to retain his inherited portion of the La Laguna Rancho (513 acres) and continued to live with his family in the old Machado adobe. Sumner operated the ranch, albeit not as successfully as had Machado, and Sumner's mortgage on the property was soon foreclosed on and the land sold at a sheriff's sale.

Throughout the 1840s and 1850s, thousands of settlers and prospectors traveled through the project area on the Emigrant Trail en route to various destinations in the West. The southern portion of the trail ran from the Colorado River to Warner's Ranch and then westward to Aguanga, where it split into two roads. The main road continued westward past Aguanga and into the valley north of the Santa Ana Mountains. This road was alternately called the Colorado Road, Old Temescal Road, or Fort Yuma Road and what is now State Route 79 generally follows its alignment. The second road, known as the San Bernardino Road, split off northward from Aguanga and ran along the base of the San Jacinto Mountains.

On September 16, 1858, the Butterfield Company, following the southern Emigrant Trail, began carrying the Overland Mail from Tipton, Missouri, to San Francisco, California. The first

stagecoach passed through Temecula on October 7, 1858, and exchanged horses at John Magee's store, which was located south of Temecula Creek on the Little Temecula Rancho. It was around this store that the second location of Temecula had been established. In addition to being a Butterfield Overland Mail stop, it was at John Magee's store that the first post office in what is now Riverside County opened on April 22, 1859, with Louis Rouen being appointed the first United States postmaster in inland Southern California.

In the final period of historic occupation, the American Developmental/Indian Reservation Era (AD 1860–current), the first major changes in the study area took place as a result of the land issues addressed in the previous decade. Following completion of the U.S. Government Land Office land survey, large tracts of federal land became available for sale and for preemption purposes, particularly after Congress passed the Homestead Act of 1862. The state was eventually granted 500,000 acres of land by the federal government for distribution, as well as two sections of land in each township for school purposes. Much of this land was in the southern part of the state. Under the Homestead Act of 1862, 160-acre homesteads were available to citizens of the United States (or those who had filed an intention to become one) who were either head-of-household or a single person over the age of 21 (including women). Once the homestead claim was filed, the applicant had six months to move onto the land and was required to maintain residency for five years as well as to build a dwelling and raise crops. Upon completion of these requirements, the homesteader was required to publish intent to close on the property in order to allow others to dispute the claim; if no one did so, the homesteader was issued a patent to the property, thus conveying ownership. Individuals were attracted to the federal lands by their low prices, and as a result, the population began to increase in regions where the lands available for homestead were located.

Settlement of the region in which the project site is located began in earnest as a direct result of the Homestead Act of 1862, although many of the settlers actually obtained their land through other avenues. This region was considered especially desirable by settlers due to the abundance of flat land with good soil, relatively dependable sources of water, and the proximity to major transportation corridors. However, despite the attractiveness of the region, non-Native settlement did not begin until the last two decades of the nineteenth century, with the majority occurring in the 1890s. The first individuals to receive patents for land within the region (for the purpose of this report, Township 6 south, Range 3 west) were Jacob Rance and Francisco Alvarado, who on January 30, 1880, received a land patent for 160 acres in portions of Sections 10 and 11; authorization for the land patent was a Surveyor General Certificate under the Scrip of Nature or Scrip Act of March 17, 1842 (5 Stat. 607) (GLO Document #86268). Not until almost ten years later did the influx of settlers into the region commence. Interestingly, many of the patents in this area were not for homesteaded land but instead were cash-sale patents issued by authority of the Public Land Sales Act of 1820 (3 Stat. 566), which permitted purchase of as few as 80 acres of land for as little as $1.25 per acre. These purchases did not require residence, domicile construction, or agriculture as did the Homestead Act of 1862. Considering that many of the cash-sale patents occurred after gold had been discovered in the region, the intended use for much of this land may have been for pursuits other than farming.

On March 17, 1882, the California Southern Railroad (San Bernardino and Temecula Line) was opened, extending from National City near the Mexican border in San Diego County, northerly through Temecula and Murrieta, across the Perris valley, down Box Springs Grade, and on to the City of San Bernardino. As a result, the entire region anticipated a boom in industry and population. The Elsinore Station, whose name had been changed from the Laguna Station on January 1, 1884, served as the Elsinore railway even though the new town it served was several miles to the northwest. The original depot was simply a boxcar, but in 1886 a new building was constructed and it was at that time that the station was renamed Elsinore Junction.

Unfortunately, flooding and washouts in the Temecula Canyon plagued the California Southern Railroad from the beginning. Railway service was disrupted for months at a time, and a fortune was spent on rebuilding the washed-out tracks. Finally, in 1891 the Santa Fe Railway constructed a new line from Los Angeles to San Diego down the coast, and when later that year the California Southern Railroad's route through Temecula Canyon once again washed out, that portion of the line was discontinued. The line from Elsinore Junction to Elsinore continued operation and in 1896 was extended 8 miles north to serve Alberhill; at this time the Elsinore line was classified only as a freight-loading spur. Elsinore Junction continued until a 1927 washout resulted in the abandonment of the main line between Elsinore and Perris and there was no further need of the rail station.

Around the same time the California Southern Railroad opened, L. Menifee Wilson, a 20-year-old man from Kentucky, came to this area and located what appears to be the first gold quartz mine in this part of Southern California. The mine was located approximately 2 miles northeast of the subject property in Section 5 and was named the Menifee Quartz Lode (California Division of Mines and Mineral Resources). As news of his find spread, miners flocked to the region to try their luck. Hundreds of gold mining claims were subsequently filed in the region around Menifee's mine, and this area became known as Menifee and the Menifee Valley. In addition to the Menifee mine, two gold mines were located within 2 miles of the project site: Lucky Boy Mine (Sec. 9) and the Mammoth Mine (Sec. 8). One feldspar-silica mine, the Perris Mining Co. Mine (Sec. 16), was also developed within this 2-mile radius. Gold quartz discoveries in the Wildomar, Winchester, Perris, Lakeview, and Murrieta areas further fueled the belief that the entire region was one of unsurpassed mineral wealth. Wilson was one of the major proponents of this belief and in addition to his original mine, he claimed several others in the general area. From the time of Wilson's first gold discovery in the early 1880s, gold production through hard rock mining in western Riverside County increased considerably, reaching its peak in 1895. At that time the value of gold produced was reported in the *Mining and Scientific Press* (Vol. 85) as being $285,106. Although the gold value was still relatively high in 1896 ($262,800), from that point on production decreased substantially every year until in 1917, the value of gold produced was reported as being zero.

On September 24, 1883, approximately 18 months after the opening of the California Southern Railroad, Franklin H. Herald, Donald M. Graham, and William Collier purchased the 12,832-acre La Laguna Rancho for $12,000. It was renamed Elsinore and subdivided into town lots and small acreages for sale. However, in 1885 the partnership was dissolved and the unsold land within the rancho was divided. Collier and Graham took as their share the land that lay southeasterly of Corydon Street and platted a town site with the name "Wildon" on the land. In November of 1886, a second plat for the new town was recorded with the name "Wildomar." This final name comprised letters of each partner's first name, plus letters from the first name of Margaret Collier, who was Graham's sister and Collier's wife.

On April 16, 1886, Wildomar's first post office was established, and when Riverside County incorporated in 1893, Wildomar was designated as one of the original 40 election precincts and the Wildomar school district as one of the original 52 accepted school districts. Many Quakers from West Branch, Iowa, settled in Wildomar and the town became known as a Quaker colony. According to the *Riverside Daily Press* (1898:43), the proprietors of Wildomar (presumably Graham and Collier) were temperance men and they decided that their new town should have a "no saloon" clause incorporated into every deed of acre property as well as the town lots.

As the aforementioned gold boom began to subside in the late 1890s, the local economy's emphasis on mining began to give way to a far greater emphasis on the agricultural potential of

the region. This shift in industry led to a less dramatic population growth for the region and allowed for the rural setting of western Riverside County to persist until the late twentieth century.

KNOWN CULTURAL RESOURCES IN THE PROJECT AREA

A records search was conducted at the California Archeological Inventory/California Historical Resources Information System, Eastern Information Center, located at the University of California, Riverside. The research included a review of all site maps, site records, survey reports, and mitigation reports relevant to the proposed project area. The following documents were also reviewed: the National Register of Historic Places, the California Office of Historic Preservation Archaeological Determinations of Eligibility, and the California Office of Historic Preservation Historic Property Directory. A request for a Sacred Lands File search was submitted to the Native American Heritage Commission, and project scoping letters were sent to 14 tribal representatives as being interested in project development in the Temecula area. A complete list of the tribal representatives contacted, copies of the letters sent, and the request letter sent to the Native American Heritage Commission can be found in **Appendix 3.9-1**. The response received from the Native American Heritage Commission may be found in **Appendix 1.0-2**, and the responses to the project scoping letter received from the Pechanga Band of Mission Indians and the Cahuilla Band of Indians can be found in **Appendix 3.9-1**. No other responses were received.

Following the records and Sacred Lands File searches, a literature search of available published references to the project area was undertaken. Reference material included all available photographs, maps, books, journals, historical newspapers, registers, and directories at the Riverside Public Library Local History Collection and the University of California, Riverside, libraries. Cartographic research was conducted at the Science Library Map Collection of the University of California, Riverside. Archival research relating to the original ownership of the subject property was conducted using the General Land Office records currently maintained by the California Office of the Bureau of Land Management. A complete list of maps consulted is available in **Appendix 3.9-1**.

Results of the records search conducted by staff at the Eastern Information Center indicated that the entirety of the project site had been included in a previous cultural resources study and portions of the property had been included in two additional studies of limited scope. The initial cultural resources investigation, which included all of the subject property, was conducted in 1973 by Joan R. Smith and Robert L. Bettinger of the Archaeological Research Unit, University of California, Riverside. Their report, entitled "Bundy Canyon Development: Potential Impact on Archaeological Resources (RI 0108)," covered a study area that encompassed approximately 2.25 square miles, "immediately south of Cottonwood Canyon and southwest of Paloma Valley." Smith and Bettinger crossed the study area on foot in an east–west direction at approximately 70-meter intervals. These transect intervals are significantly larger than the 15-meter intervals currently accepted as a standard field method. However, they did pay particular attention to areas around creeks and boulders with the expectation of finding temporary camps and milling sites at those locations. During the course of their field survey, three archaeological sites were discovered, one of which is located within the boundaries of the proposed project site. Smith and Bettinger recorded this site (CA-RIV-1256) as a highly eroded metate slick on top of a large granitic boulder, located at the foot of a hill near a cultivated field with a dry creek immediately west of the site. Impact on this site from development proposed in 1973 was considered negligible, so no further research or mitigation was recommended.

Two linear studies have been conducted that included limited portions of the subject property: "Built Environment Historic Resources Technical Memorandum for Bundy Canyon-Scott Road

Improvement Project (RI 7852)" by Francesca G. Smith and Caprice D. Harper of Parsons in May 2007, and "Cultural Resources Report for the Verizon Wireless Project 'The Farm' (RI 7822)" by URS Corporation in December 2007. During the course of the first survey, CA-RIV-8282 (33-15958) was discovered within the boundaries of the project site. This archaeological site was described as a sparse lithic scatter containing a total of 26 pieces of debitage, including 22 quartz flakes, two metavolcanic flakes, and one edge-modified andesite flake. The lithic scatter was wholly surficial, with the potential for subsurface cultural deposits that could reach a depth of 2 meters. No ground stone or midden-altered sediments were observed.

The proposed project site is located within a very well studied region, with 37 cultural resource studies having been conducted within a 1-mile radius. During the course of field surveys for these studies, 27 cultural resources properties have been recorded, the majority of which are between 0.5 and 1 mile distant; two single artifact occurrences (CA-RIV-15669, 15670) are on property adjacent to the project site. A large village site (CA-RIV-1024) and numerous associated sites are located approximately 0.5 mile northeast of the subject property. A listing of all previously recorded cultural resources located near the project site is included in **Table 3.9-1**.

TABLE 3.9-1
PREVIOUSLY RECORDED CULTURAL RESOURCES IN THE SCOPE OF THE RECORDS SEARCH

Trinomial	Description
CA-RIV-1024	Village site: pictographs, petroglyphs, fire cracked rock, bedrock milling features, pottery, midden, choppers, scrapers
CA-RIV-1632	1 bedrock mortar
CA-RIV-1633	3 cores, 4 manos, 4 metate fragments, 1 biface, flakes, shoe buckle
CA-RIV-1641	5 slicks, 1 hammerstone, debitage
CA-RIV-1642	1 shallow bedrock mortar
CA-RIV-1643	1 slick
CA-RIV-1644	1 slick
CA-RIV-1645	1 mortar, 1 core, debitage
CA-RIV-1771	2 bedrock mortars, 1 slick
CA-RIV-1988	4 slicks, 2 metates, metate fragments, 1 mano, 1 fire-affected rock, 2 quartzite cores, 24 flakes, 2 quartz hammerstones, 1 agate point, 3 pieces calcined bone
CA-RIV-1999	rock shelter, fire-affected rock, slick, mano fragment, flake
CA-RIV-2001	1 slick, 1 mini-mortar, fire-affected mano
CA-RIV-2042	2 small slicks
CA-RIV-3348	1 slick
CA-RIV-3349	1 slick
CA-RIV-2249	7 bedrock mortars, 3 slicks
CA-RIV-4075	1 bedrock mortar and 1 dished grinding slick on 2 outcrops 2.5 meters apart
CA-RIV-4154	1 mortar
CA-RIV-6201	lithic scatter
CA-RIV-7869	structural footings, asphalt drive, tile floor, rock chimney
CA-RIV-7870	stacked rock wall, reservoir, trash
CA-RIV-8779	2 slicks

Trinomial	Description
CA-RIV-8780	2 slicks, 1 flake
CA-RIV-10124	1 mortar
CA-RIV-14993	historic farm features & equipment
CA-RIV-15669	1 meta-quartzite mano (bifacial, ground & shaped)
CA-RIV-15670	1 metavolcanic secondary flake

In addition to the resources listed in **Table 3.9-1**, two previously identified archeological sites occurring within the project site were determined to have been previously recoded in the wrong location. Both sites were re-recoded with the correct location during the current field survey. Site CA-RIV-1256, a highly eroded metate slick on top of a large granitic boulder recorded in 1973, was recorded as generally disturbed, near a cultivated field at the foot of a hill, immediately east of a dry creek within the proposed project site. Site CA-RIV-8282, a sparse, lithic scatter containing a total of 26 pieces of debitage, including 22 quartz flakes, three metavolcanic flakes, and one edge-modified andesite flake over an area measuring 33 by 33 meters, was originally recorded in 2007. It was located adjacent to a prominent riparian area along an unnamed blueline creek.

A historical records search offered no information specific to the subject property. According to General Land Office records maintained by the Bureau of Land Management, the first application for non-Native ownership of the subject property was filed by an agent of the Southern Pacific Railroad on July 13, 1885. However, the project site remained vacant, as cartographic research show no structures within the property boundaries between 1854 (date of first General Land Office survey) and 1976 (date of aerial photographs taken for the 1979 photorevised US Geological Survey Romoland Quadrangle). Between 1951 and 1976, a network of unpaved roads meanders through the property, possibly providing alternative access routes from Bundy Canyon Road to residences built to the south of the subject property.

KNOWN PALEONTOLOGICAL RESOURCES IN THE PROJECT AREA

Paleontology is defined as a science dealing with the life of past geological periods as known from fossil remains. Paleontological resources include fossil remains, as well as fossil localities and formations that have produced fossil material. Such locations and specimens are important nonrenewable resources. The California Environmental Quality Act (CEQA) offers protection for these sensitive resources and requires that they be addressed during the environmental impact report process.

NATIVE AMERICAN COORDINATION

As of March 1, 2005, Senate Bill (SB) 18 (Government Code Sections 65352.3, 65352.4) requires that, prior to the adoption or amendment of a general plan proposed on or after March 1, 2005, a city or county must consult with Native American tribes with respect to the possible preservation of, or the mitigation of impacts to, specified Native American places, features, and objects located within that jurisdiction. As a component of the Phase I Cultural Resources Assessment performed for the proposed project, a request for a Sacred Lands File search was submitted to the Native American Heritage Commission and project scoping letters were sent to 14 tribal representatives listed as being interested in project development in the proposed project area. A complete listing of these tribal representatives is available in **Appendix 3.9-1**. As of the time of completion of the Phase I Cultural Resources Assessment, two of the tribal representatives contacted responded to the project scoping letter: the Cahuilla Band of Indians

and the Pechanga Band of Mission Indians. Both representatives stated that while the project site is outside of their present reservation's boundaries, the area of the proposed project is within their ancestral territory. In consideration of this, both Tribes requested to be in direct consultation with the City of Wildomar during the development of the proposed project.

3.9.2 REGULATORY FRAMEWORK

FEDERAL

National Historic Preservation Act

The National Historic Preservation Act (NHPA) requires that the federal government list significant historic resources on the National Register of Historic Places (NRHP), which is the nation's master inventory of known historic resources. The NRHP is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

Structures, sites, buildings, districts, and objects over 50 years of age can be listed in the NRHP as significant historic resources. However, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP. The criteria for listing in the NRHP include resources that:

a) Are associated with events that have made a significant contribution to the broad patterns of history;

b) Are associated with the lives of persons significant in our past;

c) Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d) Have yielded or may likely yield information important in prehistory or history.

STATE

California Register of Historical Resources

The State Historical Resources Commission has designed the California Register of Historic Resources (CRHR) for use by state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The CRHR is the authoritative guide to the state's significant historical and archeological resources. This program encourages public recognition and protection of resources of architectural, historical, archeological, and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding, and affords certain protections under CEQA.

California Environmental Quality Act

Under CEQA, public agencies must consider the effects of their actions on both "historical resources" and "unique archaeological resources." Pursuant to Public Resources Code (PRC)

Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Section 21083.2 requires agencies to determine whether proposed projects would have effects on unique archaeological resources.

Historical resource is a term with a defined statutory meaning (PRC Section 21084.1; determining significant impacts to historical and archaeological resources is described in the CEQA Guidelines, Section 15064.5[a], [b]). Under CEQA Guidelines Section 15064.5(a), historical resources include the following:

1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Public Resources Code, Section 5024.1).

2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the California Register of Historical Resources (Public Resources Code Section 5024.1), including the following:

    a) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

    b) Is associated with the lives of persons important in our past;

    c) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

    d) Has yielded, or may be likely to yield, information important in prehistory or history.

4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in a historical resources survey (meeting the criteria in Section 5024.1(g) of the PRC) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC Section 5020.1(j) or 5024.1.

Historic resources are usually 45 years old or older and must meet at least one of the criteria for listing in the California Register, described above (such as association with historical events, important people, or architectural significance), in addition to maintaining a sufficient level of physical integrity.

Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be historical resources for purposes of CEQA unless a preponderance of evidence indicates otherwise (PRC, Section 5024.1 and California Code of Regulations (CCR), Title 14, Section 4850). Unless a resource listed in a survey has been demolished, lost substantial integrity, or there is a preponderance of evidence indicating that it is otherwise not eligible for listing, a lead agency should consider the resource to be potentially eligible for the CRHR.

For historic structures, CEQA Guidelines Section 15064.5(b)(3) indicates that a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995) shall be considered as mitigating impacts to a less than significant level.

As noted above, CEQA also requires lead agencies to consider whether projects will impact unique archaeological resources. Public Resources Code Section 21083.2(g) states:

> *"Unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:*
>
> - *Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.*
> - *Has a special and particular quality such as being the oldest of its type or the best available example of its type.*
> - *Is directly associated with a scientifically recognized important prehistoric or historic event or person.*

Treatment options under Section 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a unique archaeological resource).

Section 7050.5(b) of the California Health and Safety Code (CHSC) specifies protocol when human remains are discovered, as follows:

> *In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for*

the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

CEQA Guidelines Section 15064.5(e) requires that excavation activities be stopped whenever human remains are uncovered and that the County Coroner be called in to assess the remains. If the County Coroner determines that the remains are those of Native Americans, the Native American Heritage Commission must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as timely identified by the Native American Heritage Commission. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

In addition to the mitigation provisions pertaining to accidental discovery of human remains, the CEQA Guidelines also require that a lead agency make provisions for the accidental discovery of historical or archaeological resources, generally. Pursuant to Section 15064.5(f) these provisions should include "an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place."

Paleontological resources are classified as non-renewable scientific resources. California Public Resources Code Section 5097.5 et seq. makes it a misdemeanor for anyone to knowingly disturb any archaeological, paleontological, or historical features situated on public lands. No state or local agencies have specific jurisdiction over paleontological resources. No state or local agency requires a paleontological collecting permit to allow for the recovery of fossil remains discovered as a result of construction-related earth-moving on state or private land in a project site.

LOCAL

The Open Space Element of the City of Wildomar General Plan includes the following policies that are applicable to the proposed project regarding the protection of cultural and paleontological resources:

- OS 19.2: Review all proposed development for the possibility of archaeological sensitivity.
- OS 19.3: Employ procedures to protect the confidentiality and prevent inappropriate public exposure of sensitive archaeological resources when soliciting the assistance of public and volunteer organizations.
- OS 19.4: Require a Native American Statement as part of the environmental review process on development projects with identified cultural resources.
- OS 19.8: Whenever existing information indicates that a site proposed for development may contain biological, paleontological, or other scientific resources, a report shall be filed stating the extent and potential significance of the resources that may exist within the proposed development and appropriate measures through which the impacts of development may be mitigated.
- OS 19.9: This policy requires that when existing information indicates that a site proposed for development may contain paleontological resources, a paleontologist shall monitor site grading activities, with the authority to halt grading to collect uncovered

paleontological resources, curate any resources collected with an appropriate repository, and file a report with the Planning Department documenting any paleontological resources that are found during the course of site grading.

The Open Space Element also includes additional policies regarding the protection and identification of historical (OS 19.5, 19.6, and 19.7) and paleontological (OS 19.10) resources, which do not specifically apply to the proposed project because it is not classified as a major project by the City.

3.9.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Following Public Resources Code Sections 21083.2 and 21084.1, and Section 15064.5 and Appendix G of the CEQA Guidelines, cultural resource impacts are considered to be significant if implementation of the project considered would result in any of the following:

1) Cause a substantial adverse change in the significance of a historical resource as defined in Public Resources Code Section 21084.1 and CEQA Guidelines Section 15064.5.

2) Cause a substantial adverse change in the significance of an archaeological resource as defined in Public Resources Code Sections 21083.2 and 21084.1, and CEQA Guidelines Section 15064.5.

3) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

4) Disturb any human remains, including those interred outside of formal cemeteries.

State CEQA Guidelines Section 15064.5 defines "substantial adverse change" as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource is materially impaired.

CEQA Guidelines Section 15064.5(b)(2) defines "materially impaired" for purposes of the definition of substantial adverse change as follows:

The significance of an historical resource is materially impaired when a project:

(A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

(B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

> *(C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.*

CEQA requires that if a project would result in an effect that may cause a substantial adverse change in the significance of a historical resource or would cause significant effects on a unique archaeological resource, then alternative plans or mitigation measures must be considered. Therefore, prior to assessing effects or developing mitigation measures, the significance of cultural resources must first be determined. The steps that are normally taken in a cultural resources investigation for CEQA compliance are as follows:

- Identify potential historical resources and unique archaeological resources;
- Evaluate the eligibility of historical resources; and
- Evaluate the effects of the project on eligible historical resources.

METHODOLOGY

Prior to commencement of the Phase I Cultural Resources Assessment field survey, a records search was conducted by staff at the California Archaeological Inventory/California Historical Resources Information System, Eastern Information Center, located at the University of California, Riverside. The research included a review of all site maps, site records, survey reports, and mitigation reports relevant to the study area. A request for a Sacred Lands File search was submitted to the Native American Heritage Commission, and project scoping letters were sent to 14 tribal representatives listed as being interested in project development in the Temecula area.

Following the records and Sacred Lands File searches, a literature search of available published references to the study area was undertaken. Reference material included all available photographs, maps, books, journals, historical newspapers, registers, and directories at the Riverside Public Library Local History Collection and at the libraries of the University of California, Riverside. Cartographic research was conducted at the Science Library Map Collection of the University of California, Riverside. Archival research relating to the original ownership of the subject property was conducted using the General Land Office records currently maintained by the California Office of the Bureau of Land Management. The following maps were consulted:

- 1854–1880, General Land Office Plats of Township No. 6 South, Range No. 3 West, San Bernardino Meridian
- 1901 Elsinore, California, 30' USGS Topographic Map
- 1959 Santa Ana, California, 1:250,000 USGS Topographic Map
- 1953 Romoland, California, 7.5' USGS Topographic Map
- 1979 (photorevised) Romoland, California, 7.5' USGS Topographic Map

Subsequent to the literature, archival, and cartographic research, Jean Keller conducted a comprehensive on-foot field survey of the subject property on December 3–5, 11, 17–19, and 24, 2011, and on January 7, 2012. Due to the size and topographic complexity of the subject property, the property was divided into sections of approximately 25 acres in size, using existing

features such as roads to delineate boundaries. Each section was surveyed, beginning at its northwestern corner, in parallel transects at 15-meter intervals when possible. Each survey proceeded in a generally west–east, east–west direction following the existing land contours. All of the property was accessible for survey with the exception of those areas covered by paving, structures, material storage, and trash. In addition, a fenced open space area on a hilltop in the southeastern quadrant of Tentative Tract Map 36388 that is actively used as a spray area for sewage water was inaccessible for survey. Special attention was given to bedrock outcrops, especially those located in the vicinity of watercourses, for evidence of milling features, rock art, and shelter opportunities. Ground surface visibility ranged from less than 10 percent in sections of the watercourses obscured by a dense understory to 100 percent on land that had recently been disked, with an average ground surface visibility of approximately 65 percent.

The two previously recorded archaeological sites were visited, evaluated as to their current condition, and photographed, with site records updated for submittal to the Eastern Information Center.

Following the initial review of the site, and consultation with the Pechanga Tribe, Jean Keller conducted a specific study of Archaeological Site CA-RIV-8282 to determine the project impacts (Keller 2012b). The intent of the Phase II investigation was to determine whether the lithic scatter comprising the site qualified as a significant cultural resource according to CEQA criteria and to determine the appropriate level of mitigation since preservation of the deposit is not considered a viable alternative under the proposed development plan.

The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed project would result in significant impacts. The analyses identify and describe how specific policies and actions as well as other City regulations and standards provide enforceable requirements and/or performance standards that address cultural and paleontological resources and avoid or minimize significant impacts.

PROJECT IMPACTS AND MITIGATION MEASURES

Impacts to Historical Resources (Standard of Significance 1)

Impact 3.9.1 Implementation of the proposed project would not cause a substantial adverse change in the significance of a known historical resource. Therefore, **no impact** would occur.

The Phase I Cultural Resources Assessment (Keller 2012a) performed for the proposed project (included in **Appendix 3.9-1**) identified a number of structures located within the boundaries of the proposed project area, including three lift/pump stations, and an asphalt parking lot and foundation for the old visitor center for The Farm. As previously described, there are adopted standards for consideration of historical resources (see subsection 3.9.2, Regulatory Framework). The identified structures fail to meet the criteria for being considered historical resources. Therefore, the proposed project will have **no impact** on any historical resource.

The archaeological site CA-RIV-8282 was originally recorded in 2007 by C. Bouscaren and C. Cisneros of Applied EarthWorks Inc. in conjunction with a field survey entitled "Built Environment Historic Resources Technical Memorandum for Bundy Canyon-Scott Road Improvement Project" by Francesca G. Smith and Caprice D. Harper of Parsons (2007). The unpublished report (RI-7852) is on file with the Eastern Information Center at the University of California, Riverside. At the time of discovery, CA-RIV-8282 was mapped as covering an area of approximately 33 meters (north–south) by 33 meters (east–west). It was described as a small, sparse lithic scatter consisting of 26

pieces of debitage (22 quartz flakes, 3 metavolcanic flakes, and one edge-modified andesite flake). The site location had been recently disked and no ground stone artifacts were observed. The site was regarded as having some potential for a subsurface deposit. Bouscaren and Cineros stated that in the event avoidance was not a feasible option, a limited testing program should be implemented to determine the presence/absence of subsurface cultural deposits.

The site was relocated in 2012 during the Phase I Cultural Resources Assessment of the +150-acre Tentative Tract Map 36388 (Keller 2012a). During the field study, the ground containing the site was found to have been recently disked and visibility approached 100 percent. However, despite a thorough examination of the mapped location, only two quartz and three metavolcanic flakes were found scattered over an area measuring 59 meters (north–south) x 19 meters (east–west).

After due consideration, it was concluded that CA-RIV-8282 had been impacted by periodic disking which had resulted in the inadvertent dispersion and burial of cultural material. Moreover, examination of a recent percolation test pit (Test Pit-16) located near the site indicated that the possible depth of cultural material could be somewhat limited. To positively determine the presence/absence of a potentially significant subsurface deposit at CA-RIV-8282, a Phase II test program was initiated. The Cahuilla Band of Indians and Pechanga Band of Luiseño Indians concurred with this recommendation.

The Phase II Cultural Resources Test Investigation, conducted in June of 2012, consisted of two phases of investigation: surface collection and an STP/Auger sampling program. Despite a thorough examination of the site location, only 15 items were originally collected from the surface of CA-RIV-8282; one of the finds was subsequently rejected as non-cultural. Based upon the locations of the 14 surface finds, the artifact scatter at CA-RIV-8282 covered a maximum area of approximately 58 meters (north–south) by 46 meters (east–west). Half of the surface items were found concentrated at the north end of the site adjacent to the property boundary and Bundy Canyon Road between the 1,712- and 1,714-foot elevation, while the remainder were more widely dispersed.

Artifacts collected from the surface of CA-RIV-8282 included both chipped stone finds and ground stone implements. The chipped stone finds included four waste flakes, one shatter, one core, one projectile point fragment, one biface fragment, and three hammerstones. These artifacts are manufactured from quartzite, andesite, felsite, chalcedony, and quartz. Ground stone implements comprised two manos and one metate fragment.

A total of 39 STP/Auger holes were excavated at CA-RIV-8282, with 12 auger holes yielding lithic debris. Specific material recovered included five waste flakes, one retouched flake, and 19 pieces of shatter. The waste flakes and retouched flake were excavated from the various STP/Auger holes and depths: A-5 (16–20 cm), A-10 (retouched flake; 15–35 cm), A-12 (0–19 cm), B-5 (18–30 cm), B-10 (0–16 cm), and C-11 (0–35 cm). Angular pieces of shatter were recorded from STP/Auger holes A-6 (19–25 cm), A-9 (24–35 cm), A-10 (15–35 cm), A-12 (0–19 cm), A-13 (0–11 cm), B-10 (17–35 cm), B-11 (15–35 cm), C-8 (0–8 cm), and C-13 (0–35 cm). The results of the excavations were subsequently plotted over the surface collection map, with the overlapping area representing the approximate site boundaries of CA-RIV-8282. This area measures 48 meters (north–south) x 32 meters (east–west). Depths of finds appear to extend to approximately 35 centimeters.

The site was originally characterized as a sparse lithic scatter. However, the test did yield several ground stone implements comprising two manos and one possible metate fragment. In addition, three hammerstones were recovered, which were likely used to dress or sharpen milling

equipment. In light of these finds, activities at the site may have included the processing CA-RIV-8282 of seeds such as chia. In addition, one point fragment and a biface fragment were recovered, which would indicate hunting. Although no bedrock milling stations are physically associated with the artifact scatter, there are numerous sites in the area. The closest of these is CA-RIV-1256, described as a highly eroded metate slick on top of a large granitic boulder (Keller 2012a). It lies nearby within the subject property.

As the results of the STP/Auger hole program have demonstrated, there is no detectable, high-density deposit of prehistoric finds associated with CA-RIV-8282. Furthermore, no fire-altered rock, carbon, charcoal, or animal bone (burned or otherwise) was encountered. Consequently, the paucity of finds would tend to support the supposition that the site was casually used, probably by a single family during daylight hours. In all likelihood, the site was frequented by prehistoric peoples who ventured to the area to collect and mill seeds for short periods of time and then returned to their base camp. Clearly, the statistical data generated by the Phase II investigation lends little or no support in favor of CA-RIV-8282 representing a habitation site. No doubt, the users of the site resided at one of the habitation sites in the region, possibly at a permanent or semi-permanent village like the Walker Ranch or the Audie Murphy Ranch. Oxendine stated that the material culture of a village site should include items that can be identified and related to various activities. Among these are food preparation, tool manufacture, cooking, manufacture of pottery vessels, clothing, basketry, pipes, effigies, ceremonial enclosures, and religious rituals. Additionally, Oxendine suggests that such village sites were positioned within the territory so that the majority of subsistence needs could be attained without prolong absence from the village complex.

A very important and difficult question is, "when was CA-RIV-8282 in use?" None of the artifacts in the collection are time-sensitive. No C-14 datable organic materials were recovered during the investigation, and obsidian for hydration dating is lacking. Nonetheless, an educated guess may be made on the basis of what is lacking, combined with what is known about the archaeology of the region.

The complete absence of a Late Prehistoric date such as a potsherd, suggests that CA-RIV-8282 may have been used more than 1,000 years ago. However, it is equally true that at this small site, a ceramic vessel simply had not been broke, thus the lack of even one potsherd. Moreover, an upper limit for the age of the site may be suggested on the basis of what is known about the local archaeology. Unlike some regions of California, western Riverside County does not appear to have had a significant population prior to about 2,500 years ago.

Based on the results of the Phase II Cultural Resources Test Investigation, CA-RIV-8282 was not deemed to be representative of a significant archaeological period or representative of a unique archeological resource. Therefore, as neither further research nor mitigation for CA-RIV-8282 is recommended, there is **no impact.**

Mitigation Measures

None required.

Impacts to Archeological Resources (Standard of Significance 2)

Impact 3.9.2 Implementation of the proposed project could result in a substantial adverse change in the significance of an archaeological resource, as well as the potential disturbance of currently undiscovered cultural resources (i.e., prehistoric archaeological sites, historical archaeological sites, and isolated

artifacts and features) and human remains. This impact is considered **potentially significant**.

The Phase I Cultural Resources Assessment performed for the proposed project (included in **Appendix 3.9-1**) identified two previously identified archeological sites within the project area: CA-RIV-1256 and CA-RIV-8282.

Based on the eligibility criteria cited in subsection 3.9.2, Regulatory Framework, archaeological site CA-RIV-1256 would not be deemed a significant archaeological resource eligible for listing on the California Register, as it does not meet any of the stipulated eligibility criteria. It comprises a single eroding slick on an exfoliating granitic outcrop with no associated surficial or subsurface cultural resources evident. There are literally tens of thousands of such features recorded throughout Riverside County, and little information can be gleaned from them beyond recordation of their existence. However, this site is located within an area known to be a highly sensitive cultural landscape and it may be associated with a large village site approximately 0.5 mile to the northeast. Thus, while the site itself is not considered significant on its own merits, there is a possibility that it may be considered significant by association, as part of a larger cultural area. According to Pechanga Cultural Resources, there may be other important cultural components on the subject property of which CA-RIV-1256 is a part, but since the Pechanga Tribe has chosen not to share that information due to their desire for the information not to be entered into the public record, it cannot be addressed in determining whether this specific site is significant according to California Register criteria. The archaeological site CA-RIV-8282 has been investigated and determined not to be significant under California Register criteria (Keller 2012b).

Although only two small archaeological sites were observed within proposed project boundaries, one of which has been determined to not be considered a significant archaeological resource according to CEQA/California Register criteria, the property is situated in an area considered to be a highly sensitive cultural landscape with a possibility of significant subsurface cultural elements. Based on available information, all ground-disturbing activities associated with project development should be actively monitored by a qualified archaeologist and tribal representative. Both the Cahuilla Band of Indians and the Pechanga Band of Luiseño Indians have stated an interest in providing such monitoring.

Mitigation Measures

MM 3.9.2a Prior to the issuance of the first grading permit, the project applicant shall enter into a Tribal Monitoring Agreement with the Pechanga Band of Luiseno Indians and/or the Cahuilla Band of Indians. The agreement shall include, but not be limited to, outlining provisions and requirements for addressing the treatment of cultural resources and establishing on-site monitoring provisions and/or requirements during all ground-disturbing activities. A copy of this signed agreement shall be provided to the Planning Director and Building Official prior to the issuance of the first grading permit.

Timing/Implementation: *Prior to ground-disturbing activities*

Enforcement/Monitoring: *City of Wildomar Planning and Building Department*

MM 3.9.2b Should any culturally significant resources be uncovered during the grading and construction phases of the proposed project, work shall be halted or

relocated to an area outside of the area in which the resource was found while a qualified archeologist and tribal representative identify the resource and reassess the area. If the resource found is determined to be an historical or unique archeological resource, a time allotment sufficient to allow for the implementation of avoidance measures or appropriate mitigation shall be made available. Work on the proposed project may continue in other areas of the project site while any historical or unique archeological resource mitigation takes place.

Timing/Implementation: *During all grading and construction activities*

Enforcement/Monitoring: *City of Wildomar Planning Department* and *Public Works Department*

Following implementation of mitigation measures **MM 3.9.2a** and **MM 3.9.2b**, impacts will be **less than significant**.

Impacts to Paleontological Resources (Standard of Significance 3)

Impact 3.9.3 Implementation of the proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. This impact is considered **potentially significant**.

Due to the likelihood that any potential paleontological resources at the project site would currently be buried, the project site has not been investigated by a professional paleontologist. However, excavations could occur in association with development of the proposed project that could affect paleontological resources buried within the project site. Therefore, it is possible that project-related ground-disturbing activities could uncover previously unknown paleontological resources within project boundaries. Unanticipated and accidental paleontological discoveries during project implementation have the potential to affect significant paleontological resources.

Mitigation Measures

MM 3.9.3 Prior to issuance of a grading permit, the project applicant shall present a letter to the Chief Building Official indicating that a qualified paleontologist has been retained to carry out a paleontological monitoring and salvage program. The contracting paleontologist shall be present to monitor all initial ground-disturbing activities in native soils or sediments, including all vegetation removal. Should any paleontological resources (i.e., fossils) be uncovered during project construction activities, all work in the immediate vicinity shall be halted or diverted to other areas on the site and the City shall be immediately notified. The qualified paleontologist shall be retained to evaluate the finds and recommend appropriate mitigation measures for the inadvertently discovered paleontological resources. The City and the project applicant shall consider the recommendations of the qualified paleontologist. The City, the qualified paleontologist, and the project applicant shall consult and agree upon implementation of a measure or measures that the City, the qualified paleontologist, and the project applicant deem feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. Further ground disturbance shall not resume within the area of the discovery until an

agreement has been reached by the project applicant, qualified paleontologist, and the City, as well as the Native American tribal representative if relevant, as to the appropriate preservation or mitigation measures.

Timing/Implementation: *As a condition of project approval, and implemented prior to issuance of a grading permit and during ground-disturbing activities*

Enforcement/Monitoring: *City of Wildomar Planning Department and Public Works Department*

Implementation of mitigation measure **MM 3.9.3** would ensure that any paleontological resources inadvertently discovered during project construction activities would be protected consistent with the recommendations of a qualified paleontologist. Impacts would be reduced to a **less than significant** level.

Impacts to Human Remains (Standard of Significance 4)

Impact 3.9.4 No human remains have been identified within the project site; however, implementation of the proposed project could result in the inadvertent disturbance of currently undiscovered human remains. Any discovery of human remains would trigger state law governing the treatment of human remains. Therefore, this impact is considered to be **potentially significant**.

Although no human remains have been identified within the project site, implementation of the proposed project would include ground-disturbing construction activities that could result in the inadvertent disturbance of currently undiscovered human remains. Procedures of conduct following the discovery of human remains on non-federal lands are mandated by Health and Safety Code Section 7050.5, by Public Resources Code Section 5097.98, and by CEQA in the California Code of Regulations Section 15064.5(e). According to these provisions, should human remains be encountered, all work in the immediate vicinity of the burial must cease, and any necessary steps to ensure the integrity of the immediate area must be taken. The remains are required to be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made. The Riverside County Coroner would be immediately notified, and the coroner would then determine whether the remains are Native American. If the coroner determines the remains are Native American, the coroner has 24 hours to notify the Native American Heritage Commission, who will, in turn, notify the person they identify as the most likely descendent (MLD) of any human remains. Further actions would be determined, in part, by the desires of the MLD, who has 24 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 24 hours, the owner is required, with appropriate dignity, to reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD's recommendations, the owner or the descendent may request mediation by the NAHC. Any discovery of human remains within the project site would be subject to these procedural requirements, which would reduce impacts associated with the discovery/disturbance of human remains to a **less than significant** level.

Mitigation Measures

MM 3.9.4 In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps shall be taken:

(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

a. The Riverside County Coroner shall be contacted to determine whether an investigation into the cause of death is required; and

b. If the Riverside County Coroner determines the remains are Native American:

i. The Coroner shall contact the Native American Heritage Commission within 24 hours.

ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.

iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98; or

(2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission;

b. The descendant identified fails to make a recommendation; or

c. The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

Timing/Implementation: *As a condition of project approval, and implemented prior to issuance of a grading permit and during ground-disturbing activities*

Enforcement/Monitoring: *City of Wildomar Planning Department and Public Works Department*

With implementation of mitigation measure **MM 3.9.4,** the provisions of state law regarding the accidental discovery of human remains will be followed, ensuring that impacts are reduced to a **less than significant** level.

3.9.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting associated with the proposed project includes approved, proposed, planned, and other reasonably foreseeable projects and development in the City of Wildomar. Developments and planned land uses, including the proposed project, would cumulatively contribute to impacts to known and unknown cultural resources and paleontological resources in the area. The Existing Setting subsection provides an overview of cultural resources and the history of the region.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts to Cultural and Paleontological Resources

Impact 3.9.5 Implementation of the proposed project, along with any foreseeable development in the project vicinity, could result in cumulative impacts to cultural resources, i.e., prehistoric sites, historic sites, and isolated artifacts and features). This contribution would be considered **less than cumulatively considerable.**

As mitigated, the direct impacts associated with the proposed project will be reduced to a less than significant level. While it is possible that grading and development will result in the accidental discovery of paleontological and cultural resources, mitigation measures and state and federal laws already in place will set in motion actions designed to mitigate these potential impacts. The proposed project is adjacent to existing development that has disturbed the soil and likely already affected any cultural or paleontological resources. As a result of surrounding development, mitigation proposed in this section, and existing federal and state laws, this impact is considered **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

City of Wildomar. 2008. *City of Wildomar General Plan – Open Space Element*.

Keller, Jean A. 2012a. *A Phase I Cultural Resources Assessment of Tentative Tract Map 36388*.

———. 2012b. *A Phase II Cultural Resources Test Investigation of Archaeological Site CA-RIV-8282 Located Within the Boundaries of Tentative Tract Map 36388*.

3.10 PUBLIC SERVICES AND UTILITIES

This section describes the public services and utilities that would serve the Oak Creek Canyon Development project upon completion. Specifically, this section includes an examination of fire protection and emergency medical services, law enforcement services, public schools, water supply and service, wastewater services, solid waste services, parks and recreation. Each subsection includes a description of existing facilities and infrastructure, applicable service goals, potential environmental impacts resulting from implementation of the proposed project, and cumulative impacts.

Impacts associated with the following public service and utility issues are addressed in other sections of this Draft EIR, as listed below.

- Storm drainage system, including potential overflow and downstream flooding impacts – Section 3.7, Hydrology and Water Quality
- Groundwater impacts, including water quality – Section 3.7, Hydrology and Water Quality
- Energy use, including energy demands associated with the proposed project – Section 3.12, Energy Use and Greenhouses Gases

3.10.1 FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

3.10.1.1 EXISTING SETTING

RIVERSIDE COUNTY FIRE DEPARTMENT

The Riverside County Fire Department (RCFD) provides fire protection and emergency medical services to an approximate 7,000-square-mile service area that includes the City of Wildomar.

RCFD services include providing fire suppression, emergency medical, rescue, and fire prevention services while serving as the operational area coordinator for the California Fire and Rescue Mutual Aid System for all fire service jurisdictions in Riverside County.

The Riverside County Fire Department also has several automatic aid agreements with other city jurisdictions as well as with the adjacent National Forests. The County of Riverside contracts with the State of California for fire protection. Public Resources Code 4142 affords legal authority for the California Department of Forestry and Fire Protection (CAL FIRE) to enter into agreements with local government entities to provide fire protection services with the approval of the California Department of General Services. By virtue of this authority, CAL FIRE administers the Riverside County Fire Department.

The RCFD currently operates 95 fire stations in 17 battalions. These 95 fire stations are divided into two operational divisions: East Operations and West Operations. Across both divisions there are six subdivisions: Bautista, Indio, Moreno, Northwest, Oak Glen, and Southwest. The City of Wildomar is located within the Southwest Division.

The Southwest Division comprises four battalions and encompasses the southwestern portion of Riverside County from the San Diego county line to the south, to the southern edge of the City of Moreno Valley to the north, and east to the western portion of the Hemet Valley. Wildomar is located within Battalion 2, which includes eight fire stations. The locations of the eight stations are listed below (RCFD 2012).

- Elsinore Fire Station #10 is located at 410 West Graham Avenue, Lake Elsinore, and is the battalion headquarters.
- Lakeland Village Fire #11 is located at 33020 Maiden Lane, Lake Elsinore.
- El Cariso Fire Station #51 is located at 32353 Ortega Highway, Lake Elsinore.
- Wildomar Fire Station #61 is located at 32637 Gruwell Street, Wildomar.
- Rancho Carrillo Fire Station #62 is located at Lot #51, Verdugo Road, San Juan Capistrano, and is a volunteer station.
- Rancho Capistrano Fire Station #74 is located at 35420 Calle Grande, Lake Elsinore, and is a volunteer station.
- McVicker Park Fire Station #85 is located at 29405 Grand Avenue, Lake Elsinore.
- Canyon Hills Fire Station #94 is located at 22770 Railroad Canyon Road, Lake Elsinore.

The department consists of 1,200 career firefighters, 200 administrative support personnel, and 300 volunteer reserve firefighters who responded to 121,059 incidents in 2011, averaging 325 emergency responses per day (RCFD 2012).

Response Times and Service Standards

The Riverside County Fire Department developed a methodology to determine the location of future fire stations. This methodology was established utilizing principles recommended in the *National Fire Protection Association (NFPA) Handbook*, Volume II, 20th edition. The principles utilized by the RCFD are listed below (RCFD 2009).

- Consideration of criteria established by the Insurance Services Offices, Inc. (ISO) regarding the distribution of fire companies within the community.
- Consideration of NFPA Standard 1710 as a guideline, which calls for an engine company within 4 minutes, 0 seconds of travel time to fire incidents and emergency medical service (EMS) calls, and a full first-alarm group.
- Ability to respond within 8 minutes, 0 seconds to a minimum of 90 percent of all annual incidents.
- Consideration of the proximity of travel time to other station protection zones for timely inclusion in the full first-alarm response group.
- Consideration of rapid and safe access to multi-directional major response routes.
- Consideration of appropriate locations given the land use issues in the surrounding environment.
- Consideration of utility availability, plot size, and surrounding traffic control issues.
- Consideration of historical and projected call volume (response workload) in the area of concern using risk versus cost analysis.

Currently, the fire protection fees are $307.00 per building less than 15,000 square feet (RCFD 1998). These fees are used to fund site acquisition, construction, improvement and equipping of fire protection buildings and facilities, and acquisition and improvement of fire protection equipment.

3.10.1.2 REGULATORY FRAMEWORK

STATE

California Fire Code

The 2007 California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout the State of California (CBSC 2008). The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

California Health and Safety Code

Additional state fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code, which include regulations for building standards, fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise building and child-care facility standards, and fire suppression training.

California Occupational Safety and Health Administration

In accordance with the California Code of Regulations, Title 8, Sections 1270, Fire Prevention, and 6773, Fire Protection and Fire Fighting Equipment, the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

LOCAL

Riverside County Fire Department Strategic Plan

The Riverside County Fire Department's (2009) *Strategic Plan 2009–2029* covers fiscal years 2009–10 through 2029–30. The plan describes the array of fire and rescue services provided to citizens, and it provides an evaluation of the current status of various commonly used service performance measures. The plan also makes recommendations for staffing, facilities, and station sites and remodels.

Mutual Aid Agreements

Fire protection mutual aid is defined as an agreement between two fire agencies in which they commit to respond to calls for services in the other agency's jurisdiction when they are called, at no cost to the requesting agency. Automatic aid is not only predetermined, but one or more additional departments are automatically dispatched to certain locations or types of alarms at the same time as the home department. Typically, both mutual and automatic aid agreements are written between the agencies.

The Riverside County Fire Department has four mutual aid and seven automatic aid agreements with other agencies. The specific agencies with which the County has current contracts for these services are listed in **Table 3.10.1-1**.

TABLE 3.10.1-1
RCFD CONTRACTUAL AGREEMENTS

Mutual Aid Agreements	Automatic Aid Agreements
City of Corona (Hazmat)	City of Palm Springs
Chuckawalla Valley State Prison Fire Department	Idyllwild Fire Protection District
March Air Force Base	City of Hemet
Niland Fire District	Morongo Band of Mission Indians
	City of Murrieta
	Orange County Fire Authority
	Pechanga Band of Luiseno Mission Indians

Source: RCFD 2009

Based on a recent administrative review of the Riverside County Fire Department's mutual aid and automatic aid agreements, the agreements are virtually identical. However, the agreements do not include provisions for annual reviews by either party. Data regarding these agreements is tracked in terms of how many responses to calls were provided under each agreement during the year. Several of the agreements are over ten years old (e.g., Orange County Fire Authority agreement dated 1999 and Idyllwild Fire Protection District agreement dated 2000) (RCFD 2009).

3.10.1.3 IMPACTS AND MITIGATION MEASURES

STANDARD OF SIGNIFICANCE

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. A fire protection and emergency services impact is considered significant if implementation of the proposed project would:

1) Create substantial adverse physical impacts associated with the provision of new or physically altered fire related facilities or services, the construction and/or provision of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection and emergency services.

2) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

METHODOLOGY

Evaluation of potential fire protection and emergency medical service impacts was based on information provided by the Riverside County Fire Department, as well as a review of the applicable fire codes and regulations, the Wildomar General Plan and Municipal Code, and other relevant literature.

PROJECT IMPACTS AND MITIGATION MEASURES

Increased Demand for Fire Protection and Emergency Medical Services (Standard of Significance 1)

Impact 3.10.1a Implementation of the proposed project will not result in the need for additional fire protection and emergency services in order to maintain acceptable service levels. However, the proposed project may result in a slight increase in demand for fire protection and emergency medical services. The impact is considered **less than significant**.

Completion of the proposed project will result in the addition of 275 housing units and approximately 895 persons.[1] Fire protection and emergency medical services for the proposed project will be provided by the RCFD. Upon completion, the proposed project will represent an approximate 2.7 percent increase in the population of Wildomar and an approximate 2.5 percent increase in the number of homes within the city (DOF 2012).

Wildomar General Plan Policy S-5.1 directs the City to develop and enforce construction and design standards that ensure that proposed development incorporates fire prevention features through specified minimum standards and the inclusion of certain safety features.

In consideration of the incremental changes in population and housing that the proposed project represents and the proposed project's compliance with the safety requirements of General Plan Policy S-5.1, the proposed project would result in a **less than significant** impact to fire protection and emergency medical services.

Mitigation Measures

None required.

Significant Risk of Loss Due to Wildland Fire (Standard of Significance 2)

Impact 3.10.1b While the proposed project is located within an area that is identified as being exposed to a very high risk of wildfire, it is more specifically located in an area that is developed and well served by fire prevention services. The close proximity to a fire station and the limited undeveloped land near the proposed project will result in a **less than significant** impact.

In November 2007, the California Department of Forestry and Fire Protection (CAL FIRE) adopted Fire Hazard Severity Zone (FHSZ) maps for State Responsibility Areas. The current adopted map identifies the area of the proposed project as a very high fire hazard severity zone (VHFHS).

[1] Approximate population growth assumes the California Department of Finance 2012 persons per household estimate of 3.255 for the City of Wildomar.

VHFHS zones are determined by the Director of CAL FIRE and are those real properties that are not deemed to be a state responsibility pursuant to Public Resources Code Sections 4125 et seq. Identification of a VHFHS is based on consistent statewide criteria and on the severity of the fire hazard that is expected to prevail in those areas. VHFHS zones are based on fuel loading, slope, fire weather, and other relevant factors.

CAL FIRE classifies real property in accordance with whether a very high fire hazard is expected to prevail in those areas so that public officials can identify measures that will retard the rate of spread and reduce the potential intensity of uncontrolled fires that threaten to destroy resources, life, or property, and to require that those measures be implemented.

According to Government Code Section 51179, a local agency (defined as a city, county, city and county, or district responsible for fire protection within a VHFHS zone) may make changes to recommendations made by the Director of CAL FIRE pursuant to Government Code Section 51178. This provision allows a local agency, at its discretion, to make changes to the boundaries of VHFHS zones that may not be reflected on maps released by CAL FIRE.

Upon city incorporation in 2008, the City of Wildomar adopted the FHSZ map used by Riverside County to identify which areas of the county (the Local Regional Authority) would be categorized as being a VHFHS. This map identifies the project site as a VHFHS zone under the authority of the City of Wildomar.

However, in consideration of the proposed project site's proximity to a fire station and the considerable development that currently surrounds the proposed project site, the categorization of the area as a VHFHS zone will not result in any significant exposure of individuals or structures to the threat of wildfire. Therefore, the impact would be **less than significant.**

Mitigation Measures

None required.

Adequate Fire Flow (Standard of Significance 1)

Impact 3.10.1c While the implementation of the proposed project will result in additional need for water supply, this additional need will not be sufficient to require the creation of additional water supply infrastructure. Implementation of the proposed project may result in additional need for water supply and infrastructure to provide adequate fire flows for fire protection. The provision of these facilities could cause environmental impacts. This is a **less than significant** impact.

The Riverside County Fire Department has established the following minimum requirements for fire protection facilities required by the proposed project:

- Type of fire hydrant and connection as approved by the agency providing fire protection.
- Approved fire hydrants shall be located one at each street intersection and spaced not more than 330 feet apart in any direction.
- The water system shall be capable of providing a fire flow of 1,000 gallons per minute (gpm) for 2 hours duration at a minimum of 20 pounds per square inch (PSI) operating

pressure from each fire hydrant. This amount shall be in addition to the average day demand as defined in the California Administrative Code, Title 22, Chapter 16 (California Waterworks Standards).

- The fire protection system shall be installed and operational prior to any combustible building material being placed on the job site.

The RCFD will further review and approve the proposed project site plan for fire hydrant sizing and placement during the building permit and site review processes. Fire flow will be provided at the project site via future water lines and public hydrants along Bundy Canyon Road. The five new hydrants will be capable of providing the required fire flows to serve the project.

Upon review and the necessary permit processing by the Riverside County Fire Department and the Elsinore Valley Municipal Water District, this impact will be **less than significant**.

Mitigation Measures

None required.

3.10.1.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for fire protection and emergency medical services includes the proposed project area and the immediate surrounding areas. The cumulative setting includes all existing, planned, proposed, approved, and reasonably foreseeable development in the immediate area of the proposed project that could potentially place demand on fire protection and emergency medical services or could be expected to place demand on services in the future.

Cumulative Demand for Fire Protection and Emergency Medical Services

Impact 3.10.1d Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the immediate area, may increase the demand for fire protection and emergency medical services. However, given the requirement for CEQA review of future development, any necessary infrastructure or facilities expansion will be reviewed for potential impacts. Impacts related to the proposal project are **less than cumulatively considerable.**

The Riverside County Fire Department was contacted and determined that with standard development conditions in place, the department can provide service to the project area. Growth in the project area was previously addressed, and the proposed project is consistent with the development potential for the area. This impact is considered **less than cumulatively considerable**.

Mitigation Measures

None required.

3.10.2 LAW ENFORCEMENT SERVICES

3.10.2.1 EXISTING SETTING

Riverside County Sheriff's Department

The Riverside County Sheriff's Department (RCSD) provides law enforcement services to the City of Wildomar. Composed of 2,049 sworn officers and 1,808 civilian personnel, the RCSD is responsible for law enforcement services over a 7,300-square-mile area that includes the unincorporated areas of the county as well as 17 incorporated cities (DOJ 2012; RCSD 2012). The RCSD provides service through ten sheriff's stations; the City of Wildomar is in the service area of the Lake Elsinore Station, which is located at 333 Limited Avenue in Lake Elsinore. Responses to calls for service are dispatched to the Lake Elsinore Station through the RCSD's central dispatch communication center located in the City of Riverside.

3.10.2.2 REGULATORY FRAMEWORK

STATE

Emergency Response/Evacuation Plans

Government Code Section 8607(a) directs the Governor's Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. The program is intended to provide effective management of multi-agency and multijurisdictional emergencies in California. SEMS consists of five organizational levels, which are activated as necessary: (1) Field Response, (2) Local Government, (3) Operational Area, (4) Regional, and (5) State.

Local governments must use SEMS to be eligible for funding of their response-related personnel costs under state disaster assistance programs. The City of Wildomar is generally responsible for emergencies that occur within city boundaries and has adopted an Emergency Operations Plan that is consistent with the SEMS.

LOCAL

City of Wildomar Disaster Operation and Relief Plan

The objectives of the City of Wildomar Emergency Plan (Ordinance No. 44) are to prepare for and facilitate coordinated and effective responses to emergencies in Wildomar and to provide adequate assistance to other jurisdictions as needed. The plan specifies actions for the coordination of operations, management, and resources during emergencies; governmental responsibilities during emergency events; and a plan for the organization of nongovernmental organizations providing support assistance.

3.10.2.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A law enforcement services impact is considered significant if implementation of the proposed project would:

1) Create substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for law enforcement services.

METHODOLOGY

Evaluation of potential law enforcement impacts was based on information provided by the Riverside County Sheriff's Department, as well as review of the RCSD's staffing report and facilities needs assessment. The impact analysis focuses on whether those impacts would have a significant effect on the physical environment.

PROJECT IMPACTS AND MITIGATION MEASURES

Increased Demand for Law Enforcement Services (Standard of Significance 1)

Impact 3.10.2a Implementation of the proposed project will not result in a significant increased demand for law enforcement services and will not result in the need for new or physically altered law enforcement facilities, the construction of which could cause significant environmental impacts. Therefore, this is a **less than significant** impact.

Completion of the proposed project will result in the addition of 275 housing units and approximately 895 persons.[2] Because the project site is in an area of the county served by the Riverside County Sheriff's Department, law enforcement services for the proposed project will be provided by the RCSD. Upon completion, the proposed project will represent an approximate 2.7 percent increase in the population of Wildomar and an approximate 2.5 percent increase in the number of homes in the city (DOF 2012). This incremental increase in the city's population and in the number of homes within the city will not warrant the construction of any new facilities for the RCSD.

The proposed project will be located on a currently undeveloped site that is located in an area that is currently developed and receiving law enforcement services from the RCSD station located at 333 Limited Avenue in Lake Elsinore. Because development associated with the proposed project is in an already developed area, the RCSD will not be required to expand its service area to accommodate the proposed project upon completion. In consideration of the incremental population increases the proposed project represents and the location of the proposed project in an area that is currently receiving service from the RCSD, the potential impacts of the proposed project will be **less than significant**.

Mitigation Measures

None required.

[2] Approximate population growth assumes the California Department of Finance 2012 persons per household estimate of 3.255 for the City of Wildomar.

3.10.2.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for law enforcement services includes the service area boundaries of the Riverside County Sheriff's Department. The RCSD provides services within the current Wildomar city limits, as well as to the surrounding unincorporated areas of Riverside County and 16 other incorporated cities. The cumulative analysis includes all existing, planned, proposed, approved, and reasonably foreseeable development in the project area.

Cumulative Demand for Law Enforcement Services

Impact 3.10.2b Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the RCSD service area, would increase the demand for law enforcement services. The project's contribution to the need for expanded law enforcement services is considered **less than cumulatively considerable**.

The Riverside County Sheriff's Department was contacted and determined that law enforcement service can be provided to the project area. Growth in the project area and the related need for law enforcement services was addressed previously, and the proposed project is consistent with the development potential for the area. This impact is considered **less than cumulatively considerable**.

Mitigation Measures

None required.

3.10.3 PUBLIC SCHOOLS

3.10.3.1 EXISTING SETTING

LAKE ELSINORE UNIFIED SCHOOL DISTRICT

The Lake Elsinore Unified School District (LEUSD) was formed in 1989 and now serves a 131.78-square-mile area that includes the City of Wildomar, the cities of Lake Elsinore and Canyon Lake, and several unincorporated communities, including Lakeland Village and Horsethief Canyon. The LEUSD operates 13 elementary schools, two K–8 schools, four middle schools, three comprehensive high schools, four alternative schools, and a virtual K–12 school. LEUSD schools are shown in **Table 3.10.3-1**.

TABLE 3.10.3-1
LEUSD SCHOOLS

Elementary Schools	
Cottonwood Canyon	Donald Graham
Earl Warren	Elsinore
Jean Hayman	Machado
Railroad Canyon	Rice Canyon

Elementary Schools	
Ronald Reagan	Tuscany Hills
Wildomar	William Collier
Withrow	
K–8 Schools	
Luiseno	Lakeland Village
Middle Schools	
Canyon Lake	David A. Brown
Elsinore	Terra Cotta
High Schools	
Elsinore	Lakeside
Temescal Canyon	
Alternative Schools	
Gordon Kiefer Independent Study	Keith McCarthy Academy
Ortega High	Tri-Valley Community Day
Virtual K–12	
Southern California Online Academy	

Source: LEUSD 2012

Charter Schools

Charter schools are public schools that are created or organized by a group of teachers, parents, community leaders, or a community-based organization. Charter schools may provide instruction in any grades K–12 and are generally sponsored by a local public school board or county board of education. Specific goals and operating procedures for the charter school are detailed in an agreement (or "charter") between the sponsoring board and charter organizers. Public charter schools may not charge tuition and may not discriminate against any pupil on the basis of ethnicity, national origin, gender, or disability (CCSA 2012). The State of California charters one school in the Wildomar area: Sycamore Academy. Sycamore Academy was established in 2009 and is located in Wildomar. Sycamore Academy offers grades K–6 and serves the Wildomar community and the surrounding area.

Transportation

The LEUSD has approved the establishment of a fee-based transportation program in order to continue transportation services to eligible students. Kindergarten students are eligible for the transportation program (school buses) if they reside more than 0.75 mile from the school, elementary students beyond 1.5 miles, middle school students beyond 2.5 miles, and high school students beyond 3.5 miles from the school. Parents desiring transportation services to transport children from their homes to the school must apply for the service annually, receive district approval, and pay a $170.00 semi-annual fee.

Enrollment

Existing and Historical Enrollment

For the 2011/12 academic year, the Lake Elsinore Unified School District had an enrollment of 22,171 students. During the past ten years, the LEUSD's enrollments have risen from 17,769 students for the 2001/02 school year to 22,171 students for the academic year of 2011/12, representing an overall increase of 24.78 percent. As shown in **Table 3.10.3-2**, while the district was rapidly growing earlier in the decade, growth in recent years has significantly slowed, and in two recent academic years (2008/09 and 2010/11), enrollment declined.

TABLE 3.10.3-2
LAKE ELSINORE UNIFIED SCHOOL DISTRICT ENROLLMENT 2001/02–2011/12

Academic Year	District Enrollment	Change from Previous Year	Percentage Change
2001–02	17,769	–	–
2002–03	18,933	+1,164	6.55%
2003–04	19,711	+778	4.11%
2004–05	20,203	+492	2.50%
2005–06	20,652	+449	2.22%
2006–07	21,525	+873	4.23%
2007–08	22,109	+584	2.71%
2008–09	21,756	-353	-1.60%
2009–10	22,216	+460	2.11%
2010–11	22,065	-151	-0.68%
2011–12	22,171	+106	0.48%

Source: California Department of Education 2012

Forecasting Enrollment

According to the LEUSD's School Facilities Needs Analysis, the generation rates for single-family homes include 0.2877 per unit for elementary school (K–5), 0.1376 per unit for middle school (grades 6–8), and 0.1702 per unit for high school (grades 9–12). The project will generate 79 (79.12) elementary school students, 38 (37.84) middle school students, and 47 (46.81) high school students, for a total of 164 (163.77) students (LEUSD 2012).

3.10.3.2 REGULATORY FRAMEWORK

STATE

Development Impact Fees/SB 50

Proposition 1A, the Kindergarten–University Public Education Facilities Bond Act of 1998, or SB 50, was approved by the voters in November 1998. This proposition provided $6.7 billion in general

obligation bonds for K–12 public school facilities and provided the first funding for the new School Facility Program, which provides state funding assistance for new construction and modernization. A primary result of SB 50 was the creation of different levels of developer fees. Lake Elsinore Unified School District currently levies development impact fees on development within the district's boundaries consistent with SB 50. The current fees are $3.20 per square foot for new residential development and $0.51 per square foot for new commercial development (LEUSD 2012).

3.10.3.3 IMPACTS AND MITIGATION MEASURES

STANDARD OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A public schools impact is considered significant if implementation of the proposed project would:

1) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services.

METHODOLOGY

To determine the level of impact the proposed project will have on the local public school system, the schoolchildren generation rates published by the Lake Elsinore Unified School District were used to predict how many children will be housed within the proposed project. The predicted numbers were then reviewed against both the current and historic enrollment numbers of the LEUSD to determine the significance of enrollment increases.

PROJECT IMPACTS AND MITIGATION MEASURES

Increased Demand for School Facilities (Standard of Significance 1)

Impact 3.10.3a The proposed project will not result in significant increased enrollment in the local school district ultimately resulting in the need for construction of additional school facilities. This is a **less than significant** impact.

According to enrollment prediction methods published by the Lake Elsinore Unified School District, the proposed project will result in an increase of 164 students in the LEUSD service area. As of the 2011/12 academic year, the LEUSD enrolled 22,171 students. The proposed project will represent an increase in LEUSD enrollment of less than 1 percent, which would not be sufficient growth to warrant the construction of new facilities.

As noted in subsection 3.10.3.2 above, current state law requires that impacts to current school facilities be mitigated though mandatory development impact fees. The fees enacted within the LEUSD of $3.10 per square foot of residential development and $0.47 per square foot of commercial development will be collected for the proposed project and will act to fully mitigate any impact the proposed project will have on the LEUSD's facilities. Therefore, this impact will be **less than significant**.

Mitigation Measures

None required.

3.10.3.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for public school impacts includes the district boundaries for the LEUSD for grade school services. The Lake Elsinore Unified School District serves a 131.78-square-mile area that includes the City of Wildomar, including the proposed project site. Any existing, planned, proposed, approved, and reasonably foreseeable development in the cumulative setting could result in cumulative impacts.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Schools Impacts

Impact 3.10.3b Population growth associated with implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the cumulative setting, will not result in a significant cumulative increase in student enrollment. This is a **less than cumulatively considerable** impact.

Implementation of the proposed project is expected to result in population growth that would increase student enrollment in the Lake Elsinore Unified School District. Current state law requires that the environmental impact of new development on grade school facilities is considered fully mitigated through the payment of required development impact fees. All new development associated with the proposed project will be required to pay the applicable development impact fees. Furthermore, any significant expansion of school facilities or development of new school facilities would be subject to the appropriate CEQA environmental review, which would identify any site-specific impacts and provide mitigation to reduce those impacts. Therefore, cumulative impacts on school facilities are considered **less than cumulatively considerable**.

Mitigation Measures

None required.

3.10.4 WATER SUPPLY AND SERVICE

3.10.4.1 EXISTING SETTING

FARM MUTUAL WATER COMPANY

Water service to the proposed project will be directly provided by the Farm Mutual Water Company (FMWC). The FMWC, which was formed in 1976 to provide water service to an approximate 327-acre area immediately outside the Elsinore Valley Municipal Water District service area in the Cottonwood Canyon area along Bundy Canyon Road, receives water from the Elsinore Valley Municipal Water District (EVWMD). Documentation of the formation of the FMWC is located in **Appendix 3.10-2**, while a copy of a letter from the FMWC stating that the agency will be providing water service to the proposed project is included in **Appendix 3.10-3**.

ELSINORE VALLEY MUNICIPAL WATER DISTRICT

The Elsinore Valley Municipal Water District (EVMWD) is a nonprofit public utility supplying water service to 35,000 water, wastewater, and agricultural service connections in the region as well as to two water agencies: the Farm Mutual Water Company and the Elsinore Water District (EVMWD 2012). The EVMWD is a subagency of the Western Municipal Water District (WMWD), a member agency of the Metropolitan Water District of Southern California. The EVMWD serves the cities of Lake Elsinore, Canyon Lake, Murrieta, and Wildomar and the surrounding areas in unincorporated Riverside County. The EVWMD's water supply is a blend of local groundwater, surface water from Railroad Canyon Reservoir, and imported water. In an average year, approximately half of the EVWMD's water supply is imported and the district's total water production equals approximately 27,000 acre-feet (EVMWD 2012).

3.10.4.2 REGULATORY FRAMEWORK

LOCAL

In order to comply with the Urban Water Management Planning Act of the California Water Code, the Elsinore Valley Municipal Water District prepared the Elsinore Valley Municipal Water Management Plan. The most recent Urban Water Management Plan (UWMP) prepared by EVMWD was adopted on June 9, 2011. The purpose of a UWMP is to determine the current levels of water use and to predict and plan for future water demand. The information contained within the EVWMD Urban Water Management Plan includes the water usage and predicted water demand of the service area of the Farm Mutual Water Company.

3.10.4.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. A water service impact is considered significant if implementation of the proposed project would:

1) Result in the need for new entitlements or a substantial expansion or alteration to local or regional water supplies that would result in a physical impact to the environment.

2) Result in the need for new systems or a substantial expansion or alteration to the local or regional water treatment or distribution facilities that would result in a physical impact to the environment.

3) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

As previously mentioned, water quality impacts are discussed in Section 3.7, Hydrology and Water Quality.

METHODOLOGY

To determine the potential impact the proposed project may have on local water supplies and potable water distribution facilities, the information regarding current water use and predicted water demands contained within the 2011 EVWMD Urban Water Management Plan was referenced. In addition, the development standards of the Western Municipal Water District were reviewed and used to determine the potential water demand of the proposed project. Documents and planning criteria of the local water agency, the Elsinore Valley Municipal Water District, were also reviewed and used to determine impacts. The proposed project has also been reviewed by the EVMWD, which found that an adequate water supply for the proposed project currently exists and that no significant upgrade of EVMWD facilities would be necessary to provide water to the project.

PROJECT IMPACTS AND MITIGATION MEASURES

Water Supply Demand and Environmental Effects (Standards of Significance 1 and 3)

Impact 3.10.4a Implementation of the proposed project will slightly increase demand for water supply, which could result in effects on the physical environment. However, adequate water supply sources exist, and the proposed project's and the Elsinore Valley Municipal Water District's water conservation provisions, would ensure adequate water service. This is considered a **less than significant** impact.

The EVMWD obtains its potable water supplies from imported water from the Metropolitan Water District and local surface water from Canyon Lake. In addition, the EVMWD has access to groundwater from Elsinore Basin, Coldwater Basin, San Bernardino Bunker Hill Basin, Rialto-Colton Basin, and Riverside-North Basin. Almost all of the groundwater production for potable use occurs in the Elsinore Basin. Through recharge programs run by the EVMWD, the amount of annual groundwater pumping is nearly equal to the natural recharge (EVWMD 2011b, p. 4-1). The California Department of Water Resources, Bulletin 118, does not identify the Elsinore Basin to be in a state of overdraft (EVWMD 2011b, p. 4-12). Imported water supply is purchased from the Metropolitan Water District via the Eastern Municipal Water District and the Western Municipal Water District.

The EVMWD's existing recycled water demands are supplied by tertiary-treated wastewater from the Regional Water Reclamation Facility (WRF), Railroad Canyon WRF, and Horsethief Canyon WRF. In the effort to minimize the need for imported water, the EVMWD plans to expand its recycled water system to provide recycled water for irrigation users and to maintain water levels in Lake Elsinore during normal and dry years.

The EVMWD's 2011 Urban Water Management Plan reports that the average daily per capita water use within their service area from 1999 to 2008 was 248 gallons per capita per day (base daily rate) (EVWMD 2011b, p. 3). The 275 proposed housing units would result in a residential water demand of 221,991 gallons per day, or approximately 248.7 acre-feet per year.

The 2011 Comprehensive Annual Financial Report produced by the EVMWD states that the district produced 23,748 acre-feet of water in fiscal year 2011 (July 1, 2010 through June 30, 2011). The report further states that of the 23,748 acre-feet of water produced, a total of 22,996 acre-feet of water was consumed. For the past ten years, the EVMWD has produced between 23,748 acre-feet (fiscal year 2011) and 34,016 acre-feet (fiscal year 2007) of water annually, with average water production of approximately 27,442 acre-feet from fiscal year 2002 to fiscal year

2011. During that same period, the lowest amount of water consumed by EVMWD customers was 22,966 acre-feet (2011) and the highest amount of consumption 31,878 acre-feet (2007), with an average annual consumption of 26,453 acre-feet.

With estimated water consumption at 248.7 acre-feet annually, the proposed project will represent an increase in water consumption by the EVMWD of 1.08 percent in years of low water consumption, 0.78 percent in years of high water consumption, and a 0.94 percent increase over the historic average water consumption of EVMWD's customers.

Considering the current estimations that were determined by utilizing the EVMWD and WMWD water consumption assumptions, the proposed project will increase regional water consumption by approximately 1 percent or less. Given this minimal incremental increase, this impact is **less than significant**.

Mitigation Measures

None required.

Water Supply Infrastructure (Standard of Significance 2)

Impact 3.10.4b Implementation of the proposed project would increase demand for water supply and thus require additional water supply infrastructure that could result in a physical impact to the environment. This is considered a **less than significant** impact.

The Elsinore Valley Municipal Water District has reviewed the proposed project and determined that they can provide water treatment to the proposed project. The proposed project will replace the existing water line in Bundy Canyon Road and construct two 500,000-gallon water storage tanks for fire flow and pressure management of the system. As noted above, the amount of water provided to the project is considered a small increase in the amount currently provided to the area. The Elsinore Valley Municipal Water District will be able to supply the estimated increase in the amount of water required by the proposed project. Other than the pipeline within Bundy Canyon Road and the water storage tanks, the physical impacts of which are analyzed in this DEIR, the Elsinore Valley Municipal Water District has indicated that no other improvements to the water treatment or delivery system are necessary. The impacts of the proposed project on the water treatment and delivery system are **less than significant**.

Mitigation Measures

None required.

3.10.4.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for water services, including supplies and related infrastructure, consists of Elsinore Valley Municipal Water District boundaries, as well as other areas obtaining water from the Western Municipal Water District.

The cumulative setting includes all existing, planned, proposed, approved, and reasonably foreseeable development in the EVMWD service area and the larger service area of the Western Municipal Water District.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Water Supply Impacts

Impact 3.10.4c Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development within the cumulative setting, would increase the cumulative demand for water supplies. However, this increased demand will not be sufficient to lead to a requirement for new water facilities and related infrastructure. The project's contribution to cumulative water supply and infrastructure impacts is considered **less than cumulatively considerable**.

To determine future water demands within its service area, the EVMWD based the predictions contained within the 2011 UWMP on the existing year (2010) demands calculated as a product of the 2010 population and the 10-year baseline per capita water use. Starting from 2020, future demands were calculated as the product of the population and the target water use (240 gallons per capita per day) was established for the EVMWD using the summation of three performance standards: indoor residential use, outdoor residential use, and commercial, industrial use, and institutional (CII) use. Water demand for 2015 was calculated as halfway between the usage in 2010 and 2020. Water use projections for years 2015, 2020, 2025, 2030, and 2035 are presented in **Table 3.10.4-1**.

TABLE 3.10.4-1
EVMWD DEMAND ASSUMPTIONS AND PREDICTIONS

Projections	2015	2020	2025	2030	2035
Population of service area	136,133	149,852	162,626	174,579	185,102
Employment	24,699	27,458	32,272	37,086	41,900
Housing	46,388	51,297	55,774	59,921	63,888
EVMWD Water Deliveries (acre-feet per year)	37,292	40,338	43,777	46,995	49,827
Total Water Sales to the FMWC (acre-feet per year)	501	542	588	631	669

Source: EVWMD 2011b

The projections provided in **Table 3.10.4-1** include the demand projections of the area served by the Farm Mutual Water Company. The 2011 EVWMD Urban Water Management Plan states that it is assumed that demand within the FMWC service area will increase proportionally to the water demand increase within the EVMWD service area. For the years 2005 and 2010, the EVMWD delivered 420 and 460 acre-feet of water to the FMWC, respectively.

Mitigation Measures

None required.

3.10.5 WASTEWATER SERVICES

3.10.5.1 EXISTING SETTING

The Elsinore Valley Municipal Water District (EVMWD) maintains facilities to convey, treat, and dispose of municipal wastewater generated within a 96-square-mile area of western Riverside

County. This service area includes the area of the proposed project and much of the City of Wildomar, among other jurisdictions.

The EVMWD currently operates three wastewater treatment facilities: the Regional Wastewater Treatment Plant (WWTP), Horsethief Canyon WWTP, and Railroad Canyon WWTP. In addition, flow in the southern part of the EVMWD's service area is treated at the Santa Rosa Water Reclamation Facility operated by the Rancho California Water District (RCWD). These four treatment plants serve four major service areas within the EVMWD's wastewater collection system. Each service area consists of gravity collectors, trunk lines, lift stations, and force mains, which convey flow to the treatment plants. The regional area contains 21 lift stations, the Canyon Lake area contains 7 lift stations, and the Horsethief area contains 2 lift stations. A large portion of the EVMWD's wastewater collection system consists of 8-inch- through 15-inch-diameter collector and trunk sewer lines. In addition to these collector and trunk lines, the EVMWD has two major interceptor sewers ranging in size from 12 inches to 27 inches in diameter. The EVMWD's system also contains 30 force mains, with diameters ranging in size from 4 inches to 16 inches.

3.10.5.2 REGULATORY FRAMEWORK

FEDERAL

Clean Water Act

The Clean Water Act (CWA) is the primary federal legislation governing surface water quality protection. The statute employs a variety of regulatory and nonregulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water. Pollutants regulated under the CWA include "priority" pollutants, including various toxic pollutants; "conventional" pollutants, such as biochemical oxygen demand (BOD), total suspended solids (TSS), fecal coliform, oil and grease, and Ph; and "non-conventional" pollutants, including any pollutant not identified as either conventional or priority. The CWA regulates both direct and indirect discharges (EPA 2012).

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) program, Section 402 of the CWA, controls direct discharges into navigable waters. Direct discharges, or point source discharges, are from sources such as pipes and sewers. NPDES permits, issued by either the EPA or an authorized state/tribe, contain industry-specific, technology-based, and/or water-quality-based limits and establish pollutant monitoring and reporting requirements. (The EPA has authorized 40 states to administer the NPDES program including California, under which the regional boards administer the NPDES Program.) A facility that intends to discharge into the nation's waters must obtain a permit before initiating a discharge. A permit applicant must provide quantitative analytical data identifying the types of pollutants present in the facility's effluent and the permit will then set forth the conditions and effluent limitations under which a facility may make a discharge (EPA 2012).

General Pretreatment Regulations

Another type of discharge that is regulated by the CWA is discharge that goes to a publicly owned treatment works (POTW). POTWs collect wastewater from homes, commercial buildings, and industrial facilities and transport it via a collection system to the treatment plant. At the plant, the POTW removes harmful organisms and other contaminants from the sewage so it can be discharged safely into the receiving stream. Generally, POTWs are designed to treat domestic sewage only. However, POTWs also receive wastewater from industrial (nondomestic) users. The General Pretreatment Regulations establish responsibilities of federal, state, and local government, industry, and the public to implement Pretreatment Standards to protect municipal wastewater treatment plants from damage that may occur when hazardous, toxic, or other wastes are discharged into a sewer system and to protect the quality of sludge generated by these plants. Discharges to a POTW are regulated primarily by the POTW itself, rather than the state/tribe or the EPA (EPA 2012).

STATE

Porter-Cologne Water Quality Act

In 1969, the California Legislature enacted the Porter-Cologne Water Quality Control Act to preserve, enhance, and restore the quality of the state's water resources. The act established the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards as the principal state agencies with the responsibility for controlling water quality in California. Under the act, water quality policy is established, water quality standards are enforced for both surface water and groundwater, and the discharges of pollutants from point and nonpoint sources are regulated. The act authorizes the SWRCB to establish water quality principles and guidelines for long-range resource planning including groundwater and surface water management programs and control and use of recycled water (USDOE 2012).

State Water Resources Control Board

Created by the California legislature in 1967, the five-member State Water Resources Control Board (SWRCB) allocates water rights, adjudicates water right disputes, develops statewide water protection plans, establishes water quality standards, and guides the nine regional water quality control boards located in the major watersheds of the state. The joint authority of water allocation and water quality protection enables the SWRCB to provide comprehensive protection for California's waters (SWRCB 2012).

The SWRCB is responsible for implementing the CWA and issues NPDES permits to cities and counties through Regional Water Quality Control Boards (RWQCBs). Wildomar is located in a portion of the state regulated by the San Diego Regional Water Quality Control Board.

REGIONAL

San Diego Regional Water Quality Control Board

The San Diego RWQCB provides planning, monitoring, and enforcement techniques for surface water and groundwater quality in San Diego County and western Riverside County, including the City of Wildomar and the surrounding area. The San Diego RWQCB develops and enforces water quality objectives and implements plans that will best protect the area's waters while recognizing local differences in climate, topography, geology, and hydrology. The RWQCB also

protects and enforces the many uses of water, including the needs of industry, agriculture, municipal districts, and the environment (RWQCB 2012).

Water Reuse Requirements (Permits)

The San Diego RWQCB issues water reuse requirements (permits) for projects that reuse treated wastewater. These permits include water quality protections as well as public health protections by incorporating criteria established in Title 22. The San Diego RWQCB may incorporate requirements into the permit in addition to those specified in Title 22. These requirements typically include periodic inspection of recycled water systems, periodic cross-connection testing, periodic training of personnel that operate recycled water systems, maintaining a database and/or permitting individual use sites, periodic monitoring of recycled water and groundwater quality, and periodic reporting.

Waste Discharge Requirements

The San Diego RWQCB typically requires a Waste Discharge Requirement (WDR) permit for any facility or person discharging or proposing to discharge waste that could affect the quality of the waters of the State, other than into a community sewer system. Those discharging pollutants (or proposing to discharge pollutants) into surface waters must obtain an NPDES permit from the San Diego RWQCB. The NPDES permit serves as the WDR permit. For other types of discharges, such as those affecting groundwater or in a diffused manner (e.g., erosion from soil disturbance or waste discharges to land), a Report of Waste Discharge must be filed with the San Diego RWQCB in order to obtain a WDR permit. For specific situations, the San Diego RWQCB may waive the requirement to obtain a WDR permit for discharges to land or may determine that a proposed discharge can be permitted more effectively through enrollment in a general NPDES permit or general WDR permit (RWQCB 2009).

LOCAL

Wastewater Master Plan

The EVMWD's Wastewater Master Plan (2003) evaluates the capacity of its wastewater collection system during peak wet weather flows and describes current services and plans to connect currently unserved areas and future development areas to the district's sanitary sewer system. The plan provides a detailed capital improvement program (CIP) for the necessary improvements to the existing wastewater collection system facilities and improvements needed for future growth, as well as a detailed cost summary and implementation plan.

3.10.5.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The following standards are based on State CEQA Guidelines Appendix G. A significant impact to wastewater service would occur if implementation of the proposed project would:

1) Require or result in the construction of new water or wastewater treatment facilities or expansion or existing facilities, the construction of which could cause significant environmental effects.

2) Result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

METHODOLOGY

Evaluation of potential impacts on wastewater facilities and services was based on the Elsinore Valley Municipal Water District's 2011 Urban Water Management Plan and 2003 Wastewater Master Plan (2003). Wastewater demand projections, as well as infrastructure conditions and needs, discussed in these documents were compared to potential impacts resulting from the development of the proposed project.

PROJECT IMPACTS AND MITIGATION MEASURES

Waste Discharge Requirements (Standard of Significance 1)

Impact 3.10.5a Implementation of the proposed project will not result in wastewater discharge that would exceed wastewater treatment requirements of the San Diego Regional Water Quality Control Board. This impact is considered **less than significant.**

The EVMWD currently operates three wastewater treatment facilities: the Regional WWTP, the Horsethief Canyon WWTP, and the Railroad Canyon WWTP. In addition, flow in the southern part of the EVMWD's service area is treated at the Santa Rosa Water Reclamation Facility operated by the Rancho California Water District (RCWD). These four treatment plants serve four major service areas within the EVMWD's wastewater collection system and the proposed project area. Each service area consists of gravity collectors, trunk lines, lift stations, and force mains, which convey flow to the treatment plants. The regional area contains 21 lift stations, the Canyon Lake area 7 lift stations, and the Horsethief area 2 lift stations.

A large portion of the EVMWD's wastewater collection system consists of 8-inch- through 15-inch-diameter collector and trunk sewer lines. In addition to these collector and trunk lines, the EVMWD has two major interceptor sewers with diameters ranging in size from 12 inches to 27 inches. The EVMWD's system also contains 30 force mains, ranging in size from 4 inches to 16 inches in diameter.

Implementation of the proposed project is expected to result in a less than 1 percent population increase in the EVMWD service area. The proposed project will connect to an existing 10-inch sewer line in Bundy Canyon Road.

Upon completion, the proposed project will represent an increase of 275 housing units and 895 persons from baseline (2008) conditions. This growth will slightly increase wastewater flows that would need to be treated and ultimately discharged along Temescal Wash.

The EVMWD is not exceeding any limits established in its current Urban Water Management Plan and will be required by the San Diego RWQCB to remain in compliance after any future expansion of flow capacity. Therefore, the proposed project is not expected to exceed wastewater treatment requirements or orders of the San Diego Regional Water Quality Control Board. Impacts are considered **less than significant**.

Mitigation Measures

None required.

Wastewater Conveyance and Treatment (Standards of Significance 1 and 2)

Impact 3.10.5b The proposed project will slightly increase wastewater flows. However, the increase represented by the proposed project will not require any additional infrastructure or treatment capacity. This impact is considered **less than significant**.

Implementation of the proposed project is expected to result in growth that will represent less than 1 percent of the population of the EVMWD service area.

According to the EVWMD's 2011 Comprehensive Financial Annual Report, the amount of wastewater treated in 2011 was 9,082 acre-feet (AF). Over the past decade, the EVMWD has treated between 6,713 AF (fiscal year 2002) and 9,159 AF (fiscal year 2005) of wastewater annually, with an average of 8,353 AF of wastewater treated annually. The EVWMD currently estimates that the average wastewater flow per household is 288 gallons per equivalent dwelling unit (EDU) per day. Based on this factor, the proposed project would result in buildout wastewater flows of 79,200 gallons per day (88.72 acre-feet per year) average flow. This increase in wastewater flow is equivalent to a 1.1 percent increase in the average annual wastewater flows of the EVMWD. The increase would not be enough to require additional wastewater treatment facilities. Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

3.10.5.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

As wastewater services are provided by the EVMWD, the cumulative setting for wastewater services includes all areas served by the district. The reader is referred to Section 4.0 of this DEIR regarding the cumulative setting and buildout under the proposed project.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Wastewater Service Impacts

Impact 3.10.5c Implementation of the proposed project, along with other existing, planned, proposed, approved, and reasonably foreseeable development within the cumulative setting, would contribute to the cumulative demand for wastewater service. However, continued implementation of EVMWD standards would ensure adequate wastewater facilities are provided. This impact is considered to be **less than cumulatively considerable**.

The proposed project will construct all of the wastewater collection systems necessary to meet its needs. There are no future phases of the project that will require additional wastewater collection or treatment facilities. Therefore, the proposed project would not contribute to

cumulative wastewater infrastructure impacts, and this impact is considered **less than cumulatively considerable**.

Mitigation Measures

None required.

3.10.6 SOLID WASTE

3.10.6.1 EXISTING SETTING

Solid waste services for the proposed project site are provided by contract by Waste Management of the Inland Empire. Waste Management currently serves over 220,000 residents by disposing of over 17,000 tons of waste on a weekly basis.

Solid waste collection from the proposed project area will be trucked to the Moreno Valley Transfer Station, which is owned and operated by Waste Management and which also serves as a component of the Riverside County Waste Management Department's (RCWMD) network of solid waste facilities. The transfer station is located approximately 23 miles away from the proposed project site at 17700 Indian Street in Moreno Valley.

Solid waste collection and disposal is funded through monthly service fees paid by service users. Funding options support disposal sites, diversion activities, public education programs, hazardous waste collection, and transportation programs, along with other requirements of state and federal laws. Other fees are provided by a surcharge on residential collection bills for recycling programs, tipping fees, the sale of recyclables, waste hauler franchise fees, special programs (recycling and hazardous materials), and grants (RCWMD 2012).

3.10.6.2 REGULATORY FRAMEWORK

FEDERAL

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), an amendment to the Solid Waste Disposal Act of 1965, was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. The RCRA gives the United States Environmental Protection Agency (EPA) the authority to control hazardous waste from "cradle to grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. The RCRA also sets forth a framework for the management of nonhazardous solid wastes. The federal Hazardous and Solid Waste Amendments (HWSA) are the 1984 amendments to the RCRA that focused on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. Some of the other mandates of this law include increased enforcement authority for the EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program. Amendments to the RCRA in 1986 enabled the EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances (EPA 2012).

STATE

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (Public Resources Code, Section 42900–42927) requires all California cities and counties to reduce the volume of waste deposited in landfills by 50 percent by the year 2000 and continue to remain at 50 percent or higher for each subsequent year. The purpose of this act is to reduce, recycle, and reuse solid waste generated in the state to the maximum extent feasible.

The California Integrated Waste Management Act requires each California City and county to prepare, adopt, and submit to the California Department of Resources Recycling and Recovery (CalRecycle) a source reduction and recycling element (SRRE) that demonstrates how the jurisdiction will meet the Integrated Waste Management Act's mandated diversion goals. Each jurisdiction's SRRE must include specific components, as defined in Public Resources Code Sections 41003 and 41303. In addition, the SRRE must include a program for management of solid waste generated in the jurisdiction that is consistent with the following hierarchy: (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal. Included in this hierarchy is the requirement to emphasize and maximize the use of all feasible source reduction, recycling, and composting options in order to reduce the amount of solid waste that must be disposed of by transformation and land disposal (Public Resources Code Sections 40051, 41002, and 41302) (CalRecycle 2012a).

REGIONAL

Riverside County Waste Management Department

The RCWMD is responsible for the landfilling of nonhazardous county waste. In this effort, the RCWMD operates six landfills and has a contract agreement for waste disposal with an additional private landfill, and administers several transfer station leases. The RCWMD ensures that Riverside County has a minimum of 15 years of capacity, at any time, for future landfill disposal.

LOCAL

Wildomar Source Reduction and Recycling Element

On April 27, 2011, the City of Wildomar adopted a Source Reduction and Recycling Element (SRRE), which is required to fulfill the requirements of the California Integrated Waste Management Act of 1989. The law requires that all cities and counties in California divert 50 percent of the total waste generated within their jurisdiction from landfill disposed annually by the year 2000. The adopted element includes a Source Reduction and Recycling Element (SRRE), a Household Hazardous Waste Element (HHWE), and a Nondisposal Facility Element (NDFE). Waste Management Incorporated (WMI) is the solid waste hauler under contract to the City of Wildomar.

City of Wildomar Municipal Code

Title 8 Health and Safety of the City of Wildomar Municipal Code set forth the city's solid waste provisions, including restrictions on disposing of any garbage, rubbish, or waste matter in the city other than at a disposal site established by the City Council or designated by the City Manager,

prohibitions on solid waste collectors disposing of recyclable materials, and restrictions on accumulation of solid waste on residential properties.

3.10.6.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G. A solid waste impact is considered significant if implementation of the proposed project would:

1) Be served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs.

2) Fail to comply with federal, state, and local statutes and regulations related to solid waste.

METHODOLOGY

Evaluation of potential solid waste service impacts was based on information from the CalRecycle website and personal conversation with Waste Management Incorporated, the contract hauler for the City of Wildomar. The SRRE was also reviewed to determine the diversion rates and goals for the City. The capacity of landfills and other solid waste facilities was evaluated based on reporting from CalRecycle, and residential waste generation was based on actual per-capita generation rates in 2011.

PROJECT IMPACTS AND MITIGATION MEASURES

Increased Solid Waste Disposal (Standard of Significance 1)

Impact 3.10.6a Implementation of the proposed project will generate increased amounts of solid waste that will need to be disposed of in landfills or recycled. This impact is considered **less than significant**.

Implementation of the proposed project will result in the construction of 275 new single-family homes that could generate 895 new residents who will generate solid waste which will require disposal and recycling. CalRecycle reports that in 2011, the 32,414 residents of the city generated 17,673 tons of solid waste for a per-capita rate of 2.99 pounds per person per day, which is less than the 2009 reported rate of 3.17 pounds per person per day in the SRRE. As proposed, the project would generate approximately 976,758 pounds of solid waste per year. CalRecycle estimates that a cubic yard of household trash weighs about 800 pounds, which results in approximately 1,221 cubic yards per year generated by the proposed project.

CalRecycle posts estimates of solid waste generation for commercial establishments on its website (http://www.calrecycle.ca.gov/wastechar/wastegenrates/Commercial.htm); however, the rates are reported by other jurisdictions and CalRecycle does not endorse any of the rates. Reported rates range greatly and are dependent on the actual commercial use. Some of the rates are by employee and others by square foot. For example, one rate from Los Angeles estimates 2.5 pounds per 1,000 square feet per day, while another rate from the same city estimates 13 pounds per day from 1,000 square feet. Further, most of the rates are from the early 1990s before source reduction and recycling became the law, and likely overstate the current

solid waste generation. Without knowing the actual uses, it is impossible to estimate the amount of solid waste generated. The SRRE requires that 30 percent of nonresidential waste be diverted from the landfill.

Upon collection, the solid waste will be transported to the Moreno Valley Transfer Station where the collected waste will be processed for recycling, composting, or disposal. In a telephone interview on November 15, 2012, a representative of Waste Management determined that the increase in solid waste produced by the proposed project will not result in a significant increase in total waste received at the Moreno Valley Transfer Station (WM 2012). The solid waste can go to one of three landfills: El Sobrante, Lamb Canyon, or Badlands. El Sobrante is owned and operated by USA Waste Services of California. The other two landfills are owned and operated by the County of Riverside. Capacities for each of the landfills is included in the SRRE and summarized in **Table 3.10.6-1**.

TABLE 3.10.6-1
LANDFILL CAPACITY

Disposal Facility	Owner/Operator	Permitted Capacity (cubic yards)	Remaining Capacity (cubic yards)	Potential Fill Date
El Sobrante	USA Waste Services of California	184,930,000	145,530,000	2045
Lamb Canyon	County of Riverside	34,292,000	18,955,000	2021
Badlands	County of Riverside	30,386,332	19,477,616	2016

Source: City of Wildomar 2011

As shown in the table, there is sufficient capacity at the landfills to accept the 1,221 cubic yards of potential solid waste from the proposed project. This impact would therefore be considered **less than significant**.

Mitigation Measures

None required.

Compliance with Federal, State, and Local Statutes for Solid Waste (Standard of Significance 2)

Impact 3.10.6b Implementation of the proposed project could fail to comply with federal, state, and local statutes and regulations related to solid waste. This impact is considered **less than significant**.

Title 8, Chapter 8.20 regulates refuse disposal sites in the City of Wildomar. Section 8.20.050 of Chapter 8.2 of the Wildomar Municipal Code requires that each solid waste facility operator, including the City of Wildomar, perform random load checks across load types of residential, commercial, and industrial to detect hazardous waste before such incoming waste is transferred to, and/or disposed at, the landfill. The goals of the ordinance and check program are to (1) prevent hazardous waste from being placed in a landfill not permitted to receive such waste, and (2) educate and discourage customers from bringing in such material. The code mandates the number of checks per day, depending on the daily tonnage. The load checks are random and an inspection form is required for each check. Chapter 8.104 mandates that solid waste be collected in the city and establishes the methodology and timing for collection. Through compliance with the SRRE and City ordinances, the proposed project will comply with federal, state, and local regulations regarding solid waste. This impact is considered **less than significant**.

Mitigation Measures

None required.

3.10.6.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for solid waste includes all existing, planned, proposed, approved, and reasonably foreseeable development in Riverside County. Future development associated with the proposed project, as well as in the surrounding region, would result in an incremental cumulative demand for solid waste collection and disposal in regional landfills.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Solid Waste Impacts

Impact 3.10.6c Implementation of the proposed project, along with other existing, planned, proposed, approved, and reasonably foreseeable development in the region, would result in increased demand for solid waste services. This impact is **less than cumulatively considerable**.

As shown in **Table 3.10.6-1**, there is adequate capacity in the landfills that receive solid waste from the City of Wildomar. The approximate 1,221 cubic yards of solid waste generated by the proposed project will not significantly affect the life span of the receiving landfills. Further, compliance with the SRRE will reduce or divert solid waste from the landfills. The proposed project will not contribute significantly to cumulative solid waste impacts, and this impact is considered **less than cumulatively considerable**.

Mitigation Measures

None required.

3.10.7 PARKS AND RECREATION

3.10.7.1 EXISTING SETTING

The City of Wildomar owns and manages three public parks: Marna O'Brien Park, Regency Heritage Park, and Windsong Park.[3] In addition, the city contains 306.93 acres of land dedicated to open space recreation and 220.92 acres of land dedicated to open space conservation. A summary of the park and open space acreages in Wildomar is shown in **Table 3.10.7-1.**

[3] As of August 2012, the City is not currently funding Regency Heritage or WIndsong Park, allowing both facilities to remain non-operational.

TABLE 3.10.7-1
PARK AND OPEN SPACE FACILITIES

Open Space	Acreage
Marna O'Brien Park	8.94
Regency Heritage Park	3.26
Windsong Park	2.07
Open Space – Recreation	306.93
Open Space – Conservation	220.92
Total Open Space Acreage	**542.11**

Source: Colgan 2012

Upon city incorporation in 2008, the City of Wildomar adopted the Riverside County Municipal Code. The code includes an open space requirement of 3 acres of neighborhood and community parkland per 1,000 residents. As of 2012, according to the California Department of Finance, Wildomar's estimated population was 32,719. As demonstrated in **Table 3.10.7-1**, the city's current open space inventory includes 542.11 acres, which surpasses the 98.16 acres required by the City's Municipal Code.

3.10.7.2 REGULATORY FRAMEWORK

STATE

Quimby Act

The goal of the 1975 Quimby Act (California Government Code Section 66477) was to require developers to help mitigate the impacts of property improvements by requiring them to set aside land, donate conservation easements, or pay fees for park improvements. The Quimby Act gave authority for passage of land dedication ordinances only to cities and counties, thus requiring special districts to work with cities and/or counties to receive parkland dedication and/or in-lieu fees. The fees must be paid and land conveyed directly to the local public agencies that provide parks and recreation services community-wide. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities (Westrup 2002).

Originally, the Quimby Act was designed to ensure "adequate" open space acreage in jurisdictions adopting Quimby Act standards (e.g., 3–5 acres per 1,000 residents). In some California communities, the acreage fee was very high where property values were high, and many local governments did not differentiate on their Quimby fees between infill projects and greenbelt developments. In 1982, the Quimby Act was substantially amended via AB 1600. The amendments further defined acceptable uses of or restrictions on Quimby funds, provided acreage/population standards and formulas for determining the exaction, and indicated that the exactions must be closely tied (nexus) to a project's impacts as identified through traffic studies required by CEQA. In other words, AB 1600 requires agencies to clearly show a reasonable relationship between the public need for the recreation facility or park land and the type of development project upon which the fee is imposed (Westrup 2002). Cities or counties with a high ratio of parkland to inhabitants can set a standard of 5 acres per 1,000 residents for new development. Cities or counties with a lower ratio can only require the provision of up to 3 acres of parkland per 1,000 residents. The calculation of a city's or county's parkland-to-

population ratio is based on a comparison of the population count of the last federal census to the amount of city- or county-owned parkland.

LOCAL

Wildomar Community Services Department

The City of Wildomar Community Services Department oversees the development and maintenance of the local parks and assists in coordinating disaster preparedness programs. Open space in the city is maintained by private landowners or associations.

City of Wildomar Municipal Code

Chapter 16.20 of Title 16 requires fees in lieu of dedication or dedication of parkland at a ratio of 3 acres per 1,000 population. The code defines a park as a parcel or parcels of land, exclusive of natural open space, which is open and available for use by the general public and which serves the recreational needs of the public.

3.10.7.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A park and recreation impact is significant if implementation of the proposed project would:

1) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

2) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

METHODOLOGY

Evaluation of the proposed project was based on review of the current facilities and the City's Municipal Code. This material was compared to the proposed project's specific park and recreation service–related impacts. The impact analysis below focuses on whether those impacts would have a significant effect on the physical environment.

PROJECT IMPACTS AND MITIGATION MEASURES

Increased Demand for Parks and Recreation Facilities (Standards of Significance 1 and 2)

Impact 3.10.7a Implementation of the proposed project would accommodate a slight increase in population that will be served by the park and recreation facilities to be built as part of the proposed project. This impact is considered to be **less than significant**.

The completion of the proposed project will result in a population increase of approximately 895 residents in Wildomar. Per City ordinance, the new population will generate demand for 2.7

acres of parkland. The proposed project includes 4.7 acres of parkland, which exceeds the requirement of the City ordinance and the Quimby Act. Further, the parks and open space needs of the residents will also be met by the total of 76 acres of open space that includes trails.

During the scoping meeting, several residents of The Farm voiced concerns over new residents potentially using Farm facilities without payment. One of the facilities noted was the Farm community swimming pool. During a site visit, the pool was observed to be very secure with fencing topped with razor wire. While there is a potential for new residents in the proposed project to use Farm recreation facilities, the pool facility seems secure. Other facilities could either be secured or signed to inform others that the land is private. Similar signage may appear on the proposed project's parks and open space area.

While the parks will be owned and operated by the proposed project's homeowners association, they will not be fenced. The parks will also not have community-serving features such as soccer fields or baseball diamonds intended for league play. As the proposed project will generate and maintain its own parkland, this impact is **less than significant**.

Mitigation Measures

None required.

3.10.7.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for parks and recreation consists of the City of Wildomar's jurisdictional boundary, which encompasses 13.2 square miles. Any existing, planned, proposed, approved, and reasonably foreseeable development within the city could contribute to cumulative impacts. The reader is referred to Section 3.1, Land Use, for a discussion of assumed land uses and development conditions associated with the proposed project.

Cumulative Park and Recreation Demands

Impact 3.10.7b Implementation of the proposed project, along with other existing, planned, proposed, approved, and reasonably foreseeable development, would increase the use of existing parks and would require additional park and recreation facilities within the cumulative setting, the provision of which could have an adverse physical effect on the environment. This would be a **less than cumulatively considerable** impact.

The proposed project provides parkland and open space than required to meet the City's ordinance. Further, the project will maintain its own parkland and open space. As there is more than sufficient parkland, and the project will provide maintenance for its facilities, this impact is considered **less than cumulatively considerable**.

Mitigation Measures

None required.

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3.11 AESTHETICS AND VISUAL RESOURCES

This section describes the existing visual resources of the City of Wildomar, summarizes its landscape characteristics, and discusses the impacts associated with implementation of the proposed project. The analysis focuses on the anticipated alteration of the landscape characteristics and potential visual resource impacts in the city. Key issues addressed in this section include alteration of existing scenic resources (potential degradation of scenic resources or views of scenic resources), visual character, and urban lighting characteristics (increased nighttime light and daytime glare). Information for this section comes from City staff, field observations, and other public documents.

3.11.1 EXISTING SETTING

EXISTING CONDITIONS

Undeveloped natural areas and the surrounding topography create a rural residential viewshed with single-family homes surrounded by slopes, hills, and undeveloped areas. Even in the undeveloped areas, however, there is evidence of disturbance and man-made improvements ranging from roadways such as Bundy Canyon Road to homes on hillsides and ridges, graded driveways, power lines, fences, sheds, and other accessory structures. Located in close proximity to a variety of topographic features that range from relatively flat land to steep hillsides, the eastern half of the proposed project site is primarily composed of a steep-sided hill, while a portion of the Sedco Hills forms the western half. The surrounding area is generally rural residential and suburban in character, with single-family homes situated on semi-rural and large suburban lots. The habitat of the project area is predominantly disturbed chaparral with scattered trees that are mainly concentrated along the drainages that cross the project site. Bundy Canyon Road, which bisects the site, is lined with aboveground transmission lines. **Table 3.11-1** provides a summary of the visual resources within the project site. **Figure 1.0-3** shows a series of photographs that illustrate the various visual resources.

On Bundy Canyon Road close to Interstate 15 (I-15), there are developed areas that have urban improvements such as sidewalks, curbs, and streetlights. For much of the remaining length of the roadway that extends through the proposed project area, there are no improvements adjacent to the roadway. Overhead power lines occasionally cross the roadway as needed to provide services along the road.

The City of Wildomar General Plan does not identify any portion of the proposed project area as a designated state or county scenic highway, nor is the site identified as being eligible for such designation. The Farm Specific Plan, which encompasses the proposed project site, does not identify specific visual or aesthetic resources to be protected or designated.

TABLE 3.11-1
SUMMARY OF VISUAL RESOURCES

Visual Resource	Description
Open space	Open space is a scenic feature present throughout the project area, which is currently vacant; however, the single-family housing communities located along the northern and southern borders of the project site do not include scenic open space. Figures 3.1-2 and 3.1-3 in Section 3.1, Land Use, provide aerial views of the project site that show the open space quality of the area.
Vistas of distant mountains	In specific areas, views from the project site offer vistas of the San Jacinto Mountains to the east, the Elsinore Mountains to the west, and on clear days the San Bernardino Mountains to the north.

Visual Resource	Description
Views of rolling hills	Views of the rolling hills directly west of the project site may be seen from anywhere on the project site, while smaller hills can be clearly seen from the southwest and southeast corners of the site.
Riparian and oak woodland areas	Cottonwood Canyon, a large drainage which crosses the eastern end of the project site from north to south, supports mature oak trees that form a scenic canopy over Bundy Canyon Road (see **Figure 1.0-3**).

Viewer groups of the project area currently include motorists and occasional cyclists and pedestrians traveling along Bundy Canyon Road. Aside from an unpaved shoulder along Bundy Canyon Road, the project site does not have dedicated lanes and paths or other facilities to support pedestrian, cycling, or equestrian uses. Most of the existing residential homes adjacent to the proposed project site will be located several hundred feet from the proposed project, though homes located along the northeastern side of Harvest Way West will be immediately across the street from the portion of the proposed project to be built along the southwestern side of Harvest Way West. The homes located along the north side of Bundy Canyon Road between Greenwood Avenue and Harvest Way East will also be directly across the street from the proposed project, and the commercial use component of the proposed project, at the southwestern corner of Bundy Canyon Road and Sunset Avenue, will be located in intermediate proximity to three existing homes at the end of Hidden Hollow Drive. Many of these residential properties have fences, walls, or trees and other vegetation that visually shield the houses from the roadway and the proposed project site.

NIGHTTIME LIGHTING CONDITIONS

Lighting conditions of the area consist of typical suburban low light conditions found in semi-rural areas. There are streetlights along parts of Bundy Canyon Road, along areas adjacent to development close to I-15, and at intersections. There are also residential yard lights and exterior lighting associated with the homes along Bundy Canyon Road and the adjacent development.

Sources of daytime glare include direct beam sunlight and reflections from windows, architectural coatings, glass, and other shiny reflective surfaces. Nighttime light illumination and associated glare can be divided into stationary and mobile sources. Stationary sources of nighttime light include structure illumination, decorative landscape lighting, lighted signs, sports field lighting, and streetlights. The primary source of mobile nighttime light is motor vehicle headlights. During winter nighttime hours, the ambient light in the area can be accentuated during periods of low cloudiness or fog, which reflects light, resulting in intensification of the amount of light.

3.11.2 REGULATORY FRAMEWORK

STATE

State Scenic Highway Program

In 1963, the California legislature created the Scenic Highway Program to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to state highways. The state regulations and guidance governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. A highway may be designated scenic depending on how much of the natural landscape can be seen by travelers,

the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. A scenic corridor is the land generally adjacent to and visible from the highway and is identified using a motorist's line of vision. A reasonable boundary is selected when the view extends to the distant horizon. There are no state designated scenic highways in the project area.

Nighttime Sky – Title 24 Outdoor Lighting Standards

The California legislature passed a bill in 2001 requiring the California Energy Commission (CEC) to adopt energy efficiency standards for outdoor lighting for both the public and private sectors. In November 2003, the CEC adopted changes to the Title 24, parts 1 and 6, Building Energy Efficiency Standards. These standards became effective on October 1, 2005, and included changes to the requirements for outdoor lighting for residential and nonresidential development. The new standards will likely improve the quality of outdoor lighting and help to reduce the impacts of light pollution, light trespass, and glare. The standards regulate lighting characteristics such as maximum power and brightness, shielding, and sensor controls to turn lighting on and off. Different lighting standards are set by classifying areas by lighting zone. The classification is based on population figures of the 2000 Census. Areas can be designated as LZ1 (dark), LZ2 (rural), or LZ3 (urban).

LOCAL

Wildomar General Plan

The City of Wildomar General Plan contains several policies pertaining to visual resources; those that are relevant to the proposed project are listed below in the Methodologies subheading of subsection 3.11.3, Impacts and Mitigation Measures.

Regulating Light Pollution (Mount Palomar Nighttime Lighting Policy)

Light pollution is regulated by Wildomar Municipal Code Chapter 8.64. The proposed project site is located approximately 49 miles from Mount Palomar, which places the site within Zone B of the Mount Palomar Nighttime Lighting Policy Area. (Zone A means the circular area 15 miles in radius centered on Palomar Observatory.) As shown below, Zone B restricts the use of certain light fixtures that emit undesirable light rays into the night sky, which may have a detrimental effect on astronomical observation and research at the Mount Palomar Observatory. Development within this zone requires that the project maintain preservation of the night sky.

TABLE 3.11-2
LAMP TYPE AND SHIELDING REQUIREMENTS PER FIXTURE FROM ORDINANCE 8.88 REGULATING LIGHT POLLUTION

Lamp Type	Zone A	Zone B
Class I – Color Rendition Important		
Low pressure sodium	Allowed	Allowed
Others above 4050 lumens	Prohibited	Allowed if fully shielded
Others 4050 lumens & below	Allowed*	Allowed

Lamp Type	Zone A	Zone B
Class II – Parking Lots, Walkways, Security		
Low pressure sodium	Allowed	Allowed
Others above 4050 lumens	Prohibited	Prohibited
Others 4050 lumens & below	Prohibited	Allowed
Class III – Decorative		
Low pressure sodium	Prohibited	Allowed
Others above 4050 lumens	Prohibited	Prohibited
Others 4050 lumens & below	Prohibited	Allowed

Source: Wildomar Municipal Code
**Maximum of 8.100 total lumens per acre or per parcel if under 1 acre.*

All lighting allowed by the ordinance must be fully shielded if feasible and partially shielded in all other cases, and must be focused to minimize spill light into the night sky and onto adjacent properties. The ordinance defines "fully shielded" as outdoor light fixtures shielded or constructed so that light rays emitted by the fixtures are projected below the horizontal plane passing through the lowest point on the fixture from which light is emitted. "Partially shielded" means outdoor light fixtures designed or constructed so that 90 percent of the light rays emitted by the fixture are projected below the horizontal plane passing through the lowest point of the shield (Wildomar Municipal Code, 8.64.040).

3.11.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

An aesthetic or visual resource impact is considered significant if implementation of the project would result in any of the following:

1) Have a substantial adverse effect on a scenic vista.

2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

3) Substantially degrade the existing visual character or quality of the site and its surroundings.

4) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

METHODOLOGY

The visual resource analysis is based on field review of the project site and review of topographic conditions, as well as anticipated changes from implementation of the proposed project and other anticipated development in the area.

As discussed in subsection 3.11.1, Existing Setting, there are no adopted scenic highways in the project area, so this impact (Standard of Significance 2) will not be further considered in this Draft EIR.

PROJECT IMPACTS AND MITIGATION MEASURES

Substantial Damage Scenic Resources (Standards of Significance 1 and 3)

Impact 3.11.1 The proposed project will not have a substantial adverse effect on a scenic vista or substantially degrade the existing visual character or quality of the site and its surroundings. This impact is considered **less than significant**.

The proposed project will include the removal of some of the trees and rock outcroppings currently located on the project site to accommodate the new homes. While the changes will affect the views of the property from the surrounding area, the trees and rock outcroppings are not unique to the area, nor are they formally recognized as scenic vista by any local or regional government agency. Views onto the property will be changed by the grading and development of improvements necessary to support the proposed residential and commercial uses.

As described in the project description, approximately 76 acres of the site will remain as open space and largely untouched by the development. While there will be trails and some minor improvements such as the road leading to the water storage tanks in the open space, these improvements will be similar to others made in the area to support existing development.

This impact is considered **less than significant**.

Mitigation Measures

None required.

Substantially Degrade the Existing Visual Character of the Area (Standard of Significance 3)

Impact 3.11.2 While the potential project will result in changes to the existing visual character of the project site, these changes will not lead to a significant degradation of the existing visual character of the area. This impact is **less than significant**.

The proposed project will construct single-family residences, a small commercial area, and several local parks in a currently undeveloped area that is surrounded by residential land uses on nearly all sides. With the exception of an undeveloped area directly west of the project site, the project density of 1.8 units per gross acre (3.5 units/acre net developable area) will be consistent with the current density range of 2–5 units per acre of the existing residential development in the surrounding area. The proposed project will provide a different housing type than is prevalent in the area, with a more urban look similar to other housing developments in the city. Yard sizes, setbacks, and street improvements will be consistent with the Oak Creek Canyon development/design standards and City of Wildomar standards.

The proposed project will include a small commercial area approximately 5.2 acres in size (3.5 acres developable). Construction of this commercial property will result in a development that is different in scale and type from the surrounding residential areas. As part of the development review process, the City of Wildomar will evaluate the design of the commercial land as part of plot plan review procedures. The Oak Creek Specific Plan includes commercial design guidelines so aesthetics and design will be part of the review process. As the commercial area fronts on Bundy Canyon Road and will be oriented toward this large arterial, and the design will

be reviewed to ensure compatibility with the commercial design guidelines during the plot plan review process, this impact is considered **less than significant**.

The proposed project also includes the preservation of approximately 76 acres of open space. The developed open space will continue to retain the characteristics of the natural environment of the area while allowing new natural scenic resources to develop. Due to the aesthetic consistency of the proposed project with many of the current land uses of the site and the preservation of 20 percent of the proposed project site as open space, the impacts of the proposed project on the existing visual character of the area will be **less than significant**.

Mitigation Measures

None required.

Create a New Source of Substantial Light or Glare (Standard of Significance 4)

Impact 3.11.3 The proposed project will not result in any new significant sources of glare or light that would adversely affect the day or nighttime views of the area. This impact would be **less than significant**.

Implementation of the proposed project will not introduce new sources of daytime glare and will not substantially change nighttime lighting and illumination levels. Lighting nuisances typically are categorized by the following:

- Glare – Intense light that shines directly or is reflected from a surface into a person's eyes.
- "Skyglow"/Nighttime Illumination – Artificial lighting from urbanized sources that alters the rural landscape in sufficient quantity to cause lighting of the nighttime sky and reduction of visibility of stars and other astronomical features.

The main sources of daytime glare in the area are from sunlight reflecting from vehicles traveling along Bundy Canyon Road and the roadways adjacent to the proposed project site and from the nearby residential buildings with reflective surfaces such as windows. The proposed project will include residential and eventually commercial structures as potential sources of glare. Building materials (e.g., reflective glass and polished surfaces) are the most substantial sources of glare. The amount of glare depends on the intensity and direction of sunlight, which is more acute at sunrise and sunset because the angle of the sun is lower during these times.

A source of glare during the nighttime hours is artificial light. The sources of new and increased nighttime lighting and illumination include, but are not limited to, new residential development, lighting from commercial uses, lights associated with vehicular travel (e.g., car headlights), street lighting, parking lot lights, and security-related lighting. Light pollution is regulated by Chapter 8.64 of the Wildomar Municipal Code. The regulation is intended to protect the Mount Palomar Observatory from unnecessary light.

As noted above, the City's Light Pollution Ordinance establishes limits on the types of fixtures and size of bulbs for aspects of the development. Compliance with the ordinance will result in a less than significant impact on nighttime light pollution. However, there will still be new light associated with urban development, including security lighting, landscape lighting, automobile headlights, etc. This type of lighting impact already exists with existing homes surrounding the project area. As the amount of nighttime lighting will be restricted through compliance with existing City of Wildomar ordinances, and the remaining lighting is consistent with urban

development throughout the City of Wildomar, including existing development around the proposed project site, the impacts of lighting associated with the proposed project are considered **less than significant**.

Mitigation Measures

None required.

3.11.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting includes the surrounding residences, as well as the adjacent Farm community. The cumulative setting also includes the proposed Bundy Canyon Road–Scott Road widening project. Development in the proposed project area as well as along Bundy Canyon Road would alter the scenic resources and visual character of the region.

The cumulative impact analysis herein focuses on whether the proposed project's contribution to regional visual resource impacts would result in a cumulatively considerable environmental impact. The project's impact would be cumulatively considerable if, when considered with other existing, approved, proposed, and reasonably foreseeable development in the region, it would result in substantial alteration of the visual character of the region, significant impacts to scenic vistas, or substantial increases in daytime glare and nighttime lighting.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts to Scenic Resources, Existing Visual Character, and Light and Glare

Impact 3.11.4 Implementation of the proposed project, in combination with the planned Bundy Canyon Road–Scott Road widening project, would contribute to the alteration of the visual character of the region. This impact is considered **less than cumulatively considerable with mitigation incorporated.**

The proposed project, in conjunction with identified improvements to Bundy Canyon Road, could be perceived to have an adverse cumulative effect on scenic resources because of the need to remove oak trees along the corridor. The proposed project may result in a loss of mature oak trees on the project site. In addition, the oak tree canopy along Bundy Canyon Road, located between Palm Avenue and Harvest Way East, may be impacted by the combination of the proposed project and the Riverside Transportation Commission's Bundy Canyon Road–Scott Road widening project. When taken together, the loss of oak trees and their habitat could be perceived to have an adverse cumulative effect on the visual character of the area. This adverse cumulative effect would be permanent. The proposed road widening project may also contribute to a cumulative change of the aesthetic character in the area from a semi-rural area to a developing residential suburban and commercial area.

Planting of new oak trees will help offset the removal of the mature oaks along Bundy Canyon Road. It is important to note that newly planted trees may not grow as quickly or survive in the areas planted. As a result, most mitigation strategies require over-planting to allow for tree morbidity during the first few years. The following mitigation measure is intended to address the loss of tree canopy along Bundy Canyon Road.

Mitigation Measures

MM 3.11.4 Prior to any development activity or the issuance of any permit or approval removing or encroaching upon oak trees on the project site (this generally includes the canopy dripline of trees within the area of ground disturbance and trees subject to changes in hydrologic regime), an Oak Tree Mitigation Plan prepared by a certified arborist, registered professional forester, botanist, or landscape architect shall be submitted for review and approval by the City that includes:

1) A survey showing the location of oak trees 5 inches or more in diameter at breast height, as defined by Public Resources Code Section 21083.4(a).

2) The removal of all oak trees 5 inches or more in diameter at breast height shall be mitigated. Removal shall be mitigated by planting (or replanting) and maintaining oak trees. A minimum of three native oak trees of 5 gallons or larger size shall be planted for each oak tree removed that is greater than or equal to 5 inches diameter at breast height (DBH). The trees shall be planted in areas deemed appropriate by the Oak Tree Mitigation Plan, considering future lot development and interference with foundations, fencing, roadways, driveways, and utilities. Replanted oak trees shall be maintained for a period of seven years after they are planted. If any of the replanted oak trees die or become diseased, they shall be replaced and maintained for seven years after the new oak trees are planted.

3) A replanting schedule and diagram for trees removed or encroached upon by the project shall be submitted to and approved by the City. Replanted trees shall be planted in areas deemed appropriate by the Oak Tree Mitigation Plan, considering future lot development and interference with foundations, fencing, roadways, driveways, and utilities. Trees planted shall be protected from livestock and other animals.

4) Oak tree protection measures for trees to be retained within the project site shall be included in construction specifications. Each oak tree to be preserved shall be surrounded by a tree zone identified by the dripline of the tree. An orange plastic fence or other suitable type of fence shall be used to identify the tree zone during construction activities. No vegetation removal, soil disturbance, or other development activities shall occur within the tree zone in order to protect root systems and minimize compaction of the soil, unless authorized by the Oak Tree Mitigation Plan.

5) Conservation easements or funds for off-site oak woodlands conservation shall be proposed to and approved by the City.

Timing/Implementation: *Prior to any ground disturbance activities*

Enforcement/Monitoring: *City of Wildomar Planning Department and Public Works Department*

With implementation of the above mitigation measures, this impact is considered **less than cumulatively considerable**.

REFERENCES

Caltrans (California Department of Transportation). 2007. http://www.dot.ca.gov/hq/LandArch/scenic/scpr.htm.

City of Wildomar. 2008. *City of Wildomar General Plan*.

———. 2008. Municipal Code (Chapter 8.64 – Light Pollution Ordinance).

3.12 Energy Use and Greenhouse Gases

This section provides a discussion on the proposed project's effect on greenhouse gas emissions and the associated effects of climate change. The California Environmental Quality Act (CEQA) requires that lead agencies consider the reasonably foreseeable adverse environmental effects of projects they are considering for approval. The reader is referred to Section 3.4, Air Quality, for a discussion of project impacts associated with air quality. Portions of this section are based on the *Oak Creek (Tentative Tract Map No. 36388) (PA 11-0261) Greenhouse Gas Analysis, City of Wildomar, California*, prepared by Urban Crossroads (2012) and included as **Appendix 3.12-1**.

3.12.1 EXISTING SETTING

INTRODUCTION TO GLOBAL CLIMATE CHANGE

Global climate change is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. Global climate change is currently one of the most controversial environmental issues in the United States, and much debate exists within the scientific community about whether or not global climate change is occurring naturally or as a result of human activity. Some data suggests that climate change has occurred in the past over the course of thousands or millions of years. These historical changes to the earth's climate have occurred naturally without human influence, as in the case of an ice age. However, many scientists believe that the climate shift taking place since the industrial revolution (1900) is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that global climate change is the result of increased concentrations of greenhouse gases in the earth's atmosphere, including carbon dioxide, methane, nitrous oxide, and fluorinated gases. Many scientists believe that this increased rate of climate change is the result of greenhouse gases resulting from human activity and industrialization over the past 200 years.

An individual project like the proposed project cannot generate enough greenhouse gas emissions to effect a discernible change in global climate. However, the proposed project may participate in the potential for climate change by its incremental contribution of greenhouse gases combined with the cumulative increase of all other sources of greenhouse gases, which when taken together constitute potential influences on global climate change. This section of the Draft EIR evaluates the potential for the proposed project to have a significant effect on the environment as a result of its potential cumulative contribution to the greenhouse effect.

EXISTING CLIMATE SETTING

Global

Worldwide anthropogenic (man-made) greenhouse gas (GHG) emissions are tracked by the Intergovernmental Panel on Climate Change for industrialized nations (referred to as Annex I) and developing nations (referred to as non-Annex I). Man-made GHG emissions data for Annex I nations are available through 2009. Man-made GHG emissions data for non-Annex I nations are available through 2007. For the year 2009, the sum of these emissions totaled approximately 40,084 million metric tons of carbon dioxide equivalents ($MMTCO_2e$). Emissions from the top five countries and the European Union accounted for approximately 65 percent of the total global GHG emissions, according to the most recently available data (Urban Crossroads 2012)

United States

The United States was the number two producer of GHG emissions in 2009. The primary greenhouse gas emitted by human activities in the United States was carbon dioxide (CO_2),

representing approximately 83 percent of total greenhouse gas emissions. Carbon dioxide from fossil fuel combustion, the largest source of greenhouse gas emissions in the United States, accounted for approximately 78 percent of the GHG emissions.

State of California

The California Air Resources Board (CARB) compiles GHG inventories for the State of California. Based on the 2008 GHG inventory data (i.e., the latest year for which data are available) for the 2000–2008 greenhouse gas emissions inventory, California emitted 474 $MMTCO_2e$, including emissions resulting from imported electrical power in 2008. Based on the CARB inventory data and GHG inventories compiled by the World Resources Institute, California's total statewide GHG emissions rank second in the United States (Texas is number one) with emissions of 417 $MMTCO_2e$, excluding emissions related to imported power.

GREENHOUSE GASES

For the purposes of this analysis, emissions of carbon dioxide, methane, and nitrous oxide were evaluated. Although other substances such as fluorinated gases also contribute to global climate change, sources of fluorinated gases are not well defined and no accepted emissions factors or methodology exist to accurately calculate these gases. The potential for fluorinated gases to result from operation of the proposed project is primarily a concern for hydrochlorofluorocarbon emissions associated with project air conditioning leakage.

Greenhouse gases have varying global warming potential (GWP) values; GWP values represent the potential of a gas to trap heat in the atmosphere. Carbon dioxide is utilized as the reference gas for GWP, and thus has a GWP of 1. **Table 3.12-1** shows the GWPs for different GHGs for a 100-year time horizon.

TABLE 3.12-1
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIME OF SELECT GREENHOUSE GASES

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon dioxide	50–200	1
Methane	12 ± 3	21
Nitrous oxide	120	310
HFC-23	264	11,700
HFC-134a	14.6	1,300
HFC-152a	1.5	140
PFC: tetrafluoromethane (CH_4)	50,000	6,500
PFC: hexafluroethane (C_2F_6)	10,000	9,200
Sulfur hexafluoride (SF_6)	3,200	23,900

Source: Urban Crossroads 2012

Carbon Dioxide

Carbon dioxide (CO_2) is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the

combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere (EPA 2008).

Methane

Methane (CH_4) is a colorless, odorless gas that is not flammable under most circumstances. CH_4 is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (enteric fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of methane to the atmosphere. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. Methane's atmospheric lifetime is about 12 years (EPA 2006a).

Nitrous Oxide

Nitrous oxide (N_2O) is a clear, colorless gas with a slightly sweet odor. N_2O is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years (EPA 2006b).

Water Vapor

Water vapor (H_2O) is the most abundant, important, and variable greenhouse gas in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere, it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. A climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. The feedback loop in which water is involved is critically important to projecting future climate change.

As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to hold more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a positive feedback loop. The extent to which this positive feedback loop will continue is unknown, as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the earth's surface and heat it up).

There are no health effects from water vapor itself; however, when some pollutants come in contact with water vapor, they can dissolve and the water vapor can then act as a pollutant-carrying agent. The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.

EFFECTS OF GLOBAL CLIMATE CHANGE

The California Environmental Protection Agency (CalEPA) published a report titled *Scenarios of Climate Change in California: An Overview* (climate scenarios report) in February 2006 (California Climate Change Center 2006), that, while not adequate for a CEQA project-specific or cumulative analysis, is generally instructive about the statewide impacts of global warming.

The climate scenarios report uses a range of emissions scenarios developed by the Intergovernmental Panel on Climate Change (IPCC) to project a series of potential warming ranges (i.e., temperature increases) that may occur in California during the twenty-first century: lower warming range (3.0–5.5°F), medium warming range (5.5–8.0°F), and higher warming range (8.0–10.5°F). The climate scenarios report then presents an analysis of future climate in California under each warming range, that while uncertain, presents a picture of the impacts of global climate change trends in California.

In addition, most recently on August 5, 2009, the California Natural Resources Agency released a public review draft of its California Climate Adaptation Strategy report that details many vulnerabilities arising from climate change with respect to matters such as temperature extremes, sea level rise, wildfires, floods and droughts, and precipitation changes. This report responds to the Governor's Executive Order S-13-2008 that called on state agencies to develop California's strategy to identify and prepare for expected climate impacts. The report was released to the public in draft form for comment and has not yet been finalized.

According to the reports, substantial temperature increases arising from increased GHG emissions potentially could result in a variety of impacts to the people, economy, and environment of California associated with a projected increase in extreme conditions, with the severity of the impacts depending on actual future emissions of GHGs and associated warming. Under the emissions scenarios of the climate scenarios report, the impacts of global warming in California have the potential to include, but are not limited to, those discussed below.

Public Health

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25 to 35 percent under the lower warming range to 75 to 85 percent under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances, depending on wind conditions. The climate scenarios report indicates that large wildfires could become up to 55 percent more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming range scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures could

increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

Water Resources

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from Northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

If GHG emissions continue unabated, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. The amount of snowpack that could be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to water managers and hamper hydropower generation. It could also adversely affect winter tourism. Under the lower warming range, the ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing and snowboarding.

The state's water supplies are also at risk from rising sea levels. An influx of salt water could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta, a major supply of fresh water.

Agriculture

Increased GHG emissions could cause widespread changes to the agriculture industry, reducing the quantity and quality of agricultural products statewide. First, California farmers could possibly lose as much as 25 percent of the water supply they need. Although higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits, and nuts. In addition, continued global climate change could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued global climate change could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

Global climate change has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the state. In contrast, wildfires in Northern California could increase by up to 90 percent due to decreased precipitation.

Moreover, continued global climate change has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80 percent by the end of the century as a result of increasing temperatures. The productivity of the state's forests has the potential to decrease as a result of global climate change.

ENERGY CONSUMPTION

Electricity

California

In 2008, California used over 285,574 gigawatts of electricity (CEC 2009).[1] California's electricity generation system currently generates over 290,000 gigawatt-hours of electricity each year, which is transported over California's 32,000 miles of transmission lines (CEC 2007). By 2020, electricity consumption in the state is projected to reach almost 320,000 gigawatts (CEC 2009). In 2008, this electricity was produced from power plants fueled by natural gas (45.7 percent), hydrologic sources (11.0 percent), coal (18.2 percent), nuclear (14.4 percent), and renewable methods (10.6 percent). Approximately 68.1 percent of the electricity was generated within California, with the balance imported from other states, Canada, and Mexico (CEC 2009). Overall electricity use in California is projected to grow by 1.2 percent annually (CEC 2009). However, peak demand is growing at a rate of 1.30 percent (850 megawatts) per year (CEC 2009). This increase in peak demand is the result of a population that is moving inland to the warmer areas of the state, prompting higher demand for electricity for air conditioning.

Electricity usage varies substantially by the type of uses, the type of construction materials used, and the efficiency of all electricity-consuming devices within a building. The average annual usage of electricity is roughly 6,500 kilowatt hours (kWh) per residence (CEC 2007).

Electricity supply in California involves a complex grid of power plants and transmission lines located in the western United States, Canada, and Mexico. Almost 32 percent of the electricity used in California is imported from 11 other western states as well as from Canada and Mexico. The issue is complicated by market forces that have become prominent since 1998, when a new regulatory environment commonly referred to as "deregulation" took effect in California. Supply is further complicated by the fact that the peak demand for electricity is significantly higher than the off-peak demand. For example, in August 2004, peak electric demand—due in large part to

[1] Energy usage is typically quantified using the British thermal unit (BTU). As points of reference, the approximate amount of energy contained in a gallon of gasoline, a cubic foot of natural gas, and a kilowatt hour (kWh) of electricity are 124,884 BTUs, 1,000 BTUs, and 3,400 BTUs, respectively.

hot weather—reached a record high of 44,497 megawatts, which is almost double the lowest demand period.

City of Wildomar

Electric service within the City of Wildomar is provided by Southern California Edison (SCE). SCE provides electric service to approximately 14 million people throughout a 50,000-square-mile service area in central, coastal, and Southern California (SCE 2012). Electricity purchased from SCE by local customers in Riverside County, including Wildomar, is generated and transmitted to the area by a statewide network of power plants and transmission lines. Various transmission and distribution lines traverse Riverside County, serving to carry electrical power from power plants within and outside the county to electrical substations where power is converted to voltages suitable for distribution to end users. Please refer to Section 3.10, Public Services and Utilities, for an expanded discussion of electric services in Wildomar.

Natural Gas

California

In 2007, California consumed about 12,494 million therms of natural gas. The California natural gas demand in 2010 is estimated to have been just slightly less than this amount (CEC 2009). As a state, California is the second largest natural gas consumer in the United States, representing more than 10 percent of national natural gas consumption. Customers in the residential and commercial sectors, referred to as "core" customers, accounted for 29 percent of the state's natural gas demand in 2008 (CEC 2009). Large consumers such as electricity generators and the industrial sector, referred to as "noncore" customers, accounted for about 71 percent of demand in the same year. California remains heavily dependent on natural gas to generate electricity, which accounted for more than 40 percent of natural gas demand in 2008 (CEC 2009). Approximately 13.5 percent of the natural gas produced in 2006 was within California, with the balance imported via pipeline from other states and Canada (CEC 2007). California is at the farthest end of those pipelines, forcing it to compete with other states that are located closer to generation plants in Canada for supplies.

As with electricity, natural gas usage in California for different land uses varies substantially by the type of use, the type of construction materials, and the efficiency of all gas-consuming devices in a given building. The average annual usage of natural gas is roughly 45,000 cubic feet per residence.

According to the California Energy Commission's *2009 Integrated Energy Policy Report*, natural gas has become an increasingly important source of energy since more of the state's power plants rely heavily on this fuel. While California's successful efficiency programs and its reliance on renewable sources of electricity should slow the demand of natural gas, competition for the state's imported supply is increasing. This reliance on imported gas leaves the state vulnerable to price shocks and supply disruptions.

The annual forecast of North American natural gas production has decreased each year since 2002, a difference of about 8 trillion cubic feet a year (CEC 2007). The energy provider Pacific Gas and Electric has publicly commented that it believes that western Canadian natural gas production will be less than predicted, while another energy company, Sempra/SoCalGas (i.e., The Gas Company), believes that several supply basins throughout North America will produce less than forecast.

Natural gas is critical in meeting the state's energy demand. California's growing population requires more natural gas for residential heating and cooking, industrial processing, and most importantly, electricity production. Natural gas, like petroleum, has become a global commodity and California competes not just with other states for access to less abundant natural gas supplies, but also with Western Europe and Asia Pacific consumers in a world market for natural gas. The result is that prices are likely to continue increasing (CEC 2007).

Peak electricity demand in California is expected to grow at about 1.30 percent each year through 2017 and will be the sector with the largest natural gas increase over the next decade. Before 1997, natural gas consumption for electricity averaged 500 billion cubic feet each year (1,400 million cubic feet per day); however, future demand is anticipated to average 2,500 million cubic feet each day (CEC 2007).

Vehicle Energy Consumption

California

California's transportation system includes 33.5 million registered vehicles (cars, trucks, trailers, and motorcycles) and almost 170,000 miles of roads maintained by local, state, and federal governments. A total of 2,453 miles are interstate freeways. The state's motor vehicle fleet includes private passenger cars as well as buses, motorcycles, and light- and heavy-duty trucks, which are used for passenger and freight movement respectively (CEC 2007). In 2007, taxable gasoline sales (including aviation gasoline) in California accounted for 15,672,334,029 gallons of gasoline (CEC 2007).

3.12.2 REGULATORY FRAMEWORK

FEDERAL

Federal Regulation and the Clean Air Act

In the past, the US Environmental Protection Agency (EPA) has not regulated GHGs under the Clean Air Act because it asserted that the act did not authorize it to issue mandatory regulations to address global climate change and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. However, the US Supreme Court held that the EPA must consider regulation of motor vehicle GHG emissions. In *Massachusetts v. Environmental Protection Agency et al.*, twelve states and cities, including California, together with several environmental organizations, sued to require the EPA to regulate GHGs as pollutants under the Clean Air Act (127 S. Ct. 1438 (2007)). The Court ruled that GHGs fit within the Clean Air Act's definition of a pollutant and that the EPA did not have a valid rationale for not regulating GHGs. In response to this ruling, the EPA has recently made an endangerment finding that GHGs pose a threat to the public health and welfare. This is the first step necessary for the establishment of federal GHG regulations under the Clean Air Act.

STATE

Assembly Bill 1493

Assembly Bill (AB) 1493 (Pavley) of 2002 (Health and Safety Code Sections 42823 and 43018.5) requires the California Air Resources Board (CARB) to develop and adopt the nation's first GHG

emission standards for automobiles. These standards are also known as "Pavley I." The California Legislature declared in AB 1493 that global warming is a matter of increasing concern for public health and the environment. It cites several risks that California faces from climate change, including a reduction in the state's water supply, an increase in air pollution caused by higher temperatures, harm to agriculture, an increase in wildfires, damage to the coastline, and economic losses caused by higher food, water, energy, and insurance prices. The bill also states that technological solutions to reduce GHG emissions would stimulate California's economy and provide jobs. In 2004, the State of California submitted a request for a waiver from federal clean air regulations, as the State is authorized to do under the Clean Air Act, to allow the State to require reduced tailpipe emissions of CO_2. In late 2007, the EPA denied California's waiver request and declined to promulgate adequate federal regulations limiting GHG emissions. In early 2008, the State brought suit against the EPA related to this denial.

In January 2009, President Obama instructed the EPA to reconsider the Bush Administration's denial of California's and 13 other states' requests to implement global warming pollution standards for cars and trucks. In June 2009, the EPA granted California's waiver request, enabling the State to enforce its GHG emissions standards for new motor vehicles beginning with the current model year.

Also in 2009, President Obama announced a national policy aimed at both increasing fuel economy and reducing GHG pollution for all new cars and trucks sold in the United States. The new standards would cover model years 2012 to 2016 and would raise passenger vehicle fuel economy to a fleet average of 35.5 miles per gallon (mpg) by 2016. When the national program takes effect, California has committed to allowing automakers who show compliance with the national program to also be deemed in compliance with state requirements. California is committed to further strengthening these standards beginning in 2017 to obtain a 45 percent GHG reduction from the 2020 model year vehicles.

Executive Order S-3-05

Executive Order S-3-05 proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

The Executive Order directed the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce greenhouse gas emissions to the target levels. The Secretary will also submit biannual reports to the governor and state legislature describing (1) progress made toward reaching the emission targets, (2) impacts of global warming on California's resources, and (3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Secretary of CalEPA created a Climate Action Team made up of members from various state agencies and commissions. The Climate Action Team released its first report in March 2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs.

Assembly Bill 32, the California Global Warming Solutions Act of 2006

AB 32 (Health and Safety Code Sections 38500, 38501, 28510, 38530, etc.[2]) requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. The gases that are regulated by AB 32 include CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The reduction to 1990 levels will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that CARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap, institute a schedule to meet the emissions cap, and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

AB 32 does not explicitly apply to emissions from land development, though emissions associated with land development projects are closely connected to the utilities, transportation and commercial end-use sectors. Further, because AB 32 imposes a statewide emissions cap, land development-related emissions will ultimately factor into consideration of greenhouse gas emissions in the state.

Climate Change Scoping Plan

In October of 2008, CARB published its Climate Change Proposed Scoping Plan, which is the State's plan to achieve GHG reductions in California required by AB 32. The scoping plan contains the main strategies California will implement to achieve reduction of 169 million metric tons (MMT) of CO_2e, or approximately 30 percent from the state's projected 2020 emission level of 596 MMT of CO_2e under a business-as-usual scenario (this is a reduction of 42 MMT CO_2e, or almost 10 percent, from 2002–2004 average emissions). The scoping plan also includes CARB-recommended GHG reductions for each emissions sector of the state's GHG inventory. The largest proposed GHG reduction recommendations are from improving emission standards for light-duty vehicles (estimated reductions of 31.7 $MMTCO_2e$), implementation of the Low-Carbon Fuel Standard (15.0 $MMTCO_2e$), energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 $MMTCO_2e$), and a renewable portfolio standard for electricity production (21.3 $MMTCO_2e$). CARB has not yet determined what amount of GHG reductions it recommends from local government operations; however, the proposed scoping plan does state that land use planning and urban growth decisions will play an important role in the state's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions. (Meanwhile, CARB is also developing an additional protocol for community emissions.) CARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity,

[2] Assembly Bill 32 is codified at Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599.

and natural gas emission sectors. The proposed scoping plan states that the ultimate GHG reduction assignment to local government operations is to be determined. With regard to land use planning, the proposed scoping plan expects approximately 5.0 MMT CO_2e will be achieved associated with implementation of SB 375, which is discussed further below. The Climate Change Scoping Plan was approved by CARB on December 11, 2008.

The timing of the implementation of the Climate Change Scoping Plan is currently uncertain as a result of a court decision in the case of *Association of Irritated Residents v. California Air Resources Board* (San Francisco Superior Court Case No. CPF-09-509562). The court found that CARB, in its CEQA review, had not adequately explained why it selected a scoping plan that included a cap-and-trade program rather than an alternative plan.

Senate Bill 1368

Senate Bill (SB) 1368 (2006) (codified at Public Utilities Code Chapter 3) is the companion bill of AB 32. SB 1368 required the California Public Utilities Commission (CPUC) to establish a greenhouse gas emission performance standard for baseload generation from investor-owned utilities by February 1, 2007. The bill also required the California Energy Commission (CEC) to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the greenhouse gas emission rate from a baseload combined-cycle natural-gas-fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the CPUC and the CEC.

California Climate Action Registry

The California Climate Action Registry (CCAR) was established in 2000 by Senate Bill 1771 (codified at Health and Safety Code Article 6 and Public Resources Code Chapter 8.5) and modified in 2001 by Senate Bill 527 (codified at Health and Safety Code Sections 42400.4, 42801, 42810, 42821, etc.[3]) as a nonprofit voluntary registry for GHG emissions. The purpose of CCAR is to help companies and organizations with operations in the state to establish GHG emissions baselines against which any future GHG emissions reduction requirements may be applied. CCAR has developed a general protocol and additional industry-specific protocols that provide guidance on how to inventory GHG emissions for participation in the registry. The California Climate Action Registry has now merged its GHG emissions registry with the climate registry and is primarily focused on offset projects and research.

Senate Bill 1078 and Governor's Order S-14-08 (California Renewables Portfolio Standard)

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008, Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Energy Standard to 33 percent renewable power by 2020.

[3] Senate Bill 527 is codified at Health and Safety Code Sections 42400.4, 42801, 42810, 42821–42824, 42840–42843, 42860, 42870, 43021, 42410, 42801.1, and 43023.

Senate Bill 375

SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPO's regional transportation plan. CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each metropolitan planning organization's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects will not be eligible for funding programmed after January 1, 2012.

Executive Order S-13-08: The Climate Adaptation and Sea Level Rise Planning Directive

On November 14, 2008, Governor Schwarzenegger issued Executive Order S-13-08 in order to reduce and assess California's vulnerability to climate change and sea level rise. The Executive Order initiated four major actions:

- Initiate California's first statewide climate change adaptation strategy that will assess the state's expected climate change impacts, identify where California is most vulnerable, and recommend climate adaptation policies.
- Request the National Academy of Science establish an expert panel to report on sea level rise impacts in California to inform state planning and development efforts.
- Issue interim guidance to state agencies for how to plan for sea level rise in designated coastal and floodplain areas for new projects.
- Initiate a report on critical existing and planned infrastructure projects vulnerable to sea level rise. This report was released in 2009 as the *California Climate Adaptation Strategy* (CNRA 2009).

The Executive Order will provide consistency to state agencies and clarify how to address sea level rise and other climate change–related impacts in current planning efforts.

California Building Energy Efficiency Standards

Title 24, Part 6 of the California Code of Regulations, known as the Building Energy Efficiency Standards, was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. On January 12, 2010, the California Building Standards Commission adopted CALGreen and became the first state in the United States to adopt a statewide green building standards code. CALGreen will require new buildings to reduce water consumption by 20 percent, divert 50 percent of construction waste from landfills, and install low pollutant-emitting materials.

LOCAL

South Coast Air Quality Management District

The project is under jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAQMD does not offer published guidance for addressing GHG emissions and does not currently have an adopted threshold of significance for them. There are no local regulations or laws pertaining to climate change and greenhouse gas emissions. The SCAQMD does provide suggested mitigation for reducing GHG emissions in proposed projects and is moving toward a district-wide approach to addressing emissions.

3.12.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Per Appendix F and G of the CEQA Guidelines, impacts related to climate change are considered significant if implementation of the proposed project would:

1) Result in inefficient, wasteful, and unnecessary consumption of energy.

2) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

3) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

To meet the GHG emission targets of AB 32, California would need to generate in the future less GHG emissions than current levels. It is recognized, however, that for most projects there is no simple metric available to determine if a single project would substantially increase or decrease overall GHG emission levels or conflict with the goals of AB 32. Moreover, emitting CO_2 into the atmosphere is not itself an adverse environmental effect. It is the increased concentration of CO_2 in the atmosphere resulting in global climate change and the associated consequences of climate change that results in adverse environmental effects (e.g., sea level rise, loss of snowpack, severe weather events). Although it is possible to generally estimate a project's incremental contribution of CO_2 into the atmosphere, it is typically not possible to determine whether or how an individual project's relatively small incremental contribution might translate into physical effects on the environment. Given the complex interactions between various global and regional-scale physical, chemical, atmospheric, terrestrial, and aquatic systems that result in the physical expressions of global climate change, it is impossible to discern whether the presence or absence of CO_2 emitted by the project would result in any altered conditions.

However, the State of California has established GHG reduction targets and has determined that GHG emissions as they relate to global climate change are a source of adverse environmental impacts in California that should be addressed under CEQA. Although AB 32 did not amend CEQA, it identifies the myriad environmental problems in California caused by global warming (Health and Safety Code Section 38501[a]). In response to the relative lack of guidance on addressing GHGs and climate change, SB 97 was passed in order to amend CEQA by directing the Office of Planning and Research to prepare revisions to the State CEQA Guidelines addressing the mitigation of GHGs or their consequences. These revisions to the State CEQA Guidelines went into effect in January 2010. In acknowledging that perhaps the most difficult part of the climate change analysis will be the determination of significance, AB 32 requires CARB, the state agency charged with regulating statewide air quality, to recommend a

method for setting thresholds which will encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the state.

METHODOLOGY

Transportation emissions from local roads and highways were calculated using the CARB Emissions Factor software, EMFAC2007, and the estimated traffic increases from the traffic study completed by DKS Engineering. Waste emissions were calculated using the EPA's Waste Reduction Model (WARM). WARM calculates and totals GHG emissions of baseline and alternative waste management practices—source reduction, recycling, combustion, composting, and landfilling. The model calculates emissions in metric tons of carbon dioxide equivalent ($MTCO_2e$) across a wide range of material types commonly found in municipal solid waste (MSW). The California Integrated Waste Management Board (CIWMB) 2004 Waste Characterization Study provided the percentages of waste by type (paper, glass, compostables, etc.) for use in the WARM model.

PROJECT IMPACTS AND MITIGATION MEASURES

Inefficient, Wasteful, and Unnecessary Consumption of Energy (Standard of Significance 1)

Impact 3.12.1 The construction and operation of the proposed project will not result in inefficient, wasteful, and unnecessary consumption of energy. This impact is considered **less than significant**.

Construction

Implementation of the proposed project would involve construction activities that would require the use of gasoline, diesel fuel, and other fuels in order to be completed. Energy usage during construction typically involves the use of motor vehicles both for transportation of workers and equipment and for direct construction actions such as the use of cranes or lifts. Additional energy usage would occur as power for tools and equipment used on-site, including but not limited to gas generators, air compressors, air handlers and filters, and other typical direct construction energy uses.

The proposed project would use gas as a short-term consequence of project construction. Construction of the proposed improvements would be similar in the consumption level of gas as any project of this size. However, this energy demand would not result in the need for new or altered facilities given the temporary nature of construction. Furthermore, construction activities are not anticipated to result in an inefficient use of energy, as construction contractors would purchase their own gasoline and diesel fuel from local suppliers and would conserve the use of their supplies to minimize costs to the project.

Utilizing ratios provided in the Climate Action Registry General Reporting Protocol Version 3.1 (California Climate Action Registry 2009), construction of the proposed project would require approximately 200,840 gallons of diesel fuel over the course of five years (see **Appendix 3.12-1** for data outputs). This usage would constitute a small percentage of typical annual fuel usage in the state as reported by the CEC: 0.001 percent (200,840 gallons ÷ 15,672,334,029 gallons = 0.001). For these reasons and because of the temporary nature of construction activities, this effect would have a less than significant impact, as five years of construction are projected to require 0.001 percent of the average fuel usage in the state for one year.

Operations

Energy consumption, in therms for natural gas and kWh for electricity, resulting from operations of the proposed project were calculated using the CalEEMod Model and are summarized in **Table 3.12-2**.

TABLE 3.12-2
PROPOSED PROJECT ENERGY CONSUMPTION

Average Year Scenario	
Natural Gas Consumption	111,078 therms
Electricity Consumption	22,400,160 kWh

*Source: Urban Crossroads, 2012. See **Appendix 3.12-1** for data inputs.*

The proposed project would result in a greater demand for energy. SCE and the Southern California Gas Company provide energy to the Wildomar area. While the proposed project would require more energy, it is unlikely that these providers would need to increase their power supplies to serve the project. SCE's total electric demand is 87,197 gigawatt-hours (GWh) annually (82,197,500,000 kWh) (CEC 2010). The Southern California Gas Company's total natural gas demand is 5,403,000,000 therms per year (CEC 2010). The proposed project would increase electricity and natural gas consumption, but not at a level that would be considered substantial in relation to regional energy supplies. The projected increase in the electricity demand for the project would be approximately 0.03 percent of SCE's total electricity annual usage, and the projected natural gas demand of the project would be approximately 0.002 percent of the Southern California Gas Company's total natural gas demand. As such, the project would not result in energy demands that would require the development of new energy sources or affect service to existing customers.

Impacts associated with the inefficient, wasteful, and unnecessary consumption of energy would be **less than significant**.

Mitigation Measures

None required.

GHG Emissions (Standard of Significance 2)

Impact 3.12.2 The proposed project will not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. This impact is considered **less than significant**.

On February 3, 2011, the SCAQMD released the California Emissions Estimator Model (CalEEMod) Emissions Inventory Model. The purpose of this model is to more accurately calculate air quality and greenhouse gas (GHG) emissions from direct and indirect sources and to quantify applicable air quality and GHG reductions achieved from mitigation measures. As such, the latest version of CalEEMod was used for the proposed project. CalEEMod includes GHG emissions from the following source categories: construction, area, energy, mobile, waste, and water.

A summary of the proposed project's GHG emissions, as shown in **Table 3.12-3**, demonstrates that the project will result in approximately 6,051.79 $MTCO_2e$ per year and 4.38 $MTCO_2e$ per

service population (SP) per year. The proposed project would not exceed the threshold of 6.6 $MTCO_2e$ per service population per year, resulting in a **less than significant** impact.

TABLE 3.12-3
TOTAL PROJECT GREENHOUSE GAS EMISSIONS (ANNUAL) (METRIC TONS PER YEAR)

Emissions Source	Emissions (metric tons per year)			
	CO_2	CH_4	N_20	Total CO_2e
Annual construction-related emissions amortized over 30 years	74.72	0.008	–	74.88
Area source emissions	234.18	0.11	–	237.93
Energy	1,358.35	0.05	0.03	1,367.17
Mobile sources	4,118.62	0.16	–	4,122.03
Waste	84.36	4.99	–	189.06
Water usage	115.70	0.67	0.02	135.60
Total CO_2e (all sources)	**6,051.79**			
Service Population	**1,381**			
$MTCO_2e$/Service Population (SP)/Year	**4.38**			
Threshold $MTCO_{2E}$/SP/Year	**6.6**			
Significant?	**NO**			

Source: Urban Crossroads 2012. See Appendix 3.12-1 for detailed model outputs.
Note: Totals obtained from CalEEMod and may not total 100% due to rounding.

Mitigation Measures

None required.

Conflict with Applicable Plan, Policy, or Regulation (Standard of Significance 3)

Impact 3.12.3 Implementation of the proposed project will not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. The impact is considered **less than significant.**

AB 32 requires California to reduce its GHG emissions by approximately 29 percent below business as usual. CARB identified reduction measures to achieve this goal as set forth in the CARB Scoping Plan. Thus, projects that are consistent with the CARB Scoping Plan are also consistent with the 29 percent reduction below business as usual required by AB 32.

The proposed project would generate GHG emissions from a variety of sources, which would all emit CO_2, CH_4, and N_2O. GHGs could also be indirectly generated by incremental electricity consumption and waste generation from the proposed project.

Table 3.12-4 presents the 39 recommended actions (qualitative measures) identified to date by CARB in its Climate Change Proposed Scoping Plan. Of the 39 measures identified, those that would be considered to be applicable to the proposed project would primarily be those actions related to transportation, electricity and natural gas use, green building design, and industrial uses. Consistency of the proposed project with these measures is evaluated by each source-

type measure below. **Table 3.12-4** identifies which CARB-recommended actions apply to the project, and of those, whether the project is consistent therewith.

TABLE 3.12-4
RECOMMENDED ACTIONS FOR CLIMATE CHANGE PROPOSED SCOPING PLAN

ID#	Sector	Strategy Name	Applicable to Project?	Will Project Conflict with Implementation?
T-1	Transportation	Pavley I and II – Light-Duty Vehicle GHG Standards	Yes	No
T-2	Transportation	Low Carbon Fuel Standard (Discrete Early Action)	No	No
T-3	Transportation	Regional Transportation-Related GHG Targets	No	No
T-4	Transportation	Vehicle Efficiency Measures	No	No
T-5	Transportation	Ship Electrification at Ports (Discrete Early Action)	No	No
T-6	Transportation	Goods-Movement Efficiency Measures	No	No
T-7	Transportation	Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action)	No	No
T-8	Transportation	Medium- and Heavy-Duty Vehicle Hybridization	No	No
T-9	Transportation	High-Speed Rail	No	No
E-1	Electricity and Natural Gas	Increased Utility Energy efficiency Programs More Stringent Building and Appliance Standards	Yes	No
E-2	Electricity and Natural Gas	Increase Combined Heat and Power Use by 30,000 GWh	No	No
E-3	Electricity and Natural Gas	Renewables Portfolio Standard	No	No
E-4	Electricity and Natural Gas	Million Solar Roofs	No	No
CR-1	Electricity and Natural Gas	Energy Efficiency	No	No
CR-2	Electricity and Natural Gas	Solar Water Heating	No	No
GB-1	Green Buildings	Green Buildings	Yes	No
W-1	Water	Water Use Efficiency	Yes	No
W-2	Water	Water Recycling	No	No
W-3	Water	Water System Energy Efficiency	No	No
W-4	Water	Reuse Urban Runoff	No	No
W-5	Water	Increase Renewable Energy Production	No	No
W-6	Water	Public Goods Charge (Water)	No	No
I-1	Industry	Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	No	No
I-2	Industry	Oil and Gas Extraction GHG Emission Reduction	No	No

ID#	Sector	Strategy Name	Applicable to Project?	Will Project Conflict with Implementation?
I-3	Industry	GHG Leak Reduction from Oil and Gas Transmission	No	No
I-4	Industry	Refinery Flare Recovery Process Improvements	No	No
I-5	Industry	Removal of Methane Exemption from Existing Refinery Regulations	No	No
RW-1	Recycling and Waste Management	Landfill Methane Control (Discrete Early Action)	No	No
RW-2	Recycling and Waste Management	Additional Reductions in Landfill Methane – Capture Improvements	No	No
RW-3	Recycling and Waste Management	High Recycling/Zero Waste	No	No
F-1	Forestry	Sustainable Forest Target	No	No
H-1	High Global Warming Potential Gases	Motor Vehicle Air Conditioning Systems (Discrete Early Action)	No	No
H-2	High Global Warming Potential Gases	SF_6 Limits in Non-Utility and Non-Semiconductor Applications (Discrete Early Action)	No	No
H-3	High Global Warming Potential Gases	Reduction in Perfluorocarbons in Semiconductor Manufacturing (Discrete Early Action)	No	No
H-4	High Global Warming Potential Gases	Limit High GWP Use in Consumer Products (Discrete Early Action; adopted June 2008)	No	No
H-5	High Global Warming Potential Gases	High GWP Reductions from Mobile Sources	No	No
H-6	High Global Warming Potential Gases	High GWP Reductions from Stationary Sources	No	No
H-7	High Global Warming Potential Gases	Mitigation Fee on High GWP Gases	No	No
A-1	Agriculture	Methane Capture at Large Dairies	No	No

A detailed discussion of the applicability of each measure and whether the project conflicts with its implementation follows.

Transportation

CARB's Scoping Plan identifies nine transportation-related recommended actions. Action T-1 concerns improvements to light-duty vehicle technology for the purposes of reducing GHG

emissions. This action focuses on legislating improved controls for vehicle manufacturers and would not generally be considered applicable to the proposed project. Vehicles utilized by the proposed project would be subject to the Pavley standards, as applicable, and would be consistent with and not conflict with this recommended action.

Electricity and Natural Gas

Action E-1, together with Action GB-1 (Green Building), aims to reduce electricity demand by increased efficiency of utility energy programs and adoption of more stringent building and appliance standards. Elements of this action include encouraging construction of zero net energy (ZNE) buildings and implementation of passive solar design. In addition to employing on-site electricity generation, a ZNE building must either replace natural gas with renewable energy for space and water heating, or compensate for natural gas use by generating surplus electricity for sale on the state's electricity grid. The proposed project is required to comply with the 2008 Title 24 Energy Efficiency Standards and applicable green building standards. Therefore, the proposed project would not conflict with this measure.

Water Use

Action W-1 (Water Use Efficiency) is addressed through implementation of the California Building Code and water efficiency measures implemented in the City of Wildomar.

Conclusion

The proposed project is consistent with or otherwise not in conflict with the CARB Scoping Plan recommended measures and actions. As such, a qualitative assessment of the project impacts based on consistency with the CARB Scoping Plan supports the conclusion that the project's GHG emissions are not cumulatively considerable.

Results of the analysis indicate that the proposed project will not exceed the applicable quantitative thresholds. Therefore, a **less than significant** impact is expected with respect to greenhouse gas emissions.

Mitigation Measures

None required.

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4.0 – Cumulative Impacts

This section summarizes the cumulative impacts associated with the proposed project that are identified in the environmental issue areas in Section 3.0. Cumulative impacts are the result of combining the potential effects of the proposed project with past actions, existing conditions, other recently approved developments, planned developments, and reasonably foreseeable development projects in the project region. The following discussion considers the cumulative impacts of the relevant environmental issue areas.

4.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) contain an assessment of the cumulative impacts that could be associated with the proposed project. According to CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (as defined by Section 15130). As defined in CEQA Guidelines Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the DEIR together with other projects causing related impacts. A cumulative impact occurs from:

> *…the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

In addition, Section 15130(b) identifies that the following three elements are necessary for an adequate cumulative analysis:

1) Either:

   (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or,

   (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

2) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and

3) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

Where a lead agency is examining a project with an incremental effect that is not cumulatively considerable, a lead agency is not required to consider that effect significant, but must briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

4.2 CUMULATIVE SETTING

A general description of the cumulative setting is provided in Section 3.0, Introduction to the Environmental Analysis and Assumptions Used. In addition, the cumulative setting for environmental issue areas evaluated in the Draft EIR is described in the section specific to the issue area (see Sections 3.1 through 3.12).

4.3 CUMULATIVE IMPACTS ANALYSIS

Identified below is a compilation of the cumulative impacts that would result from implementation of the proposed project and other approved and proposed development in the vicinity. As described above, cumulative impacts are two or more effects that, when combined, are considerable or compound other environmental effects. Each cumulative impact is determined to have one of the following levels of significance: less than cumulatively considerable, potentially cumulatively considerable, or cumulatively considerable. The specific cumulative impacts for each environmental issue area are identified in the corresponding technical sections of Section 3.0.

SECTION 3.1 LAND USE

Cumulative Impacts to Land Use

Impact 3.1.4 Development of the proposed project will be consistent with the planning policies of the City of Wildomar General Plan while being consistent with the surrounding land uses. **No impact** will occur.

The City of Wildomar General Plan and The Farm Specific Plan will be affected by the proposed project. While the proposed project would increase the number of anticipated housing units by 29 (275 proposed vs. 246 existing), the large amount of open space and overall density of the project (2.7 units per acre) make it similar to the existing 2.6 units per acre in The Farm Specific Plan. The amenities included with the proposed project, such as parks, trails, storm drainage basins, and open space, are consistent with other development in the vicinity and with the intent of The Farm Specific Plan. The project would have the cumulative effect of reinforcing and supporting adopted residential land uses planned for the area since 1974. The proposed project also has the effect of enhancing the development of the surrounding community by providing better access to these related projects and existing developments and reducing congestion and traffic in the community. This is considered a beneficial cumulative effect.

The changes to the General Plan and The Farm Specific Plan limit the impact of the change to the area encompassed by the proposed project. The reduction in lot sizes is specific to Phase 18 of The Farm Specific Plan and would not be applicable anywhere else in Wildomar. The proposed project would have **no impact** to the General Plan or to The Farm Specific Plan

SECTION 3.2 POPULATION/HOUSING/EMPLOYMENT

Cumulative Population Growth

Impact 3.2.2 Development of the proposed project would result in a slight increase in the population of the City of Wildomar. This impact is considered **less than cumulatively considerable.**

Cumulative development in the vicinity of the project would increase the population and number of housing units in Wildomar and Riverside County. However, development at the proposed project site is consistent with the land use designations and growth assumed in the Land Use Element of the General Plan. The cumulative environmental and growth inducement effects are evaluated in the technical sections of this DEIR. Given that this growth is anticipated under in the General Plan, this impact is considered **less than cumulatively considerable**.

SECTION 3.3 TRAFFIC AND CIRCULATION

Cumulative Traffic Impacts on Local Roadways and State Highways

Impact 3.3.5 When considered with existing, proposed, planned, and approved development in the region, implementation of the proposed project would contribute to cumulative traffic volumes in the region that result in significant impacts to level of service and operations. This is considered a **cumulatively considerable** impact.

A significant cumulative impact has been identified when an intersection is projected to operate below the requisite level of service standard under pre-project conditions and the project's measurable increase in traffic, as defined by 50 or more peak-hour trips, contributes to the deficiency. Mitigation measures necessary to reduce cumulative impacts to less than cumulatively considerable are also discussed below.

Murrieta Road/Scott Road – This intersection was found to operate at an unacceptable level of service (LOS F) during the weekday PM peak hour under existing (2011) conditions and is anticipated to continue to operate at LOS F during the PM peak hour with the addition of project traffic (as measured by 50 or more peak-hour trips). It is also anticipated to operate at an unacceptable LOS (LOS F) during the AM and PM peak hours under Opening Year (2015) without Project conditions and to operate at LOS F during the peak hours in 2035 with the addition of project traffic (as measured by 50 or more peak-hour trips).

I-215 Southbound Ramps/Scott Road (#12) – This intersection is anticipated to operate at an unacceptable LOS (LOS F) during the AM and PM peak hours under Opening Year (2015) without Project conditions and is anticipated to continue to operate at LOS F during the peak hours with the addition of project traffic (as measured by 50 or more peak-hour trips).

I-215 Northbound Ramps/Scott Road (#13) – This intersection is anticipated to operate at an unacceptable level of service (LOS F) during the AM and PM peak hours under Opening Year (2015) without Project conditions and is anticipated to continue to operate at LOS F during the peak hours with the addition of project traffic (as measured by 50 or more peak-hour trips).

Cumulative impacts on these roadway intersections are considered **cumulatively considerable**.

Mitigation Measures

MM 3.3.5 The project applicant shall be required to implement, or pay a fair share of the costs of the implementation of, the following traffic improvements:

Murrieta Road/Scott Road

- Install a traffic signal.

- Construct an eastbound left turn lane.
- Restripe the southbound shared left-right turn lane as a right turn lane and construct two left turn lanes.
- Construct an additional eastbound through lane.
- Construct an additional westbound through lane and a dedicated right turn lane.

I-215 Southbound Ramps/Scott Road

- Restripe the southbound shared left-through lane as a left turn lane and construct a second left turn lane and second right turn lane.
- Construct three additional eastbound through lanes.
- Eliminate the westbound left turn lane and construct two additional through lanes and a right turn lane.

It should be noted that these improvements are consistent with the planned Bundy Canyon Road/Scott Road and Interstate 215 at Scott Road interchange improvements planned by the Riverside County Transportation Commission funded by the Transportation Uniform Mitigation Fee.

I-215 Northbound Ramps/Scott Road

- Construct a second northbound right turn lane and restripe the shared left-through lane as a through lane.
- Construct two southbound right turn lanes.
- Construct a second eastbound left turn lane and two additional through lanes.
- Construct two additional westbound through lanes and a shared through-right turn lane.

It should be noted that these improvements are consistent with the planned Bundy Canyon Road/Scott Road and Interstate 215 at Scott Road interchange improvements planned by the Riverside County Transportation Commission funded by the Transportation Uniform Mitigation Fee. This project's payment of the TUMF is considered adequate mitigation.

Timing/Implementation: *Prior to issuance of building permits*

Enforcement/Monitoring: *City of Wildomar Public Works and Building Departments*

With implementation of the intersection mitigation discussed above, project-related cumulative impacts to study area intersections would be **less than cumulatively considerable**.

SECTION 3.4 AIR QUALITY

Contribution to Nonattainment Criteria Pollutants (Standard of Significance 3)

Impact 3.4.8 Construction of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the South Coast Air Basin, will not significantly contribute to cumulative increases in emissions of criteria air pollutants that could contribute to future concentrations of pollutants for which the region is currently designated nonattainment. This impact would be considered **less than cumulatively considerable.**

CEQA Section 21100(e) addresses evaluation of cumulative effects, allowing the use of approved land use documents in a cumulative impact analysis. CEQA Guidelines Section 15064(i)(3) further stipulates that for an impact involving a resource addressed by an approved plan or mitigation program, the lead agency may determine that a project's incremental contribution is not cumulatively considerable if the project complies with the adopted plan or program. In addressing cumulative effects for air quality, the SCAQMD's Air Quality Management Plan is the most appropriate document to use because it sets forth a comprehensive program that will lead the South Coast Air Basin, including the project area, into compliance with all federal and state air quality standards. The AQMP also utilizes control measures and related emissions reduction estimates based on emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Since the proposed project is in conformance with the Air Quality Management Plan, it is appropriate to conclude that the project's incremental contribution to criteria pollutant emissions is not cumulatively considerable. As a result, this impact would be considered **less than cumulatively considerable.**

SECTION 3.5 NOISE

Contribution to Cumulative Noise Levels

Impact 3.5.5 Implementation of the proposed project will not result in a substantial contribution to cumulative noise levels. The impact would be considered **less than cumulatively considerable.**

The proposed project's contribution to the cumulative traffic noise levels along area roadways was determined by comparing the predicted noise levels with and without project-generated traffic. Traffic projections for Horizon Year (2035) with Project conditions were derived from the Riverside County Transportation Analysis Model (RivTAM) using accepted procedures for model forecast refinement and smoothing. The No Project column in **Table 3.5-12** is based on forecasts reflecting the area-wide growth in traffic anticipated between existing conditions and Horizon Year (2035) conditions. Predicted increases in future cumulative traffic noise levels along primarily affected roadways are depicted in **Tables 3.5-11** and **3.5-12**. Predicted distances to future cumulative traffic noise contours are identified in **Table 3.5-10**.

As noted in the tables, area-wide growth will result in most of the increase in noise affecting the proposed project. Implementation of the proposed project would result in predicted increases of 0.0 to 1.0 dB in 2035, and such low levels of increase are considered barely perceptible (Urban Crossroads 2012). The proposed project would not result in a substantial increase in traffic noise levels along primarily affected area roadways. It is important to note that the existing traffic noise levels presented in **Table 3.5-2** do not take into account noise reductions provided by existing structures, barriers, or terrain. Given that the proposed project would not result in a

significant contribution to traffic noise levels, the proposed project's cumulative contribution to ambient noise levels would be considered **less than cumulatively considerable**.

SECTION 3.6 GEOLOGY AND SOILS

Cumulative Soil Stability and Seismic Impacts

Impact 3.6.5 Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the City of Wildomar and nearby areas of Riverside County, would not contribute to cumulative geologic and soils impacts. The proposed project's incremental contribution would be **less than cumulatively considerable**.

Soils associated with the project site are similar to others in the area. The proposed project will grade parts of the property to result in buildable lots and supporting infrastructure. The resulting project site will be visually and topographically different from the other lands surrounding the proposed project site. While some grading occurred for the surrounding homes, much of the prior development occurred with minimal or building pad–specific grading only. As shown in **Figure 2.0-3**, the realigned Bundy Canyon Road will generally be lower that the surrounding development. Along Bundy Canyon Road, there are locations where the use of a retaining wall is necessary to allow for a more productive use of the area occupied by the slope. A retaining wall is shown in **Figure 2.0-8** between Harvest Way East and Sunset Street. The wall is necessary to provide for storm drainage basins in Unit 4 and to allow more of the commercial land in Unit 5 to be available for development.

The proposed project will either ensure that grading at the periphery is a match to existing topography to avoid subsidence or erosion, or provide appropriate engineered retaining walls at the project boundary. With compliance with existing codes and standards, including the California Building Code and implementation of mitigation measure **MM 3.6.3**, the proposed project's contribution to cumulative impacts related to the area's geology would be **less than cumulatively considerable.**

SECTION 3.7 HYDROLOGY AND WATER QUALITY

Cumulative Impacts to Hydrology and Water Quality

Impact 3.7.5 The proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the Santa Margarita and Santa Ana watersheds, could alter drainage conditions, rates, volumes, and water quality, which could result in potential erosion, flooding, and water quality impacts within the overall watersheds. This is considered a **less than cumulatively considerable** impact.

The proposed project, when considered in combination with existing, approved, proposed, and reasonably foreseeable development in the Santa Margarita and Santa Ana watersheds, would alter cumulative drainage conditions, rates, volumes, and water quality, which could result in potential flooding and stormwater quality impacts within the overall watersheds. However, as discussed in Impacts 3.7.1 through 3.7.4, the proposed project's storm drain system and implementation of a Water Quality Management Plan would reduce the project's contributions to cumulative runoff, water quality, and flooding impacts. As demonstrated by the preliminary and supplemental hydrology studies completed for the project, the proposed project does not increase the flow rate for the post-project conditions and in fact reduces it in most cases. As

such, the project is rendered non-contributory to cumulative hydrology impacts. The proposed project includes a series of drainage basins that both reduce the velocity of runoff and serve to remove debris and contaminants from the stormwater runoff. Stormwater can only enter the storm drainage lines after passing through these basins. In many cases, the stormwater also travels along vegetated aboveground pathways leading to the basin and/or drop inlets. The vegetated paths help remove contaminants and debris from the stormwater before it enters the basins and ultimately the storm drain system. The proposed project's contribution to cumulative water quality, runoff, and flooding impacts is considered to be **less than cumulatively considerable.**

SECTION 3.8 BIOLOGICAL AND NATURAL RESOURCES

Cumulative Impacts to Biological Resources

Impact 3.8.9 Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the immediate area of the proposed project, will result in the conversion of habitat and impact biological resources. This impact is considered **less than cumulatively considerable**.

The City, along with other jurisdictions in western Riverside County, participates in Multi-Species Habitat Conservation Plan (MSHCP). The MSHCP is designed to protect over 150 species and conserve over 500,000 acres in western Riverside County. Project compliance with the MSHCP and the Stephens' Kangaroo Rat Habitat Conservation Plan fully mitigates for impacts on covered species and ensures large segments of natural communities in western Riverside County will be preserved.

Implementation of mitigation measures **MM 3.8.8.a** through **MM 3.8.8c** ensures the project will be compliant with the MSHCP. As identified previously, implementation of mitigation measures **MM 3.8.4**, **MM 3.8.5a**, and **MM 3.8.5b** ensures no net loss of wetlands or waters of the State or waters of the United States. Implementation of mitigation measures **MM 3.8.2, MM 3.8.3a,** and **MM 3.8.3b** ensures that effects to nesting birds are minimized. Though the development of the proposed project will continue the urbanization of the area that began long before incorporation of the city, mitigation measures associated with the proposed project will reduce the project's contribution to cumulative impacts to a **less than cumulatively considerable** level.

SECTION 3.9 CULTURAL AND PALEONTOLOGICAL RESOURCES

Cumulative Impacts to Cultural and Paleontological Resources

Impact 3.9.5 Implementation of the proposed project, along with any foreseeable development in the project vicinity, could result in cumulative impacts to cultural resources, i.e., prehistoric sites, historic sites, and isolated artifacts and features). This contribution would be considered **less than cumulatively considerable.**

As mitigated, the direct impacts associated with the proposed project will be reduced to a less than significant level. While it is possible that grading and development will result in the accidental discovery of paleontological and cultural resources, mitigation measures and state and federal laws already in place will set in motion actions designed to mitigate these potential impacts. The proposed project is adjacent to existing development that has disturbed the soil and likely already affected any cultural or paleontological resources. As a result of surrounding

development, mitigation proposed in this section, and existing federal and state laws, this impact is considered **less than cumulatively considerable**.

SECTION 3.10 PUBLIC SERVICES AND UTILITIES

Cumulative Demand for Fire Protection and Emergency Medical Services

Impact 3.10.1d Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the immediate area, may increase the demand for fire protection and emergency medical services. However, given the requirement for CEQA review of future development, any necessary infrastructure or facilities expansion will be reviewed for potential impacts. Impacts related to the proposal project are **less than cumulatively considerable.**

The Riverside County Fire Department was contacted and determined that with standard development conditions in place, the department can provide service to the project area. Growth in the project area was previously addressed, and the proposed project is consistent with the development potential for the area. This impact is considered **less than cumulatively considerable**.

Cumulative Demand for Law Enforcement Services

Impact 3.10.2b Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the RCSD service area, would increase the demand for law enforcement services. The project's contribution to the need for expanded law enforcement services is considered **less than cumulatively considerable**.

The Riverside County Sheriff's Department was contacted and determined that law enforcement service can be provided to the project area. Growth in the project area and the related need for law enforcement services was addressed previously, and the proposed project is consistent with the development potential for the area. This impact is considered **less than cumulatively considerable**.

Cumulative Schools Impacts

Impact 3.10.3b Population growth associated with implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the cumulative setting, will not result in a significant cumulative increase in student enrollment. This is a **less than cumulatively considerable** impact.

Implementation of the proposed project is expected to result in population growth that would increase student enrollment in the Lake Elsinore Unified School District. Current state law requires that the environmental impact of new development on grade school facilities is considered fully mitigated through the payment of required development impact fees. All new development associated with the proposed project will be required to pay the applicable development impact fees. Furthermore, any significant expansion of school facilities or development of new school facilities would be subject to the appropriate CEQA environmental review, which would identify any site-specific impacts and provide mitigation to reduce those impacts. Therefore, cumulative impacts on school facilities are considered **less than cumulatively considerable**.

Cumulative Water Supply Impacts

Impact 3.10.4c Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development within the cumulative setting, would increase the cumulative demand for water supplies. However, this increased demand will not be sufficient to lead to a requirement for new water facilities and related infrastructure. The project's contribution to cumulative water supply and infrastructure impacts is considered **less than cumulatively considerable**.

To determine future water demands within its service area, the EVMWD based the predictions contained within the 2011 UWMP on the existing year (2010) demands calculated as a product of the 2010 population and the 10-year baseline per capita water use. Starting from 2020, future demands were calculated as the product of the population and the target water use (240 gallons per capita per day) was established for the EVMWD using the summation of three performance standards: indoor residential use, outdoor residential use, and commercial, industrial use, and institutional (CII) use. Water demand for 2015 was calculated as halfway between the usage in 2010 and 2020. Water use projections for years 2015, 2020, 2025, 2030, and 2035 are presented in **Table 3.10.4-1**.

The projections provided in **Table 3.10.4-1** include the demand projections of the area served by the Farm Mutual Water Company. The 2011 EVWMD Urban Water Management Plan states that it is assumed that demand within the FMWC service area will increase proportionally to the water demand increase within the EVMWD service area. For the years 2005 and 2010, the EVMWD delivered 420 and 460 acre-feet of water to the FMWC, respectively.

Cumulative Wastewater Service Impacts

Impact 3.10.5c Implementation of the proposed project, along with other existing, planned, proposed, approved, and reasonably foreseeable development within the cumulative setting, would contribute to the cumulative demand for wastewater service. However, continued implementation of EVMWD standards would ensure adequate wastewater facilities are provided. This impact is considered to be **less than cumulatively considerable**.

The proposed project will construct all of the wastewater collection systems necessary to meet its needs. There are no future phases of the project that will require additional wastewater collection or treatment facilities. Therefore, the proposed project would not contribute to cumulative wastewater infrastructure impacts, and this impact is considered **less than cumulatively considerable**.

Cumulative Solid Waste Impacts

Impact 3.10.6c Implementation of the proposed project, along with other existing, planned, proposed, approved, and reasonably foreseeable development in the region, would result in increased demand for solid waste services. This impact is **less than cumulatively considerable**.

As shown in **Table 3.10.6-1**, there is adequate capacity in the landfills that receive solid waste from the City of Wildomar. The approximate 1,221 cubic yards of solid waste generated by the proposed project will not significantly affect the life span of the receiving landfills. Further, compliance with the SRRE will reduce or divert solid waste from the landfills. The proposed

project will not contribute significantly to cumulative solid waste impacts, and this impact is considered **less than cumulatively considerable**.

Cumulative Park and Recreation Demands

Impact 3.10.7b Implementation of the proposed project, along with other existing, planned, proposed, approved, and reasonably foreseeable development, would increase the use of existing parks and would require additional park and recreation facilities within the cumulative setting, the provision of which could have an adverse physical effect on the environment. This would be a **less than cumulatively considerable** impact.

The proposed project provides parkland and open space than required to meet the City's ordinance. Further, the project will maintain its own parkland and open space. As there is more than sufficient parkland, and the project will provide maintenance for its facilities, this impact is considered **less than cumulatively considerable**.

SECTION 3.11 AESTHETICS AND VISUAL RESOURCES

Cumulative Impacts to Scenic Resources, Existing Visual Character, and Light and Glare

Impact 3.11.4 Implementation of the proposed project, in combination with the planned Bundy Canyon Road–Scott Road widening project, would contribute to the alteration of the visual character of the region. This impact is considered **less than cumulatively considerable with mitigation incorporated.**

The proposed project, in conjunction with identified improvements to Bundy Canyon Road, could be perceived to have an adverse cumulative effect on scenic resources because of the need to remove oak trees along the corridor. The proposed project may result in a loss of mature oak trees on the project site. In addition, the oak tree canopy along Bundy Canyon Road, located between Palm Avenue and Harvest Way East, may be impacted by the combination of the proposed project and the Riverside Transportation Commission's Bundy Canyon Road–Scott Road widening project. When taken together, the loss of oak trees and their habitat could be perceived to have an adverse cumulative effect on the visual character of the area. This adverse cumulative effect would be permanent. The proposed road widening project may also contribute to a cumulative change of the aesthetic character in the area from a semi-rural area to a developing residential suburban and commercial area.

Planting of new oak trees will help offset the removal of the mature oaks along Bundy Canyon Road. It is important to note that newly planted trees may not grow as quickly or survive in the areas planted. As a result, most mitigation strategies require over-planting to allow for tree morbidity during the first few years. The following mitigation measure is intended to address the loss of tree canopy along Bundy Canyon Road.

Mitigation Measures

MM 3.11.4 Prior to any development activity or the issuance of any permit or approval removing or encroaching upon oak trees on the project site (this generally includes the canopy dripline of trees within the area of ground disturbance and trees subject to changes in hydrologic regime), an Oak Tree Mitigation Plan prepared by a certified arborist, registered professional forester, botanist,

or landscape architect shall be submitted for review and approval by the City that includes:

1) A survey showing the location of oak trees 5 inches or more in diameter at breast height, as defined by Public Resources Code Section 21083.4(a).

2) The removal of all oak trees 5 inches or more in diameter at breast height shall be mitigated. Removal shall be mitigated by planting (or replanting) and maintaining oak trees. A minimum of three native oak trees of 5 gallons or larger size shall be planted for each oak tree removed that is greater than or equal to 5 inches diameter at breast height (DBH). The trees shall be planted in areas deemed appropriate by the Oak Tree Mitigation Plan, considering future lot development and interference with foundations, fencing, roadways, driveways, and utilities. Replanted oak trees shall be maintained for a period of seven years after they are planted. If any of the replanted oak trees die or become diseased, they shall be replaced and maintained for seven years after the new oak trees are planted.

3) A replanting schedule and diagram for trees removed or encroached upon by the project shall be submitted to and approved by the City. Replanted trees shall be planted in areas deemed appropriate by the Oak Tree Mitigation Plan, considering future lot development and interference with foundations, fencing, roadways, driveways, and utilities. Trees planted shall be protected from livestock and other animals.

4) Oak tree protection measures for trees to be retained within the project site shall be included in construction specifications. Each oak tree to be preserved shall be surrounded by a tree zone identified by the dripline of the tree. An orange plastic fence or other suitable type of fence shall be used to identify the tree zone during construction activities. No vegetation removal, soil disturbance, or other development activities shall occur within the tree zone in order to protect root systems and minimize compaction of the soil, unless authorized by the Oak Tree Mitigation Plan.

5) Conservation easements or funds for off-site oak woodlands conservation shall be proposed to and approved by the City.

Timing/Implementation: *Prior to any ground disturbance activities*

Enforcement/Monitoring: *City of Wildomar Planning Department and Public Works Department*

With implementation of the above mitigation measures, this impact is considered **less than cumulatively considerable.**

3.12 ENERGY USE AND GREENHOUSE GASES

All impacts related to energy use and greenhouse gases analyzed by this chapter of the DEIR are cumulative in nature and were therefore discussed in subsection 3.12.3, Impacts and Mitigation Measures, of Section 3.12.

5.0 – Project Alternatives

The alternatives analysis consists of the following components: an overview of California Environmental Quality Act (CEQA) requirements for alternatives analysis, descriptions of the alternatives evaluated, a description of alternatives considered but rejected, a comparison between the anticipated environmental effects of the alternatives and those of the proposed project, and identification of an "environmentally superior" alternative.

5.1 GENERAL CEQA REQUIREMENTS

The CEQA Guidelines require that an EIR describe a reasonable range of alternatives to a project that would feasibly attain the basic project objectives but would avoid or substantially lessen one or more of the project's significant effects (CEQA Guidelines Section 15126.6(a)).

In addition, Sections 15126.6(a) and (b) of the CEQA Guidelines require the consideration of alternatives that could reduce or eliminate any significant adverse environmental effects of the proposed project, including alternatives that may be more costly or could otherwise impede the project's objectives. The range of alternatives considered must include those that offer substantial environmental advantages over the proposed project and may be feasibly accomplished in a successful manner considering economic, environmental, social, technological, and legal factors. The CEQA Guidelines also require the identification of an "environmentally superior" alternative among the alternatives analyzed.

5.2 DEVELOPMENT OF PROJECT ALTERNATIVES

This section discusses the reasoning for selecting the alternatives and summarizes the assumptions identified for the alternatives. The range of alternatives included for analysis in an EIR is governed by the "rule of reason." The primary objective is formulating potential alternatives and choosing which ones to analyze to ensure that the selection and discussion of alternatives fosters informed decision-making and informed public participation. This is accomplished by providing sufficient information to enable readers to reach conclusions themselves about such alternatives. This approach avoids assessing an unmanageable number of alternatives or analyzing alternatives which differ too little to provide additional meaningful insights about their environmental effects. The alternatives addressed in this Draft EIR were selected in consideration of one or more of the following factors:

- The extent to which the alternative would accomplish most of the basic objectives of the project.
- The extent to which the alternative would avoid or lessen any of the identified significant effects of the project.
- The feasibility of the alternative, taking into account site suitability and parcel size, and consistency with applicable public plans, policies, and regulations.
- The appropriateness of the alternative in contributing to a "reasonable range" of alternatives necessary to permit a reasoned choice.

The alternatives analyzed in this DEIR were ultimately chosen based on each alternative's ability to feasibly attain the basic project objectives while avoiding or reducing one or more the project's significant effects. The analysis provides readers with adequate information to compare the effectiveness of identified mitigation or significant adverse impacts and to enable readers to make decisions about the project. CEQA requires EIRs to address a reasonable range of reasonable alternatives, not all potential alternatives.

PROJECT OBJECTIVES

As noted above, an EIR must describe a reasonable range of alternatives to a project that would feasibly attain the basic project objectives while avoid or reducing one or more of the project's significant effects (CEQA Guidelines Section 15126.6(a)). In identifying the range of alternatives for analysis in this EIR, the following objectives listed below, as submitted by the applicant for the project were considered:

- Provide a residential development that would assist the City in meeting its existing and future housing needs;
- Provide a project that minimizes its impact on site resources and existing residents through site design;
- Create the opportunity for future commercial/retail services to become established in the area and serve local residents;
- Provide private park and recreational amenities for the future Oak Creek Canyon residents; and
- Improve existing public access through the site by improving Bundy Canyon Road.

REASONING FOR SELECTION OF ALTERNATIVES

No Project

CEQA Guidelines Section 15126.6(e) requires that a "No Project" alternative be evaluated in an EIR. In the case where the project is a development project on identifiable property, such as the proposed project, the No Project analysis must discuss the circumstance under which the project does not proceed. The comparison is that of the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. The analysis allows the decision-makers to compare the impacts of approving the project with the impacts of not approving the project (CEQA Guidelines Section 15126.6(e)(3)(B)). It is important to note that the project area is both designated and zoned for development within The Farm Specific Plan. While taking no action on the proposed project would not result in this project moving forward, it is reasonable to assume that a project would be proposed at some point in the future consistent with The Farm Specific Plan.

Reduced Density Alternative

The original application materials requested a project with 315 single-family lots with minimum parcel sizes of 4,000 to 7,200 square feet. The Notice of Preparation (NOP) was circulated with the original project (see **Appendix 1.0-1**). While the NOP was being circulated, the project applicant met with the neighbors and residents of The Farm community and reduced the project to the 275 single-family parcels and a minimum parcel size of 4,500 square feet. Ordinarily, this reduction in project features would be the reduced density alternative; however, the applicant modified the proposed project to reflect fewer parcels and larger parcel sizes as discussed with the public. This modified project then became the proposed project for purposes of this Draft EIR.

The Reduced Density Alternative was evaluated to determine whether a smaller project would result in fewer changes to Bundy Canyon Road or a reduction in necessary utilities such as water

and sewer. As envisioned in this alternative, the proposed 4,500-square-foot lots identified for Unit 1 would be developed as 7,200-square-foot lots.

5.3 ALTERNATIVES ANALYSIS

Each alternative is compared to the proposed project and environmental impacts identified in the Draft EIR. The project alternatives are evaluated in less detail than those of the proposed project, and the impacts are described in terms of difference in outcome compared with implementing the proposed project. The analysis focuses on determining the extent to which alternatives could avoid or lessen the mitigation associated with the proposed project's impacts. **Table 5.0-2** at the end of this section provides a comparison of the environmental benefits and impacts of each alternative. The CEQA Guidelines (Section 15126.6(e)(2)) state that if the environmentally superior alternative is the "No Project" alternative, the EIR must identify an environmentally superior alternative among the other alternatives.

NO PROJECT ALTERNATIVE

Characteristics

Under the No Project Alternative, the 160.2-acre site would remain undeveloped. There would be no realignment of Bundy Canyon Road, no extension of water to the site and no new water storage. The property would remain in its current stage with the existing Farm Specific Plan and zoning. Even though the site is designated, zoned, and intended for development, this alternative assumes that the site remains vacant.

Comparative Impacts

1. Land Use

The No Project Alternative would not result in changes to The Farm Specific Plan to allow an increase in density. While the DEIR does not consider the change to the Specific Plan a significant impact, leaving the plan unaltered would result in no impact. For purposes of this alternative, no impact is considered as having less of an impact to land use than the proposed project.

2. Population, Housing, and Employment

Section 3.2, Population/Housing/Employment, notes that the proposed project could generate 895 residents at full buildout. The Draft EIR determined that this represents a 2.73 percent increase in the current population, which is considered a less than significant impact. However, the No Project Alternative would not result in any population or employment growth and therefore has impacts less than those of the proposed project.

3. Traffic and Circulation

The No Project Alternative would not result in any new trips associated with construction or operation of new buildings, similar to those of the proposed project, as no homes or commercial uses would occur and there would be no new traffic. This alternative would not realign Bundy Canyon Road; however, the alignment would eventually occur as part of the Riverside County Regional Transportation Commission project already under way. As there would be no additional traffic, the project would not result in new signals at the Sellers Road, Monte Vista Drive, Harvest Way West, Harvest Way East, and Sunset Avenue intersections with Bundy Canyon Road. As noted in **Table 3.3-11** of Section 3.3, Traffic and Circulation, these intersections would operate at an

unacceptable level of service in 2015 without the project. However, it is likely that many if not all of the intersections would be improved as part of the overall Bundy Canyon/Scott Road improvement project. Because there would be no new trips associated with the No Project Alternative, the impacts to traffic and circulation are considered less than those of the proposed project.

4. Air Quality

The air quality analysis for the proposed project identified that construction activities, such as clearing, excavation, and grading, and operation of the project would result in vehicle trips, resulting in significant emissions of nitrogen oxides (NOx) and reactive organic gases (ROG). While overall impacts are considered less than significant, the No Project Alternative would not result in any change in air quality impacts and would therefore result in less impact when compared to the proposed project.

5. Noise

As discussed in Section 3.5, Noise, the proposed project has mitigation designed to protect proposed homes from the traffic projected to use the existing and expanded Bundy Canyon Road. Impact 3.5.3 also requires additional study for future uses at the commercial site. While the mitigation measures can reduce the impacts of the proposed project, the No Project Alternative would not expose residents to noise impacts associated with Bundy Canyon Road. Noise impacts are considered less than those of the proposed project.

6. Geology and Soils

The soil types on the project site are identified in Section 3.6 Geology and Soils. As noted in Impact 3.6.3, there is undocumented artificial fill on the site that would need to be removed to allow for stable construction. Although mitigation measures reduce the impacts of the proposed project to a less than significant level, the soil impacts of the No Project Alternative are less than those of the proposed project.

7. Hydrology and Water Quality

The proposed project will result in additional impervious surface, including roadways, homes, driveways, and buildings. As discussed in Section 3.7, Hydrology and Water Quality, the project proposes to collect all on-site stormwater flows via four major subsurface storm drain systems that will convey the flows to one of eight on-site extended detention basins. The stormwater drainage system and retention areas are also intended to address water quality issues associated with the runoff. While all impacts can be reduced to a less than significant level, the No Project Alternative does not result in additional construction of impervious surfaces, and impacts to hydrology and water quality would be less than the proposed project.

8. Biological and Natural Resources

The biological assessment for the site identified the potential for disturbance to nesting raptors and migratory birds associated with construction and operation. The No Project Alternative would not result in site disturbance and therefore would have no possibility of affecting nesting habitat. Although mitigation measures outlined in Section 3.8, Biological and Natural Resources, are typical of construction projects and will reduce the impacts of the proposed project to a less than significant level, the No Project Alternative would have no impact to biological resources when compared to the proposed project.

9. Cultural and Paleontological Resources

Cultural resources have been identified on the project site. Development of the site would have the potential for disturbance of undiscovered and presently unknown cultural and paleontological resources at the time the site is graded. While mitigation measures outlined in Impact 3.9.2 reduces impact to cultural and paleontological resources to a less than significant level, the No Project Alternative would not result in site disturbance and would not have the potential to disturb unknown resources. The alternative would therefore have less of an impact than the proposed project.

10. Public Services and Utilities

Section 3.10, Public Services and Utilities, of the DEIR determined that the proposed project would not have a significant impact on public services. However, because there would be no development and therefore no demand on existing services, the No Project Alternative would have less of an impact on public services than the proposed project.

11. Aesthetics and Visual Resources

Impact 3.11.4 of Section 3.11, Aesthetics and Visual Resources, determined that the proposed project would have an impact on oak trees adjacent to Bundy Canyon Road. While mitigation included in the DEIR will reduce this impact to a less than significant impact, the no Project Alternative would not impact oak trees and would therefore have less of an impact than the proposed project.

12. Energy Use and Greenhouse Gases

The proposed project will generate greenhouse gases but at a level that is considered less than significant, as discussed in Impact 3.12.2 of Section 3.12, Energy Use and Greenhouse Gases, of the Draft EIR. The No Project Alternative would not generate any new greenhouse gasses and would therefore have less of an impact than the proposed project.

Cumulative

The No Project Alternative would leave the property in its current state, keep The Farm Specific Plan in its current form, and would not result in improvements to Bundy Canyon Road. While this alternative would result in no impacts to the environment, it also fails to meet any of the project objectives. However, because alternative is the only alternative that reduces or eliminates any of the mitigation measures, the No Project Alternative is the environmentally superior alternative.

REDUCED DENSITY ALTERNATIVE

Characteristics

The Notice of Preparation and project application materials originally submittal requested 315 parcels and 5.2 acres of commercial development. After several public meetings with residents of The Farm community and representatives from the City of Wildomar, the applicant revised the project to request 275 units and approximately 5.2 acres of commercial. However, this revision to the project occurred before preparation of this DEIR; therefore, it is the latest submittal that became the proposed project.

This alternative would further reduce the density by eliminating the reduced lot sizes planned for Units 1, 3, and 4 and keep the minimum lot size of 7,200 square feet for the entire site. The potential yield was taken by totaling all of the lot sizes as proposed for the project and depicted on the subdivision map sheets and dividing the resulting land area by 7,200 square feet. As shown in **Table 5.0-1**, this alternative would result in 26 fewer parcels than the proposed project, representing an approximate 6 percent reduction in the number of residential units.

TABLE 5.0-1
COMPARISON OF PROPOSED LOT SIZE AND YIELD TO THE REDUCED DENSITY ALTERNATIVE

	Unit 1	Unit 2	Unit 3	Unit 4	Total
Lots	1–88	173–275	89–144	145–172	
Average Lot Size Per Proposal	5,634	7,825	6,473	7,083	
Lot Size Minimum Per Proposal	4,500	7,200	6,000	6,000	
Proposed Number of Parcels	88	103	56	28	275
Alternative Number of Parcels	69	103[1]	50	27	259
Difference	19	0	6	1	26

1 Proposed lot yield was used, as the average exceeds the 7,200-square-foot minimum assumed for this alternative.

Similarly, this alternative would also keep the existing 1.1-acre commercial site shown in The Farm Specific Plan rather than increase the size of the commercial area to 5.21 acres. While it is likely that the remaining area would be developed with homes, this alternative does not include the additional land as developable.

As the Bundy Canyon Road realignment is anticipated with or without approval and construction of the proposed project, the realignment of Bundy Canyon Road remains in this alternative as shown for the proposed project.

Comparative Impacts

1. Land Use

The Reduced Density Alternative would not result in changes to The Farm Specific Plan to allow an increase in density or the increase in commercial land area. While the DEIR does not consider the change to the Specific Plan a significant impact, leaving the plan unaltered would result in no impact. For purposes of this alternative, no impact is considered as having less of an impact to land use than the proposed project.

2. Population, Housing, and Employment

Section 3.2, Population/Housing/Employment, notes that the proposed project could generate 895 residents at full buildout. The Draft EIR determined that this represents a 2.73 percent increase in the current population which is considered a less than significant impact. The Reduced Density Alternative would generate 843 residents, which is less than the proposed project and represents a 2.62 increase in the population of Wildomar. The smaller commercial area could also result in fewer potential jobs; however, the jobs projection for both the proposed project and this alternative is too speculative to determine. As this alternative would result in fewer residents and therefore less demand on services, this alternative is considered to have less of an impact than the proposed project.

3. Traffic and Circulation

The Reduced Density Alternative would result in fewer trips than the proposed project. **Table 3.3-6** in Section 3.3, Traffic and Circulation, of the DEIR estimates 3,933 daily trips from the proposed project. Using the same generation assumptions provided in **Table 3.3-5** and assuming that the 1.1-acre commercial site would develop as a gas station/car wash only, this alternative would generate 3,702 daily trips, which represents a modest 6.25 percent decrease in the number of trips. The five intersections that require traffic signals would all require signals with or without the proposed project by 2015 (see **Table 3.3-11**). The slight decrease in the number of trips does not reduce or eliminate the need for the signals, as identified by the increase in delay shown in **Table 3.3-10**. Trips associated with construction would be marginally decreased, as fewer homes would be constructed and less commercial area developed. Overall, the Reduced Density Alternative would result in fewer overall trips, but would not significantly reduce the traffic impact when compared to the proposed project. Impacts are therefore considered similar to the proposed project.

4. Air Quality

The air quality analysis for the proposed project identified that construction activities, such as clearing, excavation, and grading, and operation of the project would result in vehicle trips, resulting in significant emissions of NOx and ROG. The Reduced Density Alternative would likely result in a similar amount of grading to create the streets and parcels. As noted above, trips associated with this alternative would be fewer, although not significantly reduced from the proposed project. There would be fewer vehicle trips associated with the commercial development; however, this reduction may be offset because area residents would not benefit from shorter trips for commercial needs. Overall, the fewer homes associated with the Reduced Density Alternative will result in slightly less of an air quality impact than the proposed project.

5. Noise

As discussed in Section 3.5, Noise, the proposed project has mitigation designed to protect proposed homes from the traffic projected to use the existing and expanded Bundy Canyon Road. Impact 3.5.3 also requires additional study for future uses at the commercial site. As this alternative would allow for development within the units identified on the subdivision map, the mitigation established for the proposed project would remain in place. The mitigation for noise from Bundy Canyon Road is not solely the result of traffic from the proposed project, but rather the high traffic volumes anticipated on this connector between Interstate 15 (I-15) and Interstate 215 (I-215). While the Reduced Density Alternative may result in fewer residents subject to noise from the roadway, overall the noise impacts associated with the alternative would be similar to those of the proposed project.

6. Geology and Soils

The soil types on the project site are identified in Section 3.6, Geology and Soils. As noted in Impact 3.6.3, there is undocumented artificial fill on the site that would need to be removed to allow for stable construction. Although mitigation measures reduce the impacts of the proposed project to a less than significant level, the soil impacts of the Reduced Density Alternative are similar to those of the proposed project.

7. Hydrology and Water Quality

The proposed project will result in additional impervious surface, including roadways, homes, driveways, and buildings. As discussed in Section 3.7, Hydrology and Water Quality, the project proposes to collect all on-site stormwater flows via four major subsurface storm drain systems that will convey the flows to one of eight on-site extended detention basins. The stormwater drainage system and retention areas are also intended to address water quality issues associated with the runoff. The Reduced Density Alternative would result in slightly less impervious surface associated with the commercial development and fewer homes. It is likely that the amount of impervious surface associated with streets and sidewalks would remain similar to that of the proposed project. The largest single difference in impervious surface between this alternative and the proposed project will be the commercial area. If this area remains undeveloped, it may result in less of a need for some of the proposed storm drainage basin(s) or possibly a smaller footprint and design capacity for the basins. However, it is also likely that the system would be designed to accommodate future development of this property, which would result in a storm drainage system similar to the proposed project. Overall, the Reduced Density Alternative would result in impacts to hydrology and water quality similar to the proposed project.

8. Biological and Natural Resources

The biological assessment for the site identified the potential for disturbance to nesting raptors and migratory birds associated with construction and operation. The Reduced Density Alternative would result in similar site disturbance and impacts to biological resources as the proposed project. The mitigation measures outlined in Section 3.8, Biological and Natural Resources, are typical for construction projects and would likely also be applied to the Reduced Density Alternative. As the amount of area graded for this alternative is similar to the proposed project, the impacts to biological resources would also be similar.

9. Cultural and Paleontological Resources

Cultural resources have been identified on the project site. Development of the site would have the potential for disturbance of undiscovered and presently unknown cultural and paleontological resources at the time the site is graded. Because this alternative would also result in excavation and grading, it is likely that the mitigation measures outlined in Impact 3.9.2 of this Draft EIR would also be applied to this alternative. As the area of disturbance for the Reduced Density Alternative would be similar to that of the proposed project, impacts to cultural resources would also be similar to those of the proposed project.

10. Public Services and Utilities

Section 3.10, Public Services and Utilities, of the Draft EIR determined that the proposed project would not have a significant impact on public services. The addition of population to the City of Wildomar will result in an incremental increase in the demand for public services. As fewer new residents would result from this alternative, there would be proportionately less demand for services. The Reduced Density Alternative would be expected to have less of an impact on public services than the proposed project.

11. Aesthetics and Visual Resources

Impact 3.11.4 of Section 3.11, Aesthetics and Visual Resources, determined that the proposed project would have an impact on oak trees adjacent to Bundy Canyon Road. As this alternative would also result in the realignment of Bundy Canyon Road, the Reduced Density Alternative

would also result in impact to the oak trees. While mitigation included in the DEIR will reduce this impact to a less than significant level, this alternative would result in removal of the oak trees and would therefore have the same impact as that of the proposed project.

12. Energy Use and Greenhouse Gases

The proposed project will generate greenhouse gases but at a level that is considered less than significant, as discussed in Impact 3.12.2 of Section 3.12, Energy Use and Greenhouse Gases, of the DEIR. The Reduced Density Alternative would generate less greenhouse gases because there would be fewer homes and less traffic associated with the residential and commercial components. The larger commercial area associated with the proposed project could reduce trips by residents of the proposed project and therefore reduce greenhouse gases. The smaller commercial area associated with the Reduced Density Alternative would have fewer services and would not reduce as trips or reduce greenhouse gases as much as the proposed project. However, as the commercial uses have not been identified, it is not possible to determine whether the commercial development would in fact reduce greenhouse gases by appealing to residents and resulting in shorter trips. Overall, the fewer homes and smaller commercial project would result in fewer trips. Therefore, the Reduced Density Alternative would have less of an impact on greenhouse gases than the proposed project.

Cumulative

The Reduced Density Alternative would result in fewer homes and a smaller commercial area. This alternative would not require modification of The Farm Specific Plan and could be constructed with the current entitlements. The smaller commercial area would result in less opportunity for local commercial, meaning that both existing and future residents would have to drive farther for services. The reduction in the number of vehicle trips associated with this alternative is not sufficient to reduce the number of traffic signals or intersection improvements needed along Bundy Canyon Road. The amount of grading, development, and impact associated with this alternative is similar to that of the proposed project. Overall, while the Reduced Density Alternative does slightly reduce some impacts, the extent of physical impact on the existing environment is considered similar to that of the proposed project.

ALTERNATIVES CONSIDERED BUT REJECTED AS INFEASIBLE

Initial Submittal versus Proposed Project

The proposed project was initially submitted with 315 single-family lots and a larger proportion of smaller parcels intended for higher-density residential occupancy. After a series of public outreach meetings attended by residents in The Farm Specific Plan and others along Bundy Canyon Road, the project applicant revised the project to reduce the overall number of parcels to 275 and reduce the smaller-lot product to a single location on the west side of Harvest Way West. Because the changes to the project occurred between issuance of the NOP and preparation of the Draft EIR, the revised project became the proposed project for purposes of analysis. While not technically an alternative, several of the technical reports were completed using the project description in the NOP, with similar impact statements and mitigation measures to those of the proposed project.

Alternative Site

This alternative would place a version of the proposed project on the Sunrise Ridge property located approximately 1 mile southeast of the project site. Development on this property would

require the extension of roadways through The Farm property to Bundy Canyon Road. This site was initially selected as it would not require modification to The Farm Specific Plan and would avoid adjacency issues with the existing Farm community and would not result in modification to Bundy Canyon Road. For example, the additional traffic on Bundy Canyon Road would exacerbate issues at intersections along the roadway, without the ability to make improvements. Further, the project traffic would move through, rather than adjacent to, the existing homes in The Farm Specific Plan area. Water and wastewater services would need to be extended farther into the property, without the ability to place them in the roadway of Bundy Canyon Road as part of a larger expansion project. While the Bundy Canyon Road improvement project is planned for future construction, there is no certainty that construction of the roadway would coincide with the timing for the proposed project. While the location would eliminate the need to amend The Farm Specific Plan, the potential environmental impacts that are not associated with the proposed project site eliminated this alternative from consideration.

5.4 IDENTIFICATION OF THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Based on the evaluation contained in subsection 5.3, the No Project Alternative would be the environmentally superior alternative. The No Project Alternative would not result in any construction on the vacant land or an amendment to The Farm Specific Plan. The CEQA Guidelines require that if the alternative with the least environmental impact is the No Project Alternative, then this document must also designate the next most environmentally preferable alternative. **Table 5.0-2** provides a summary of the potential impacts of the alternatives evaluated in this section, as compared with the potential impacts of the proposed project. As shown in the table, the Reduced Density Alternative would have less of an impact in some areas by virtue of a smaller population resulting from fewer housing units and would therefore be considered the environmentally superior alternative.

TABLE 5.0-2
COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT

Environmental Issue	Proposed Project	No Project	Reduced Density
Land Use	LS	-	-
Population, Housing, and Employment	LS	-	-
Traffic and Circulation	LS	-	0
Air Quality	LS	-	-
Noise	LS	-	0
Geology and Soils	LS	-	0
Hydrology and Water Quality	LS	-	0
Biological and Natural Resources	LS	-	0
Cultural and Paleontological Resources	LS	-	0
Public Services and Utilities	LS	-	-
Aesthetics and Visual Resources	LS	-	0
Energy Use and Greenhouse Gases	LS	-	-
Cumulative	LS	-	0

- Impacts less than those of the proposed project
0 Impacts similar to those of the proposed project, or no better or worse
+ Impacts greater than those of the proposed project

TABLE 5.0-3
COMPARISON OF PROJECT ALTERNATIVES TO THE PROJECT OBJECTIVES

Project Objectives	No Project	Reduced Density
Provide a residential development that would assist the City in meeting its existing and future housing needs	No	Yes
Provide a project that minimizes its impact on site resources and existing residents through site design	No	Yes
Create the opportunity for future commercial/retail services to become established in the area and serve local residents	No	Yes
Provide private park and recreational amenities for the future Oak Creek Canyon residents	No	Yes
Improve existing public access through the site by improving Bundy Canyon Road	No	Yes

As shown in **Table 5.0-3**, the reduced density alternative reduces project impact and also meets all of the project objectives.

6.0 – Long-Term Implications

This section discusses the additional topics statutorily required by the California Environmental Quality Act (CEQA). The topics discussed include significant and unavoidable environmental impacts, growth-inducing impacts, and significant irreversible environmental changes and irretrievable commitment of resources.

6.1 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT

CEQA Guidelines Section 15126.2(b) requires an environmental impact report (EIR) to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. In addition, Section 15093(a) of the CEQA Guidelines allows the decision-making agency to determine if the benefits of a proposed project outweigh the unavoidable adverse environmental impacts of implementing the project. The City can approve a project with unavoidable adverse impacts if it prepares a "Statement of Overriding Considerations" setting forth the specific reasons for making such a judgment.

Mitigation measures identified in the EIR can reduce all identified environmental impacts to a less than significant level. Because all of the environmental impacts can be reduced to a less than significant level, there is no requirement to prepare a statement of overriding considerations.

6.2 SIGNIFICANT IRREVERSIBLE CHANGES WHICH WOULD BE CAUSED BY THE PROPOSED PROJECT SHOULD IT BE IMPLEMENTED

Table 6.0-1 lists the impacts identified in the Draft EIR that resulted in mitigation measures designed to reduce the impact to a less than significant level. The table also summarizes the intent of the mitigation measure rather than the specific language of the measure. For example, the traffic mitigation measures, MM 3.3.1 through MM 3.3.3, will result in construction within existing rights-of-way along Bundy Canyon Road. The construction will involve the installation of traffic signals, turning lanes, and pavement necessary to support the anticipated roadway improvements. The other mitigation measures summarized in **Table 6.0-1** are construction and project management requirements.

TABLE 6.0-1
SUMMARY OF SIGNIFICANT IMPACTS AND THE INTENT OF THE MITIGATION MEASURES

Impact		Level of Significance Without Mitigation	Intent of Mitigation Measure	Resulting Level of Significance
Land Use				
No significant impacts, and consequently no mitigation measures, were identified in this section of the DEIR.				
Population/Housing/Employment				
No significant impacts, and consequently no mitigation measures, were identified in this section of the DEIR.				
Traffic and Circulation				
Impact 3.3.1	Implementation of the proposed project would cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.	PS	MM 3.3.1: Installs traffic signals at specified intersections to improve the level of service by improving traffic flow.	LS
Impact 3.3.4	Implementation of the proposed project could result in temporary blockages of Bundy Canyon Road and other roadways, causing an impact on emergency access.	SM	MM 3.3.4: Requires preparation of a traffic management plan (TMP) to ensure that existing residents experience minimal disruptions (e.g. access blockages) caused by the construction of improvements associated with the project. The TMP will also inform local emergency service providers of the construction schedule and any changes in access.	LS
Impact 3.3.5	When considered with existing, proposed, planned, and approved development in the region, implementation of the proposed project would contribute to cumulative traffic volumes in the region that result in significant impacts to level of service and operations.	CC	MM 3.3.5: Installs a traffic signal and makes modifications to on and off ramps at I-215 and Scott Road. The project is responsible for their share of improvement costs at these locations. These improvements are part of the Riverside County Transportation Commission I-215 Central Project.	LCC
Air Quality				
Impact 3.4.1	Construction-generated emissions could result in an air quality violation concerning localized significance.	PS	MM 3.4.2a, MM 3.4.2b: Require dust control methods to limit the potential for wind erosion and signage reminding workers of the state law on limiting idling to less than five minutes.	LS

Impact		Level of Significance Without Mitigation	Intent of Mitigation Measure	Resulting Level of Significance
Noise				
Impact 3.5.1	The completed proposed project may expose persons to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	SM	MM 3.5.1a through MM 3.5.1f: Require construction of noise walls or barriers to protect homes from current and projected noise from traffic on Bundy Canyon Road. These measures also require weather stripping and mechanical ventilation (air conditioning/heater) so that windows can remain closed if desired.	LS
Impact 3.5.3	Completion of the proposed project may result in a substantial permanent increase in ambient noise levels in the project vicinity.	SM	MM 3.5.3: Requires a site-specific noise analysis for the future commercial development.	LS
Impact 3.5.4	Construction of the proposed project may result in a temporary increase in ambient noise levels in the project vicinity.	SM	MM 3.5.4a through MM 3.5.4d: Limit the hours of construction and requires equipment to be placed as far from homes possible during construction. Also require a 24-hour number that residents can call if they experience major noise from the project.	LS
Geology and Soils				
Impact 3.6.3	Within the project site, areas of undocumented artificial fills, alluvium, and portions of the old alluvium may become unstable as a result of the project.	SM	MM 3.6.3: Requires "over-excavation" of undocumented artificial fill and some other soil types to ensure stable foundations.	LS
Impact 3.6.4	Soils testing indicates that non-expansive and expansive soils are present within the proposed project site.	SM	MM 3.6.3: Requires "over-excavation" of undocumented artificial fill and some other soil types to ensure stable foundations.	LS
Hydrology and Water Quality				
Impact 3.7.1	Construction and operation of the proposed project will not result in erosion and water quality degradation of downstream surface water and groundwater resources.	SM	MM 3.7.1: Requires preparation of a stormwater pollution prevention plan and a Water Quality Management Plan.	LS
Biological and Natural Resources				
Impact 3.8.2	Implementation of the proposed project could result in the direct mortality or loss of habitat for	PS	MM 3.8.2: Limits timing of construction to avoid impacts to nesting birds.	LS

Impact		Level of Significance Without Mitigation	Intent of Mitigation Measure	Resulting Level of Significance
	raptors and migratory birds.			
Impact 3.8.3	Project implementation may also result in the loss of western burrowing owls through destruction of active nesting sites, as well as incidental burial of adults, young, and eggs.	PS	MM 3.8.3a and MM 3.8.3b: Require pre-construction surveys for burrowing owls.	LS
Impact 3.8.4	Implementation of the proposed project could result in disturbance and degradation of riparian habitat identified in local or regional plans, policies, or regulations, or by the CDFG or the USFWS.	PS	MM 3.8.4: Requires a vegetation plan as part of the streambed alteration agreement with the California Department of Fish and Game.	LS
Impact 3.8.5	Implementation of the proposed project would result in the loss of jurisdictional waters of the United States and waters of the State.	PS	MM 3.8.5a and MM 3.8.5b: Require that a wetland delineation be verified and establishes the regulatory process for any fill.	LS
Impact 3.8.8	Implementation of the proposed project would result in disturbance and degradation of riparian/riverine habitat, as defined in Section 6.1.2 of the MSHCP. The project may result in impacts to riparian/riverine habitats.	PS	MM 3.8.8a through MM 3.8.8c: Establish process for habitat conservation and mitigation under the MSHCP Guidelines.	LS
Cultural and Paleontological Resources				
Impact 3.9.2	Implementation of the proposed project could result in a substantial adverse change in the significance of an archaeological resource, as well as the potential disturbance of currently undiscovered cultural resources (i.e., prehistoric archaeological sites, historical archaeological sites, and isolated artifacts and features) and human remains.	PS	MM 3.9.2a and MM 3.9.2b: Require a tribal representative on site during excavation and requires construction to halt if cultural resources are discovered.	LS
Impact 3.9.3	Implementation of the proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	PS	MM 3.9.3: Requires a paleontologist on site during excavation.	LS
Impact 3.9.4	No human remains have been identified within the project site; however, implementation of the	PS	MM 3.9.4: Requires specific steps should human remains be discovered.	LS

Impact		Level of Significance Without Mitigation	Intent of Mitigation Measure	Resulting Level of Significance
	proposed project could result in the inadvertent disturbance of currently undiscovered human remains. Any discovery of human remains would trigger state law governing the treatment of human remains.			
Public Services and Utilities				
No significant impacts, and consequently no mitigation measures, were identified in this section of the DEIR.				
Aesthetics and Visual Resources				
Impact 3.11.4	Implementation of the proposed project, in combination with the planned Bundy Canyon Road–Scott Road widening project, would contribute to the alteration of the visual character of the region.	SM	MM 3.11.4: Requires a detailed survey of oaks actually impacted by the final construction plans and establishes a replacement ratio for oaks that must be removed.	LCC
Energy Use and Greenhouse Gases				
No significant impacts, and consequently no mitigation measures, were identified in this section of the DEIR.				

The mitigation measures summarized in **Table 6.0-1** and described in detail in this Draft EIR are similar to other construction-related requirements in the City of Wildomar. The specific location of the traffic signal and roadway improvements is based on the traffic impact analysis included as **Appendix 3.3-1** of this DEIR. The physical installation of traffic signals is similar to other intersections in the city and results in the need for excavation for footings, the installation of metal traffic signal support poles, and the use of power to operate the signals. Depending on the type of signal, there may also be detectors placed in the roadway surface to trigger the signal. The intersection improvements will involve sidewalk, curb, and gutter with a small amount of pavement and paint used for turn lanes. The improvements at each intersection will be consistent with the City of Wildomar development standards as well as with the design expectations for Bundy Canyon Road.

There are no unique or extraordinary mitigation measures or requirements necessary for this development project to reduce environmental impacts to a less than significant level.

6.3 GROWTH-INDUCING IMPACTS

INTRODUCTION

The California Environmental Quality Act (CEQA) Guidelines Section 15126.2(d) requires that an EIR evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined by in CEQA Guidelines Section 15126.2(d) as follows:

> *…the way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth…Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also…the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.*

A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project, for example, involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises) or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, a project would indirectly induce growth if it would remove an obstacle to additional growth and development such as removing a constraint on a required public service. For example, a project providing an increased water supply in an area where water service historically limited growth could be considered growth-inducing.

The CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

The CEQA Guidelines state that it is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment (CEQA Guidelines Section 15126.2[d]). However, growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service. A project that would induce "disorderly" growth (growth that conflicts with local land use plans) could indirectly cause additional adverse environmental impacts and other public services impacts. Thus, to assess whether a growth-inducing project would result in adverse secondary effects, it is important to assess the degree to which the growth accommodated by a project would or would not be consistent with applicable land use plans.

COMPONENTS OF GROWTH

The timing, magnitude, and location of land development and population growth in a community or region are based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and nonresidential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Since the general plan of a community defines the location, type, and intensity of growth, it is the primary means of regulating development and growth in California.

GROWTH INDUCEMENT POTENTIAL

As described in Section 2.0, Project Description, implementation of the proposed project would involve the development of 275 single-family homes in the City of Wildomar. This project will require a modification of The Farm Specific Plan, a rezoning of the project site, and the approval of Tentative Tract Map 36388.

The proposed project also includes construction of public improvements necessary to support the subdivision, including two 500,000-gallon water tanks and an access road, a realigned portion of Bundy Canyon Road, and internal and external roadway improvements to City of Wildomar standards. The Draft EIR does not address the future development of the contained commercial property except in a conceptual manner, as there are no proposed land uses or specific development plans for the commercial portion of the site at this time.

SECONDARY EFFECTS OF GROWTH

Development of the proposed project would result in additional water storage, more travel lanes for a small portion of Bundy Canyon Road, and the extension of additional electrical and sewer lines into The Farm Specific Plan area for the proposed project. The project area has been zoned for medium-density residential development, and as shown in **Figure 2.0-2**, much of the area surrounding the proposed project is already subdivided for residential development. Extension of utilities into this area of the city will allow for future development consistent with the existing General Plan and zoning designations; however, the growth potential is limited in this area by topography and existing development.

Construction of a portion of Bundy Canyon Road is consistent with the Bundy Canyon Road/Scott Road Improvement Project improvements proposed by the Riverside County Transportation Commission (RCTC) and will eventually result in additional traffic capacity. The additional capacity could increase the amount of traffic traveling between Interstate 15 (I-15)

in the west and Interstate 215 (I-215) (via Scott Road) in the east. The eventual widening of Bundy Canyon Road between I-15 and I-215 is part of the regional transportation improvements managed by the RCTC and numerous cities in Riverside County. A separate EIR will be prepared for the full Bundy Canyon Road improvement, which is appropriate as the proposed project contains only a small portion of the overall road length.

GROWTH IMPACT OF THE REQUESTED CHANGE IN DENSITY FOR THE FARM SPECIFIC PLAN

Density is the ratio of land area to the number of dwelling units and can be expressed in either gross density or net density. Gross density is the simple division of the number of proposed dwelling units by the total land area. For the proposed project, this results in a density of 1.72 units per acre (275 units ÷160.2 acres = 1.72 units per acre). The existing Farm Specific Plan has a density of 1.27 units per acre (1,934 units ÷1,520 acres = 1.27 units per acre). Densities can also be expressed in terms of units per acre of residentially developable land. Using this metric, the proposed project would result in 2.70 units per acre (1,963 units ÷ 726.9 acres = 2.70 units per acre). This is an increase of .08 units per acre to the existing 2.62 units per acre allowed in the existing Farm Specific Plan (1,934 units ÷726.9 acres = 2.62 units per acre).

Net density is a figure derived by subtracting nondevelopable areas, such as roadways, dedications, and open space, from the total acreage. For the proposed project, this also includes the 5.21-acre commercial area, as it will not result in residential units. As shown in **Table 6.0-2,** the net density for the proposed project will average 7.0 units per acre for the 41.30 acres of residentially developable land. This is an increase of 2.5 units per acre from the existing 4.5 units per acre allowed in The Farm Specific Plan for the same area. This increase results in an allowable increase in the number of homes from 243 to 290 for the project area. The proposed project is requesting 275 dwelling units, which is less than the proposed changes to The Farm Specific Plan would allow. Note that both the existing Farm Specific Plan and the proposed project keep most of the project area in open space or roadways (105.5 acres of streets and open space for the existing Farm Specific Plan and 113.7 for the proposed project), which, when combined with biological and topographical constraints, substantially reduces the potential number of dwelling units.

TABLE 6.0-2
COMPARISON OF EXISTING FARM SPECIFIC PLAN DENSITIES TO PROPOSED PROJECT

Phase	Total Acreage		Parcels		Gross Density		Street Acreage		Net Density		Open Space	
	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed
9	83.0	68.3	104.0	84.0	1.3	1.2	16.1	13.7	4.6	8.3	44.5	44.5
17A	56.7	66.2	88.0	103.0	1.6	1.6	12.0	13.4	5.1	5.3	27.3	33.4
18	19.4	20.5	54.0	88.0	2.8	4.3	4.8	6.6	3.9	7.5	0.8	2.1
19	1.1	5.2	–	–	–	–	–	–	–	–	–	–
Total	160.2	160.2	246.0	275.0	1.9	2.4	11.0	11.2	4.5	7.0	24.2	26.7

Source: Project Description

When considered with the remainder of The Farm Specific Plan, however, the gross density does not change from the existing 1.3 dwelling units per acre and the overall net density increases

from 2.6 to 2.7 units per acre. This overall increase in density is not considered a significant change in the allowable density, allowing a difference of only 40 units over the 739 existing net acres and representing an increase of approximately 2 percent. The increase in density associated with the proposed project is localized to only the area affected by the proposed project and would not result in any changes to existing allowable density for the remainder of The Farm Specific Plan.

TABLE 6.0-3
COMPARISON OF EXISTING AND PROPOSED FARM SPECIFIC PLAN DENSITIES

Total Acreage		Streets & Open Space		Net Acreage		Total Units		Gross Density		Net Density	
Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed
1,520.0	1,520.0	780.8	784.8	739.2	735.2	1,934.0	1,963.0	1.3	1.3	2.6	2.7

Source: Project Description

As shown in **Table 6.0-3**, the overall changes to The Farm Specific Plan requested by the proposed project are small and would not result in substantial new growth or development within the Specific Plan area.

7.0 – Report Preparers

City of Wildomar Planning Director	Matt Bassi

PMC – EIR CONSULTANT

EIR Project Manager	Mark Teague, AICP
Environmental Planner	Seth Myers
Environmental Planner	Mark Corcoran
Principal Biologist	Joyce Hunting
Graphics	Jonathan Faoro
Graphics	Nam Nguyen
Technical Editor	Suzanne Wirth

AIR QUALITY IMPACT ANALYSIS	**URBAN CROSSROADS**
GREENHOUSE GAS ANALYSIS	**URBAN CROSSROADS**
JURISDICTIONAL DELINEATION OF WATERS AND WETLANDS	**PRINCIPE AND ASSOCIATES**
NESTING SEASON SURVEY BURROWING OWL	**PRINCIPE AND ASSOCIATES**
NOISE IMPACT ANALYSIS	**URBAN CROSSROADS**
PHASE I CULTURAL RESOURCES ASSESSMENT	**JEAN A. KELLER, PH.D.**
PHASE II CULTURAL RESOURCES TEST INVESTIGATION	**JEAN A. KELLER, PH.D.**
TRAFFIC IMPACT ANALYSIS	**URBAN CROSSROADS**
WESTERN RIVERSIDE COUNTY MULTIPLE SPECIES HABITAT CONSERVATION PLAN CONSISTENCY ANALYSIS	**PRINCIPE AND ASSOCIATES**