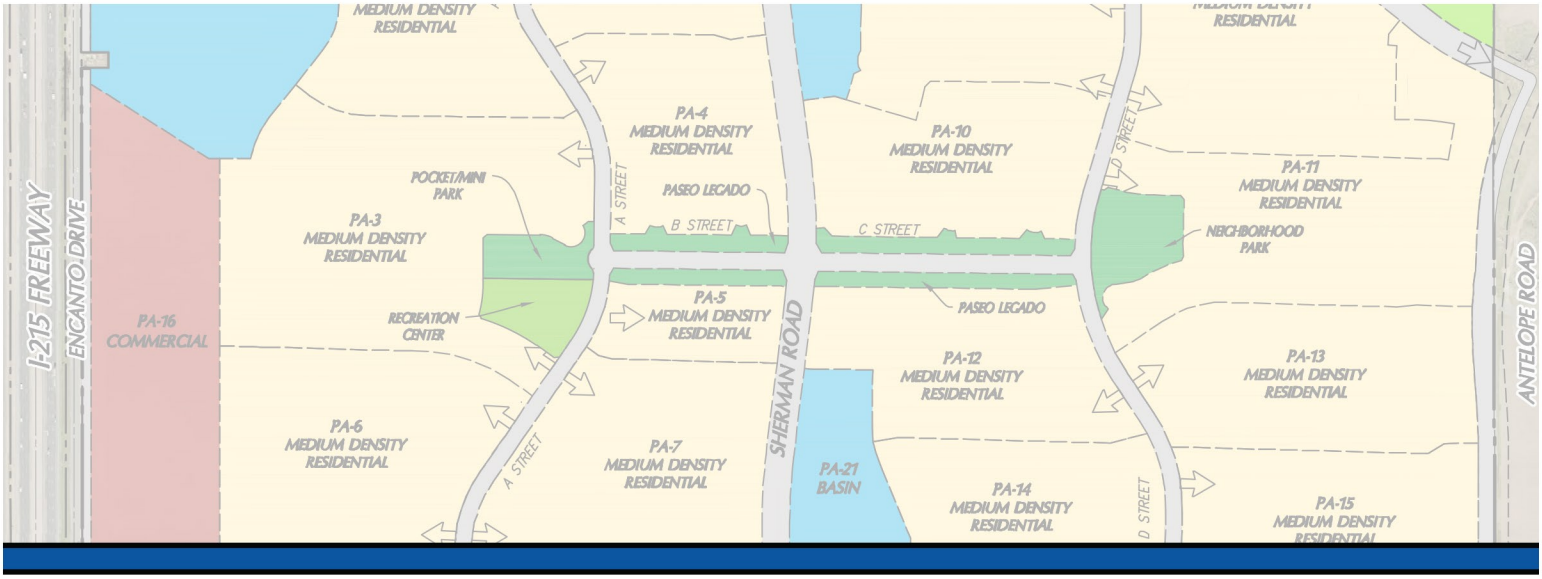

Draft Environmental Impact Report

SCH No. 2009091118

Legado Specific Plan

City of Menifee, California

Lead Agency

MENIFEE
New. Better. Best.

City of Menifee
Planning Division
29844 Haun Road
Menifee, CA 92586

January 2020

Draft Environmental Impact Report
SCH No. 2009091118

Legado Specific Plan
City of Menifee, California

Lead Agency
City of Menifee
Planning Division
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Lead Agency Discretionary Permits
Specific Plan No. 2017-187 (SP 2017-187)
Change of Zone No. 2017-188 (CZ 2017-188)
Tentative Tract Map No. 37391 (TTM 37391)
Tentative Tract Map No. 37408 (TTM 37408)
Tentative Tract Map No. 37409 (TTM 37409)

January 2020

TABLE OF CONTENTS

Section Name and Number — Page Number

TABLE OF CONTENTS (CONT'D)

Section Name and Number **Page Number**

TABLE OF CONTENTS (CONT'D)

Section Name and Number **Page Number**

TABLE OF CONTENTS (CONT'D)

TABLE OF CONTENTS (CONT'D)

Section Name and Number — Page Number

TABLE OF CONTENTS (CONT'D)

Section Name and Number **Page Number**

TABLE OF CONTENTS (CONT'D)

Section Name and Number **Page Number**

EIR TECHNICAL APPENDICES (BOUND SEPARATELY)

Appendix A: Initial Study for Fleming Ranch Specific Plan EIR, Notice of Preparation (NOP), and Written Comments on the NOP.

Appendix B: Urban Crossroads, Inc., 2019a. *Legado Specific Plan Air Quality Impact Analysis City of Menifee*. August 16, 2019.

Appendix C1: Glen Lukos Associates, Inc. (GLA), 2019a. *Biological Technical Report for Fleming Ranch Located in the City of Menifee, Riverside County, California*. October 13, 2017 [revised April 26, 2018, September 5, 2018, and August 6, 2019].

Appendix C2: Glen Lukos Associates, Inc. (GLA), 2019b. *Jurisdictional Delineation of Fleming Ranch, City of Menifee, Riverside County, California*. October 13, 2017 [revised April 26, 2018 and August 7, 2019].

Appendix C3: Glen Lukos Associates, Inc. (GLA), 2019c. *Western Riverside County Multiple Species Habitat Conservation Plan Determination of Biologically Equivalent or Superior Preservation For Impacts to Riparian/Riverine Resources Fleming Ranch Project*. November 15, 2017 [revised February 15, 2018, September 5, 2018, August 7, 2019, and December 9, 2019].

Appendix C4: Glen Lukos Associates, Inc. (GLA), 2019d. *Addendum to the Biological Technical Report and the Jurisdictional Delineation Report for the Legado Development Project, City of Menifee, Riverside County*. October 4, 2019.

Appendix D: LSA Associates, Inc. (LSA), 2018. *Cultural Resources Assessment Update Fleming Ranch, Menifee, Riverside County, California*. April 2018.

Appendix E: Urban Crossroads, Inc., 2019e. *Legado Specific Plan Energy Analysis City of Menifee*. August 16, 2019.

Appendix F1: LGC Geotechnical, Inc. (LGC), 2017a. *Preliminary Geotechnical Evaluation for Proposed Approximately 386 Acre "Fleming Ranch" Development, City of Menifee, Riverside County, California*. March 16, 2017.

Appendix F2: LGC Geotechnical, Inc. (LGC), 2017b. *Geotechnical Discussion Regarding Site Hydro-Collapse Potential, Proposed Approximately 386 Acre "Fleming Ranch" Development, City of Menifee, Riverside County, California*. April 10, 2017.

Appendix F3: LSA Associates, Inc. (LSA), 2017. *Paleontological Resources Assessment Fleming Ranch, Menifee, County of Riverside, California*. October 2017.

Appendix G: Urban Crossroads, Inc., 2019b. *Legado Specific Plan Greenhouse Gas Analysis City of Menifee*. August 16, 2019.

Appendix H: Petra Geosciences, Inc., 2016. *Phase I Environmental Site Assessment Approximately 327+/- Acres (Fleming Ranch Project), Assessor Parcel Numbers (APNs) 333-020-003; -004; -006; -007; 333-030-012; -013, and a large portion of -019; Adjacent the South Side of Rouse Road and East Side of Encanto Drive, City of Menifee, Riverside County, California*. July 13, 2016.

EIR TECHNICAL APPENDICES (BOUND SEPARATELY)

Appendix I1: K&A Engineering, Inc. (K&A), 2019a. *Preliminary Drainage Report Legado Development City of Menifee*. April 2019.

Appendix I2: K&A Engineering, Inc. (K&A), 2019b. *Preliminary Project Specific Water Quality Management Plan*. July 2019.

Appendix J: Urban Crossroads, Inc., 2019c. *Legado Specific Plan Noise Impact Analysis City of Menifee*. May 24, 2019.

Appendix K: Urban Crossroads, Inc., 2019d. *Legado Specific Plan Traffic Impact Analysis City of Menifee*. December 5, 2019.

Appendix L1: Eastern Municipal Water District (EMWD), 2017a. *Water Supply Assessment Report Fleming Ranch Project (SP 2017-187)*. September 20, 2017.

Appendix L2: Eastern Municipal Water District (EMWD), 2019. *Fleming Ranch Water Supply Assessment.* July 9, 2019.

Appendix M: Written Correspondence

LIST OF FIGURES

Figure Name and Number

LIST OF FIGURES (CONT'D)

LIST OF TABLES (CONT'D)

Table Name and Number | Page Number

LIST OF TABLES

Table Name and Number

LIST OF TABLES (CONT'D)

LIST OF TABLES (CONT'D)

LIST OF TABLES (CONT'D)

LIST OF TABLES (CONT'D)

ACRONYMS AND ABBREVIATIONS

Acronym	Definition
A-P Act	Alquist-Priolo Earthquake Fault Zoning Act
AB	Assembly Bill
AC	Asphalt Concrete
ACM	Alternative Calculation Method
ACOE	United States Army Corps of Engineers
AD	(Year) Anno Domini (Refers to the Current Era of Time)
ADT	Average Daily Traffic
AEP	Association of Environmental Professionals
AFY	Acre Feet Per Year
AIA	Airport Influence Area
AIRFA	American Indian Religious Freedom Act
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
AM	(Time) Ante Meridiem (Before Noon)
amsl	above mean sea level
AOI	Area of Interest
AQA	Age-Qualified Alternative
AQIA	Air Quality Impact Analysis (Technical Appendix)
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
APN or APNs	Assessor Parcel Number(s)
APS	Alternative Planning Strategy
ASTM	American Society for Testing and Materials
BAAQMD	Bay Area Air Quality Management District
BAU	Business as Usual
BC	(Year) Before Christ (Preceding Era of Time)
BFSA	Brian F. Smith and Associates, Inc. (Technical Consultant)
BMPs	Best Management Practices
C	Celsius
C_2F_6	Hexafluoroethane
CA	California
CAA	Federal Clean Air Act of 1970
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
Cal	California
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Building Standards Code
Caltrans	California Department of Transportation
Calveno	California Vehicle Noise Emissions Levels
CAPCOA	California Air Pollution Control Officers Association
CAPPSA	Criteria Area Plant Species Survey Area
CARB	California Air Resources Board
CASSA	Criteria Area Species Survey Area

ACRONYMS AND ABBREVIATIONS (CONT'D)

Acronym	Definition
CAT	Climate Action Team
CBC	California Building Code
CBSC	California Building Standards Commission
CCAA	California Clean Air Act of 1988
CCCC	California Climate Change Center
CCR	California Code of Regulations
CD	Consistency Determination
CDC	California Department of Conservation
CDE	California Department of Education
CDF	California Department of Forestry
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CESA	California Endangered Species Act of 1970
CF_4	Tetrafluoromethane
CF_3CH_2F	HFC-134a Tetrafluoroethane
CFCs	Chlorofluorocarbons
CFD	Communities Facilities District
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGC	California Government Code
CFGC	California Fish and Game Code
CGS	California Geological Survey
CH_4	Methane
CHF_3	HFC-23 Fluoroform
CH_3CHF_2	HFC-152a Difluoroethane
CHRIS	California Historical Research Information System
CIWMB	California Integrated Waste Management Board
CIWMP	Countywide Integrated Waste Management Plan
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	Carbon Monoxide or Commercial Office (General Plan Land Use Designation)
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
COA	Condition of Approval
COG	Council of Governments
COHb	carboxyhemoglobin
Cont'd	Continued (From Previous Page)
COP	Community Oriented Policing
COPPS	Community Oriented and Policing Problem Solving
CPPD	Compatibility Plan Policy Document
C-P-S	Scenic Highway Commercial (Zoning Classification)
CPUC	California Public Utilities Commission

ACRONYMS AND ABBREVIATIONS (CONT'D)

Acronym	Definition
CR	Commercial Retail (General Plan Land Use Designation)
CTC	California Transportation Commission
CTM	Caltrans Test Method
CTR	California Toxics Rule
CWA	Clean Water Act
CWC	California Water Code
c.y.	cubic yards
CZ	Change of Zone
CZ 2017-188	Change of Zone 2017-188
DA	Development Agreement
dB	decibel(s)
dBA	A-weighted Decibels
dBA Leq	Equivalent Continuous Sound Level
DBESP	Determination of Biologically Equivalent or Superior Preservation
DEH	Department of Environmental Health
DIF	Development Impact Fee
DOC	Department of Conservation
DOE	Determination of Eligibility
DOSH	Division of Occupational Safety and Health
DOT	U.S. Department of Transportation
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances Control
du/ac	dwelling units per acre
DWR	Department of Waste Resources or Department of Water Resources
E+P	Existing + Project
EDC	Economic Development Corridor
EDR	Environmental Data Resources, Inc.
e.g.	exempli gratia, meaning "for example"
EI	Expansion Index
EIR	Environmental Impact Report
EMFAC	EMission FACtor model
EMWD	Eastern Municipal Water District
EO	Executive Order
EPA	Environmental Protection Agency
EPD	Environmental Programs Department
EPCRA	Emergency Planning and Community Right-to-Know Act
EPS	Emission Performance Standard
ESA	Federal Endangered Species Act (in Section 4.4) or Environmental Site Assessment (Technical Appendix)
EVMWD	Elsinore Valley Municipal Water District
F	Fahrenheit
FAA	Federal Aviation Commission
FAR	Floor Area Ratio
FC	California Fire Code

ACRONYMS AND ABBREVIATIONS (CONT'D)

Acronym	Definition
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
FIMA	Federal Insurance and Mitigation Administration
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FSOR	Final Statement of Reason
FTA	Federal Transit Administration
FYI	For Your Information
Gg	Gigagrams
GBN	Ground-Based Noise
GBV	Ground-Based Vibration
GCC	Global Climate Change
GHG	Greenhouse Gas
GHGA	Greenhouse Gas Analysis (Technical Appendix F)
GLA	Glenn Lukos Associates (Technical Consultant)
Gov.	Government
GIS	Geographic Information System
g/L	Grams Per Liter
gpd	Gallons Per Day
GPCD	Gallons Per Capita Per Day
gpm	Gallons Per Minute
GPS	Geographic Positioning System
GPLUA	No Project/General Plan Land Use Alternative
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWP	Global Warming Potential
GWR	Groundwater Recharge
H_2O	Water
H_2S	Hydrogen Sulfide
HANS	Habitat Evaluation and Acquisition Negotiation Strategy
HCD	Office of Housing and Community Development
HCM	Highway Capacity Manual
HET	High-Efficiency Toilets
HCP	Habitat Conservation Plan
HFCs	Hydrofluorocarbons
HI	Hazard Index
HMTA	Hazardous Materials Transportation Act
HMTUSA	Hazardous Materials Transportation and Uniform Safety Act
HOA	Home Owners Association
hot spot	Localized Area of Carbon Monoxide Concentration
HSC	Health and Safety Code
HSWA	Hazardous and Solid Waste Amendments

ACRONYMS AND ABBREVIATIONS (CONT'D)

Acronym	Definition
HWCL	California Hazardous Waste Control Law
I-15	Interstate 15
I-215	Interstate 215
IBC	International Building Code
ICAO	International Civil Aviation Organization
i.e.	id est, meaning "that is"
IEPR	Integrated Energy Policy Report
ILFP	In-Lieu Fee Program
in.	inches
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITE	Institute of Transportation Engineers
ITS	Intelligent Transportation Systems
ITP	Incidental Take Permits
IWMA	Integrated Waste Management Act
JPA	Joint Powers Authority
K-5	Kindergarten through Fifth Grade (Elementary School)
L1 to L8	Project Site Noise Level Measurement Locations (Project Specific)
LACM	Natural History Museum of Los Angeles County
LAFCO	Local Agency Formation Commission
LAPM	Los Angeles Pocket Mouse
LCA	Life-Cycle Analysis
LCFS	Low Carbon Fuel Standard
LDN	Day-Night Average Noise Level
Leq	Equivalent Sound Level
LOS	Level(s) of Service
LSA	LSA Associates, Inc. (Technical Consultant) or Lake and Streambed Alteration Agreement
LRA	Local Responsibility Areas
LST	Localized Significance Thresholds
MARB	March Air Reserve Base
MBTA	Migratory Bird Treaty Act
MDR	Medium Density Residential
mgd	Million Gallons per Day
MHCP	Multiple Habitat Conservation Program
MHMP	Multi-Hazard Mitigation Plan
MICR	Maximum Individual Cancer Risk
MM	Mitigation Measure
mph	Miles Per Hour
MVTS	Moreno Valley Transfer Station
MMRP	Mitigation, Monitoring and Reporting Program

ACRONYMS AND ABBREVIATIONS (CONT'D)

Acronym	Definition
MT	Metric Tons
MMT	Million Metric Tons
MMTCO2e	Million Metric Tons of Carbon Dioxide Equivalent
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
MSHCP	Multiple Species Habitat Conservation Plan
MUN	Municipal and Domestic Supply
MUSD	Menifee Unified School District
MUTCD	Manual on Uniform Traffic Control Devices
MW	Megawatt
MWD	Metropolitan Water District
MWh	Megawatt-Hour
N	Nitrogen
N_2	Nitrogen Gas
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NALMAS	North American Land Mammal Ages
NCCP	Natural Community Conservation Planning
n.d.	no date
NDA	No Project/No Development Alternative
NDC	Nationally Determined Contributions
NEPSSA	Narrow Endemic Plant Species Survey Area
NIOSH	National Institute for Occupational Safety and Health
NEPA	National Environmental Policy Act
NEPSSA	Narrow Endemic Plant Species Survey Area
NEV	Neighborhood Electric Vehicle
NFIP	National Flood Insurance Program
NHL	National Historic Landmarks
NHPA	National Historic Preservation Act
NLR	Noise Level Reduction
N_2O	Nitrous Oxide
No.	Number
NO_2	Nitrous Dioxide
NO_3	Nitrate
NO_x	Oxides of Nitrogen
NOP	Notice of Preparation
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NPS	Non-Point Source or National Park Service
NPPA	Native Plant Protection Act
NPRM	Notice of Proposed Rule Making
NR	Noise Reduction
NRHP	National Register of Historic Places
NTR	National Toxics Rule
NVIA	Noise and Vibration Impact Assessment

ACRONYMS AND ABBREVIATIONS (CONT'D)

Acronym	Definition
O_2	Oxygen
O_3	Ozone
OHWM	Ordinary High Water Mark
OPR	Office of Planning and Research
OS-C	Open Space-Conservation (General Plan Land Use Designation)
OS-R	Open Space-Recreation (General Plan Land Use Designation)
OS-W	Open Space-Water (General Plan Land Use Designation)
OSHA	Occupational Safety and Health Administration
PA	Planning Area
Pb	Lead
PCBs	Polychlorinated Biphenyls
pCi/L	picocuries per liter
PDF	Project Design Feature
PEL	Permissible Exposure Limit
PeMS	Caltrans Performance Measurement System
PF	Public/Quasi Public Facilities (General Plan Land Use Designation)
PFCs	Perfluorocarbons
PHF	Peak Hour Factor
PM	(Time) Post Meridiem (After Noon)
PM_{10}	Particulate Matter (<10 micrometers)
$PM_{2.5}$	Particulate Matter (<2.5 micrometers)
ppb	parts per billion
pph	persons per household
ppm	parts per million
ppt	parts per trillion
PPV	Peak Particle Velocity
PQP	Public/Quasi Public
PRIMP	Paleontological Resource Impact Mitigation Program
PRPA	Paleontological Resources Preservation Act
PRC	Public Resources Code
psf	per square foot
PTI	Post-Tensioning Institute
PTSOR	Parks, Trails, Open Space and Recreation Master Plan
PUC	Public Utilities Code
PUHSD	Perris Union High School District
R	Residential (General Plan Land Use Designation)
R1 to R11	Air Quality Impact Analysis Sensitive Receptor Locations (Project Specific)
R-1	One Family Dwellings (Zoning Classification)
R-4	Planned Residential (Zoning Classification)
R-5	Open Area Combining Zone, Residential Development (Zoning Classification)
R-T	Mobile Home Subdivisions and Mobile Home Parks
RARE	Preservation of Rare and Endangered Species
RCA	Regional Conservation Authority
RCALUC	Riverside County Airport Land Use Commission
RCB	Reinforced Concrete Box Culvert

ACRONYMS AND ABBREVIATIONS (CONT'D)

Acronym	Definition
RCD	Resource Conservation District
RCDWR	Riverside County Department of Waste Resources
RCFD	Riverside County Fire Department
RCFCWCD	Riverside County Flood Control and Water Conservation District
RCHCA	Riverside Habitat Conservation Agency
RCP	Regional Comprehensive Plan
RCP	Reinforced Concrete Pipes
RCPLS	Riverside County Public Library System
RCRA	Resource Conservation and Recovery Act
RCSD	Riverside County Sheriff's Department
RCTLMA	Riverside County Transportation and Land Management Agency
RCWD	Rancho California Water District
RECs	Recognized Environmental Condition
REC1	Water Contact Recreation
REC2	Non-Contact Water Recreation
REMEL	Reference Energy Mean Emission Level
RMS	Root Mean Square
ROGs	Reactive Organic Gasses
ROW	Right of Way
RPA	Reduced Project Alternative
RPS	Renewable Portfolio Standard
RR5	Rural Residential 5 acre minimum (General Plan Land Use Designation)
RTA	Riverside Transit Agency
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board
RWRF	Regional Water Reclamation Facility
SARA	Superfund Act and Reauthorization Act
SB	Senate Bill
SBCM	San Bernardino County Museum
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCH	State Clearinghouse
SCS	Sustainable Communities Strategy
SDWA	Safe Drinking Water Act of 1974
SEMS	Statewide Standardized Emergency Management System
SF_6	Sulfur Hexafluoride
SFP	School Facilities Program
SGMA	Sustainable Groundwater Management Act
SHA	Safe Harbor Agreement
SHMA	Seismic Hazards Mapping Act
SHPO	State Historic Preservation Officers
SHRC	State Historical Resources Commission
SHS	State Highway System
SIP	State Implementation Plan

ACRONYMS AND ABBREVIATIONS (CONT'D)

Acronym	Definition
SKR	Stephen's Kangaroo Rat
SLTs	Screening Level Thresholds
SNUR	Significant New Use Rule
SO_2	Sulfur Dioxide
SO_4	Sulfates
SOC	Statement of Overriding Considerations
SCAB	South Coast Air Basin
SoCal Gas	Southern California Gas Company
SOx	Sulfur Oxide
s.f.	Square Feet
SIPs	State Implementation Plans
SP	Specific Plan or Service Population
SP 2017-187	Legado Specific Plan
S-P	Specific Plan Zone
SR-74	State Route 74
SR-79	State Route 79
SRA	State Responsibility Area or Source Receptor Area
SRA 23	South Coast Air Quality Management District Metropolitan Riverside 3 Monitoring Station
SRA 25	South Coast Air Quality Management District Lake Elsinore Monitoring Station
SRA 26	South Coast Air Quality Management District Temecula Monitoring Station
SRRE	Source Reduction and Recycling Elements
SSC	State Species of Special Concern
STC	Sound Transmission Class
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resource Control Board
TAC	Toxic Air Contaminant
TCP	Traditional Cultural Property
TCR	Tribal Cultural Resources
TI	Traffic Indices
TIA	Traffic Impact Analysis (Technical Appendix K)
TTM	Tentative Tract Map
TPD	Tons Per Day
TSCA	Toxic Substances Control Act
TUMF	Transportation Uniform Mitigation Fee
UNFCCC	United Nations' Framework Convention on Climate Change
µg/m3	Micrograms Per Liter
USC	United States Code
USCB	United States Census Bureau
USGS	United States Geological Survey
USFS	United States Forest Service
USFWS	U.S. Fish and Wildlife Service
UWMP	Urban Water Management Plan
VdB	Vibration Velocity
VHFHSZ	Very High Fire Hazard Severity Zones

ACRONYMS AND ABBREVIATIONS (CONT'D)

Acronym	Definition
VMT	Vehicle Miles Travelled
VOCs	Volatile Organic Compounds
VWRPD	Valley-Wide Recreation and Park District
WARM	Warm Freshwater Habitat
WDR	Waste Discharge Requirement
WILD	Wildlife Habitat
WMI	Watershed Management Initiative
WMIE	Waste Management of the Inland Empire
WQMP	Water Quality Management Plan
WRCOG	Western Riverside County Association of Governments
WRI	Wire Reinforcement Institute
WRRA	Waste Reuse and Recycling Act
WSA	Water Supply Assessment
ZORI	Zones of Required Investigation

S.0 EXECUTIVE SUMMARY

S.1 INTRODUCTION

The California Environmental Quality Act (CEQA), Public Resources Code § 21000, et seq. requires that before a public agency makes a decision to approve a project that could have one or more adverse effects on the physical environment, the agency must inform itself about the project's potential environmental impacts, give the public an opportunity to comment on the environmental issues, and take feasible measures to avoid or reduce potential harm to the physical environment.

This Draft Environmental Impact Report (EIR), having California State Clearinghouse (SCH) No. 2009091118 was prepared in accordance with CEQA Guidelines Article 9, § 15120 to § 15132, to evaluate the potential environmental impacts associated with planning, constructing, and operating the proposed Legado Specific Plan Project (hereafter, the "Project"). This EIR does not recommend approval, approval with modification, or denial of the proposed Project; rather, this EIR is a source of factual information regarding potential impacts that the Project may cause to the physical environment. The Draft EIR will be available for public review for a minimum period of 45 days.

After consideration of public comment, the City will prepare and publish responses to comments it received on the environmental effects of the Project. The Final EIR will then be considered by the City of Menifee Planning Commission prior to deciding to recommend approval, recommend approval with modification, or recommend denying approval of the Project. The City of Menifee City Council will consider certifying the Final EIR and adopting required findings in conjunction with its decision to approve, approve with conditions, or deny approval of the Project. In the case that there are any adverse environmental impacts that cannot be mitigated to below a level of significance, the City of Menifee must adopt a Statement of Overriding Considerations, stating why the City is taking action to approve the Project with or without modification despite its unavoidable impacts. In addition, the City must adopt a Mitigation, Monitoring, and Reporting Program (MMRP), which describes the process to ensure implementation of the mitigation measures identified in the Final EIR. The MMRP will ensure CEQA compliance during Project construction and operation.

This Executive Summary complies with CEQA Guidelines § 15123, "Summary." This EIR document includes a description of the Project and evaluates the physical environmental effects that could result from Project implementation. The City of Menifee determined that the scope of this EIR should cover 17 subject areas. The scope was determined through an Initial Study drafted for the Project, and the consideration of public comment received by the City in response to this EIR's Notice of Preparation (NOP) and during the public Scoping Meeting that was held on November 30, 2017 at the Hans Christenson Middle School. The Initial Study, NOP, and written comments received by the City in response to the NOP, are attached to this EIR as *Technical Appendix A*. It should be noted that the list of environmental subject areas is based on Appendix G to the CEQA Guidelines, as most recently updated in December 2018. As determined by the City of Menifee and in consideration of public comment on the NOP, the 17 environmental subject areas that could be reasonably and significantly affected by planning, constructing, and/or operating the Project are analyzed herein, including:

1. Aesthetics
2. Air Quality
3. Biological Resources
4. Cultural Resources
5. Energy
10. Land Use and Planning
11. Noise
12. Public Services
13. Recreation
14. Transportation

6. Geology and Soils
7. Greenhouse Gas Emissions
8. Hazards and Hazardous Materials
9. Hydrology and Water Quality
15. Tribal Cultural Resources
16. Utilities and Service Systems
17. Wildfire

Refer to EIR Section 4.0, *Environmental Analysis*, for a full account and analysis of the subject matters listed above. Subject areas for which were concluded that impacts would be clearly less than significant and that do not warrant detailed analysis in this EIR including the topics of agriculture and forest resources, mineral resources, and population and housing are addressed in EIR Section 5.0, *Other CEQA Considerations*.

For each of the 17 subject areas analyzed in detail in Section 4.0, this EIR describes: 1) the physical conditions that existed at the approximate time this EIR's NOP was filed with the California State Clearinghouse (November 14, 2017); 2) discloses the type and magnitude of potential environmental impacts resulting from Project planning, construction, and operation; and 3) if warranted, recommends feasible mitigation measures that would reduce or avoid significant adverse environmental impacts that the Project may cause. A summary of the Project's significant environmental impacts and the mitigation measures imposed by the City of Menifee on the Project to lessen or avoid those impacts is included in this Executive Summary as Table S-2, *Summary of Impacts, Mitigation Measures, and Conclusions*. The City of Menifee applies mitigation measures which it determines 1) are feasible and practical for project applicants to implement, 2) are feasible and practical for the City of Menifee to monitor and enforce, 3) are legal for the City to impose, 4) have an essential nexus to the Project's impacts, and 4) would result in a benefit to the physical environment. CEQA does not require the Lead Agency to analyze an exhaustive list of every imaginable mitigation measure, or measures that are duplicative of mandatory regulatory requirements.

This EIR also discusses alternatives to the Project. Alternatives are described that would attain most of the Project's objectives while avoiding or substantially lessening the Project's significant adverse environmental effects. A full discussion of Project alternatives is found in Section 6.0, *Alternatives*.

S.2 PROJECT SYNOPSIS

S.2.2 LOCATION AND REGIONAL SETTING

The approximately 331.0-acre Project site is located in the northern portion of the City of Menifee, within Riverside County, California. Figure 2-1, *Regional Map*, depicts the Project site's location within the regional vicinity. The City of Menifee is bound to the west by the City of Canyon Lake and City of Lake Elsinore; to the north by the City of Perris; to the east by unincorporated Riverside County; and to the south by the City of Murrieta. As illustrated on Figure 2-2, *Vicinity Map*, the Project site is located east of I-215 and Encanto Drive, south of Rouse Road, west of the future extension of Antelope Road, and generally north of Chambers Avenue.

The prevailing planning document for the Project site and its surrounding area is the City of Menifee General Plan, which was adopted by the City in 2013. As depicted on Figure 2-6, *Existing General Plan Land Use Designations*, the City of Menifee General Plan designates the Project site as "Fleming Ranch Specific Plan (SP)," although no Specific Plan has been adopted for the site. Thus, allowable land uses per the site's existing General Plan land use designation would be established as part of the proposed Legado Specific Plan (SP 2017-187).

Refer to Section 2.0, *Environmental Setting*, of this EIR for more information related to the regional and local setting of the Project site.

S.2.3 PROJECT OBJECTIVES

The underlying purposes of the Project are to develop a single-family residential community with freeway oriented commercial retail areas in order to implement the City of Menifee General Plan, as well as comply to the greatest feasible extent with applicable City of Menifee standards, codes, and policies. The following is a list of specific objectives that the Project intends to achieve.

A. To efficiently develop an underutilized property with a complementary mix of land uses, including residential, commercial, recreational, and open space land uses.

B. To establish a master-planned community in a manner that is sensitive to the environment as well as visually and functionally compatible with surrounding existing and proposed land uses.

C. To develop a mixed-use community with a design that takes topographic, geologic, hydrologic, and environmental opportunities and constraints into consideration to minimize alterations to natural landforms, where practical.

D. To increase the available housing supply within the region by providing detached single-family homes in traditional subdivision layouts that will be marketable within the evolving economic profile of the City of Menifee and surrounding communities.

E. To provide a system of public and community facilities, including a public community park/community center, paseos/neighborhood parks, bike lanes, and trails to support development in an efficient and timely manner and meet the needs of project residents and residents of surrounding communities.

F. To require project design elements such as architecture, landscaping, color, paving, walls, fencing, signage, entry treatments, and other similar design features that would ensure the community is developed in a manner that is aesthetically pleasing.

G. To establish development phasing that results in logical coordinated growth.

H. To provide public benefits such as community recreation facilities, as well as long-term planning certainty for the City of Menifee and the Project Applicant.

I. To establish a land use plan that is consistent with the provisions of the March Air Reserve Base Airport Comprehensive Land Use Plan Compatibility Zone policies related to maximum building height and residential density.

S.3 PROJECT SUMMARY DESCRIPTION

The Project consists of applications for a Specific Plan (SP 2017-187); Change of Zone (CZ 2017-188); Development Agreement (DA 2018-277); three Tentative Tract Maps (TTM 37391), (TTM 37408) and (TTM 37409) to establish a master-planned, medium-density residential community (3.8 to 5.6 dwelling units per acre) with freeway-oriented commercial uses on an approximately 331.0-acre site. Approval of these

applications would allow for development of the subject property with up to 1,061 dwelling units on lot sizes ranging from 5,000 square feet (s.f.) to 30,000 s.f. on approximately 216.9 acres, up to 225,000 s.f. of freeway-oriented commercial uses on approximately 20.1 acres, a 12.9-acre community park/community center, a 1.9-acre private recreation center, paseos/neighborhood parks on 7.9 acres, conserved open space on 6.3 acres, detention/water quality basins on 26.4 acres, and roadways on 38.6 acres. Associated improvements to the property would include roadway improvements, utility infrastructure, landscaping, and exterior lighting. Additional discretionary and administrative actions that would be necessary to implement the Project are listed in Table 3-8, *Matrix of Project Approvals/Permits*, in Section 3.0, *Project Description*. A summary of the discretionary approvals sought by the Project Applicant is provided below.

- Specific Plan No. 2017-187 (SP 2017-187) proposes the development of the 331.0-acre Project site with up to 1,061 residential homes on approximately 216.9 acres, freeway-oriented commercial land uses on 20.1 acres, a 12.9-acre community park/community center, a 1.9-acre private recreation center, paseos/neighborhood parks on 7.9 acres, conserved open space on 6.3 acres, detention/water quality basins on 26.4 acres, and roadways on 38.6 acres.

- The Change of Zone No. 2017-188 (CZ No. 2017-188) proposes to modify the zoning boundaries on the Project site to reflect the Legado Specific Plan land use plan for the approximately 331.0-acre Project site. At the time the Project's Notice of Preparation (NOP) was distributed for public review (2017), the Project's existing zoning designations were C-P-S (Scenic Highway Commercial) and R-1 (One-Family Dwellings) and CZ No. 2017-188 would change the site's existing zoning designations from C-P-S (Scenic Highway Commercial) and R-1 (One-Family Dwellings) to Specific Plan Zone (SP). However, on December 18, 2019 the City of Menifee adopted a new zoning map that will go into effect on January 18, 2020. Pursuant to the new zoning map, the Project site's zoning designation will be SP "Fleming Ranch Specific Plan Zone." Thus, CZ No. 2017-188 would change the site's updated existing zoning designation from "Fleming Ranch Specific Plan Zone" to "Legado Specific Plan Zone" as well as establish permitted uses and development standards as proposed by the Specific Plan.

- The Tentative Tract Map (TTM 37391) proposes a large-lot subdivision map for conveyance purposes and would establish lots corresponding to the Planning Area boundaries as proposed by SP 2017-187. A majority of backbone roadway dedications would occur as part of the large-lot subdivision. TTM 37391 would establish a subdivision of 26 lots proposed for 263.5 acres of residential, recreation center, paseos/neighborhood parks and water quality basin uses, 20.1 acres of commercial uses, 12.9 acres of park uses, 6.3 acres of open space uses, while the remaining 28.2 acres are proposed for internal public roadways.

- Vesting Tentative Tract Map (TTM 37408) proposes to subdivide the Project area west of Sherman Road (excluding the proposed commercial area) into individual planning areas to allow for the development of a residential community. TTM 37408 would establish a subdivision of 475 residential lots (totaling 79.5 acres of residential uses) while the remaining lots (totaling 75.7 acres) are proposed for community park/community center uses, open space/recreation/landscape uses, water quality/detention basins, internal public roadways, park uses, and recreation center uses.

- Vesting Tentative Tract Map (TTM 37409) proposes to subdivide the Project area east of Sherman Road into individual planning areas to allow for the development of a residential community. TTM 37409 would establish a subdivision of 547 residential lots (totaling 85.4 acres of residential uses)

while the remaining lots (totaling 73.7 acres) are proposed for open space/recreational uses, open space/conservation uses, water quality/detention basins, park uses, and internal public roadways.

- The Development Agreement No. 2018-277 (DA 2018-277) proposes the establishment of provisions for development of the Project such as, but not limited to, infrastructure improvements, park benefits, vesting of development rights, and timing of public improvements.

Refer to EIR Section 3.0, *Project Description*, for a detailed description of the Project.

S.4 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

CEQA Guidelines § 15123(b)(2) requires that areas of controversy known to the Lead Agency (City of Menifee) be identified in the Executive Summary. The Lead Agency has not identified any issues of controversy associated with the Project.

Regarding issues to be resolved, this EIR addresses the environmental issues that are known by the City, and identified during the Initial Study process. The EIR also addresses issues that were identified in the comment letters that the City of Menifee received on this EIR's NOP (refer to *Technical Appendix A*), as modified by the December 2018 updates to Appendix G to the CEQA Guidelines. Environmental topics raised in comments to the NOP are summarized in Table 1-1, *Summary of NOP Comments*, in Section 1.0, *Introduction*, of this EIR and include, but are not limited, to the topics of air quality; biological resources; transportation; public services; and utilities and service systems.

S.5 PROJECT ALTERNATIVES

In compliance with CEQA Guidelines § 15126.6, an EIR must describe a range of reasonable alternatives to the Project or to the location of the Project. Each alternative must be able to feasibly attain most of the Project's objectives and avoid or substantially lessen the Project's significant effects on the environment. A detailed description of each alternative evaluated in this EIR, as well as an analysis of the potential environmental impacts associated with each alternative, is provided in EIR Section 6.0, *Alternatives*. Also described in Section 6.0 is a list of alternatives that were considered but rejected from further analysis. The alternatives considered by this EIR include those summarized below.

S.5.1 NO PROJECT/NO DEVELOPMENT ALTERNATIVE

The No Project/No Development Alternative (herein, "NDA") considers no development/disturbance on the Project site beyond that which occurs under existing conditions. As such, the approximately 331.0-acre Project site would continue to consist of vacant land that has been subject to regular discing as part of on-going fire abatement activities. The small knoll with natural vegetation and rock outcroppings in the northeastern portion of the site would remain, as would the unimproved dirt segment of Antelope Road along the Project's eastern boundary. Under this Alternative, no improvements would be made to the Project site and none of the Project's roadway, drainage, utility, and other infrastructure improvements would occur. This Alternative was selected by the Lead Agency to compare the environmental effects of the Project with an alternative that would leave the Project site in its existing condition (as depicted on EIR Figure 2-4, *Aerial Photograph*).

Selection of the No Project/No Development Alternative would avoid or reduce all of the impacts of the Project to less-than-significant levels. The No Project/No Development Alternative would not successfully meet any of the Project Objectives. Refer to Table 6-1, *Alternative to the Project – Comparison of Environmental Impacts*, for more information.

S.5.2 No Project/General Plan Land Use Alternative

The No Project/General Plan Land Use Alternative (herein, "GPLUA") considers development of the Project site in accordance with the site's existing General Plan land use designations. Under existing conditions, the City of Menifee General Plan designates the Project site as "Specific Plan (SP);" specifically, Exhibit LU-2, "Land Use Map," from the Menifee General Plan shows the Project site designated as "Fleming Ranch SP" (Menifee, 2013a, Exhibit LU-2). According to Exhibit LU-4, "Land Use Buildout Summary," from the Menifee General Plan, the Fleming Ranch SP designation assumes the Project site would be developed with up to 1,588 dwelling units, up to 71,176 s.f. commercial retail uses, and up to 160,300 s.f. of commercial (non-retail) uses (Menifee, 2013a, Exhibit LU-4). This Alternative assumes that the 160,300 s.f. of commercial (non-retail) uses would include 108,311 s.f. of commercial office uses and 51,989 s.f. of light industrial uses. This Alternative would also develop the Project site with an 11.7-acre elementary school site, 47.6 acres of open space, and 38.4 acres of roadways in accordance with the uses shown in Menifee General Plan Exhibit LU-4, "Land Use Buildout Summary" for the Fleming Ranch SP (Menifee, 2013a, Exhibit LU-4). This Alternative was selected by the Lead Agency to compare the environmental effects of the Project with an alternative that would develop the Project site in accordance with the General Plan land use designation (SP) planned for the Project site under existing conditions. Refer to Figure 2-6, *Existing General Plan Land Use Designations*, for an illustration of the existing land use designations applicable to the Project site pursuant to the Menifee General Plan.

Selection of the No Project/General Plan Land Use Alternative would have similar impacts or slightly increase several of the less than significant impacts of the Project, although the GPLUA would not result in new significant environmental impacts beyond what would occur under the proposed Project. The No Project/General Plan Land Use Alternative would increase the Project's significant and unavoidable impacts to air quality; greenhouse gases; and transportation. The Project's significant and unavoidable impacts would not be avoided under the No Project/General Plan Land Use Alternative. The No Project/General Plan Land Use Alternative would increase impacts to hazards and hazardous materials; hydrology and water quality; noise; public services; and utilities and service systems as compared to the Project. The No Project/General Plan Land Use Alternative would meet some of the Project's objectives, but not as effectively as the Project and would fail to meet one of the Project's objectives. Refer to Table 6-1, *Alternative to the Project – Comparison of Environmental Impacts* for more information.

S.5.3 Reduced Project Alternative

The Reduced Project Alternative (herein, "RPA") would develop the Project site with a reduced number of dwelling units and commercial square footage in order to reduce the Project's significant and unavoidable impacts to air quality, greenhouse gases, and transportation. The RPA would develop the Project site with 720 dwelling units (a reduction in the number of dwelling units proposed by the Project [1,061 dwelling units] by approximately one-third) and 180,000 s.f. of freeway-oriented commercial land uses (a reduction in the square footage of freeway-oriented commercial land uses proposed by the Project [225,000 s.f.] by approximately 20%). As with the Project, the RPA would include 26.4 acres of water quality/detention basins, 7.9 acres of paseos/neighborhood parks, a 12.9-acre community park/community center, a 1.9-acre private recreation center, 6.3 acres of open space, and 38.6 acres of roadways. This Alternative was selected by the Lead Agency to compare the environmental effects of the Project against an alternative that would reduce the Project's significant and unavoidable air quality, greenhouse gas, and transportation impacts by reducing the total number of dwelling units and commercial square footage on the Project site.

Selection of the Reduced Project Alternative would have similar impacts or reduced impacts as compared to the Project. The Reduced Project Alternative would reduce the Project's significant and unavoidable impacts

to air quality, greenhouse gases, and transportation as compared to the Project. While the Reduced Project Alternative would likely result in fewer cumulatively-considerable impacts to study area intersections, road segments, freeway segments, and freeway merge/diverge locations, the Reduced Project Alternative nonetheless would result in significant unavoidable impacts. Similarly, although the Reduced Project Alternative would reduce the Project's operational emissions of PM_{10} to below a level of significance, the Reduced Project Alternative still would result in operational emissions of VOCs, NO_X, CO, and $PM_{2.5}$ that would exceed the SCAQMD Regional Thresholds. The Reduced Project Alternative also would reduce, but would not fully avoid, the Project's significant and unavoidable impact due to GHG emissions.

The Reduced Project Alternative would meet all of the Project's objectives. Although the Reduced Project Alternative would meet all of the Project's objectives, the Reduced Project Alternative would not achieve the Project's objectives to develop an underutilized property or increase the available housing supply within the region as effectively as the Project because the Reduced Project Alternative would decrease the number of dwelling units by one-third and commercial retail square footage by 20%. Refer to Table 6-1, *Alternative to the Project – Comparison of Environmental Impacts* for more information.

S.6 SUMMARY OF IMPACTS, MITIGATION MEASURES AND CONCLUSIONS

S.6.1 EFFECTS FOUND NOT TO BE SIGNIFICANT

The scope of detailed analysis in this EIR includes 17 subject areas determined by the City through the consideration of public comments received by the City on this EIR's Initial Study, as modified by the December 2018 updates to Appendix G to the CEQA Guidelines, and NOP. The Initial Study, NOP, and public comments received in response to the NOP, are attached to this EIR as *Technical Appendix A*. Three subject areas agriculture and forest resources; mineral resources; and population and housing were determined by the City to have less-than-significant impacts requiring no further analysis in this EIR. This EIR addresses the topics of agriculture and forest resources; mineral resources; and population and housing in EIR Subsection 5.0, *Other CEQA Considerations*.

S.6.2 IMPACTS OF THE PROJECT

Table S-2, *Summary of Impacts, Mitigation Measures, and Conclusions*, provides a summary of the Project's environmental impacts, as required by CEQA Guidelines § 15123(a). Also presented are the mitigation measures recommended by the City of Menifee to further avoid adverse environmental impacts or to reduce their level of significance. After the application of all feasible mitigation measures, the Project would result in six significant and unavoidable environmental effects, as summarized below.

- Air Quality: Significant and Unavoidable Direct and Cumulatively-Considerable Impact (Thresholds a and b). Implementation of Regulatory Requirements CRDR 4.2-1 through CRDR 4.2-5, Design Requirements CRDR 4.2-6 and CRDR 4.2-7, and Mitigation Measures MM 4.2-1 through MM 4.2-3, would reduce the Project's operational exceedances of the SCAQMD Regional Thresholds for CO, PM_{10}, and $PM_{2.5}$. Implementation of CRDRs and Mitigation Measures would reduce, but would not eliminate, the Project's operational exceedances of the SCAQMD Regional Thresholds for VOCs and NO_X. No feasible mitigation measures or CRDRs beyond those already identified exist that would reduce emissions of NO_X and VOCs to levels that are less than significant. It is important to note that the majority of VOC emissions are derived from consumer products. For analytical purposes, consumer products include cleaning supplies, kitchen aerosols, cosmetics and toiletries. As such, the Project cannot meaningfully control consumer products via mitigation; thus, VOC emissions are considered significant and unavoidable as no feasible mitigation measure exists that would reduce this

impact to less-than-significant levels. Additionally, a majority of the Project's NO_X emissions are derived from vehicle usage. Since the Project does not have regulatory authority to control tailpipe emissions, no feasible mitigation measures exist that would reduce NO_X emissions to levels that are less than significant. Accordingly, the following impacts associated with Project operations would remain significant and unavoidable: a) the Project's direct and cumulatively-considerable impact due to a violation of the applicable air quality standards for VOCs and NO_X, and b) the Project's emissions of VOCs and NO_X that would contribute to the region's non-attainment status under both state and federal designations for ozone.

- Greenhouse Gas Emissions (Thresholds a and b): Significant and Unavoidable Cumulatively-Considerable Impact. Implementation of the required Design Requirements (CRDRs), regulatory requirements, and Project-specific mitigation measures would reduce the Project's Service Population Ratio to 8.32 Metric Tons of Carbon Dioxide Equivalent ($MTCO_2e$) per Service Population, which would exceed the threshold of 3.84 $MTCO_2e$ per Service Population. No other feasible mitigation measures are available to reduce the Project's impacts to less that significant. Thus, the Project's cumulatively-considerable impacts due to GHG emissions would be significant and unavoidable.

- Transportation (Threshold a): Significant and Unavoidable Cumulatively-Considerable Impact. Table S-1, *Summary of Significant and Unavoidable Impacts to Transportation Facilities*, provides a summary of the significance of the Project's impacts to transportation following implementation of the City Regulations and Design Requirements, and Mitigation Measures MM 4.14-2 through MM 4.14-65 for each phase of the Project. As shown, the Project would result in a number of cumulatively-considerable impacts to transportation facilities that cannot be reduced to less than significant levels. It should be noted that aside from facilities under the jurisdiction of Caltrans, all of the Project's significant and unavoidable impacts to traffic are due to the fact that it cannot be assured that facilities to be constructed from DIF fees, TUMF fees, and/or Project fair-share payments would be in place at the time of Project occupancy. No other feasible mitigation measures are available to reduce the Project's impacts to less that significant. Thus, the Project's impacts due to a conflict with an applicable plan, ordinance, or policy measuring of effectiveness for the performance of the circulation system at the facilities listed in Table S-1, would remain significant and unavoidable.

Table S-1 Summary of Significant and Unavoidable Impacts to Transportation Facilities

#	FACILITY	CMP FACILITY?	EXISTING PLUS PROJECT (E+P)	OPENING YEAR CUMULATIVE (2020)	OPENING YEAR CUMULATIVE (2023)	OPENING YEAR CUMULATIVE (2025)	HORIZON YEAR (2040)
INTERSECTIONS							
1	Goetz Rd. / Ethanac Rd.	No	--	--	--	C*	C*
2	Murrieta Rd. / Ethanac Rd.	No	--	--	C*	C*	C*
3	Murrieta Rd. / McCall Bl.	No	--	--	--	--	C*
4	Sun City Bl. / McCall Bl.	No	--	--	--	--	C*
5	Barnett Rd. / Ethanac Rd.	No	--	--	--	--	C*
6	Case Rd. / Ethanac Rd.	No	--	--	--	--	C*
7	Bradley Rd. / McCall Bl.	No	--	C	C	C	C*
8	Bradley Rd. / Cherry Hills Bl.	No	--	--	--	D	--
9	I-215 SB Ramps / Bonnie Dr.	Yes	--	--	--	--	C*
10	I-215 SB Ramps / Ethanac Rd.	Yes	--	D*	C*	C*	C*
11	I-215 SB Ramps / McCall Bl.†	Yes	--	C*	D*	D*	C*
12	I-215 NB Ramps / SR-74	Yes	--	--	--	--	C*
13	I-215 NB Ramps / Ethanac Rd.†	Yes	--	D*	C*	C*	C*
14	I-215 NB Ramps / McCall Bl.	Yes	--	--	--	D	C*
15	Encanto Dr. / Ethanac Rd.	No	D	C*	C*	C*	C*
16	Encanto Dr. / McLaughlin Rd.	No	--	--	--	D	C*
17	Encanto Dr. / Rouse Rd.	No	--	--	--	--	C*
18	Encanto Dr. / Chambers Av. – Future Intersection	No	--	--	--	--	C*
19	Encanto Dr. / Shadel Rd.	No	--	--	--	D	C*
20	Encanto Dr. / McCall Bl.	No	--	--	D	D	C*
21	Trumble Rd. / SR-74	No	--	--	--	--	C*
22	Trumble Rd. / Ethanac Rd.	No	--	--	--	--	--
26	Sherman Rd. / SR-74	No	--	--	--	--	C*
27	Sherman Rd. / Ethanac Rd.	No	--	--	--	--	C*
28	Sherman Rd. / McLaughlin Rd.	No	--	--	--	--	C*

#	Facility	CMP Facility?	Existing plus Project (E+P)	Opening Year Cumulative (2020)	Opening Year Cumulative (2023)	Opening Year Cumulative (2025)	Horizon Year (2040)
29	Sherman Rd. / Rouse Rd.	No	--	--	--	--	C*
30	Sherman Rd. / St. B	No	--	--	--	--	--
31	Sherman Rd. / Chambers Av.	No	--	--	--	--	C*
32	Sherman Rd. / Shadel Rd.	No	--	--	--	--	--
33	Sherman Rd. / McCall Bl.	No	--	C*	C*	D	C*
34	Dawson Rd./Street C & Rouse Rd.	No	--	--	--	--	--
35	Street C/Concord Ln. & Chambers Av.	No	--	--	--	--	--
36	Antelope Rd. / Ethanac Rd.	No	--	--	--	--	C*
37	Antelope Rd. / Rouse Rd. (North)	No	--	--	--	--	C*
38	Antelope Rd. / Rouse Rd. (South)	No	--	--	--	--	C*
39	Antelope Rd. / Chambers Av.	No	--	--	--	--	C*
40	Antelope Rd. / McCall Bl.	No	--	C*	C*	C*	C*
41	Palomar Rd. / SR-74	No	--	--	--	--	D*
42	Menifee Rd. / SR-74	Yes	C*	--	C*	C*	C*
43	Menifee Rd. / Rouse Rd./Turtle Point Dr.	No	--	--	--	--	C*
44	Menifee Rd. / McCall Bl.	No	--	C*	C*	C*	C*
Roadway Segments							
1	SR-74, Bonnie Dr. to I-215 NB Ramps	Yes	--	--	--	--	C*
2	SR-74, I-215 NB Ramps to Trumble Rd.	Yes	--	--	--	--	C*
3	Ethanac Rd., Goetz Rd. to Murrieta Rd.	No	--	--	--	--	C*
4	Ethanac Rd., Murrieta Rd. to Barnett Rd.	No	--	--	--	--	C*
5	Ethanac Rd., Case Rd. to I-215 Freeway	No	--	--	D*	C*	C*
6	Ethanac Rd., I-215 Freeway to Encanto Dr.	No	C*	C*	C*	C*	C*
7	Ethanac Rd., Encanto Dr. to Trumble Rd.	No	C*	C*	C*	C*	C*
8	Ethanac Rd., Trumble Rd. to Sherman Rd.	No	--	--	C*	C*	C*
9	Ethanac Rd., Sherman Rd. to Antelope Rd.	No	--	C*	D*	C*	C*
10	SR-74, Antelope Rd. to Palomar Rd.	Yes	--	--	--	--	C*
15	Rouse Rd., Antelope Rd. (N) to Menifee Rd.	No	--	--	--	--	C*
20	McCall Bl., Sun City Bl. to Bradley Rd.	No	--	--	--	D*	C*

#	Facility	CMP Facility?	Existing plus Project (E+P)	Opening Year Cumulative (2020)	Opening Year Cumulative (2023)	Opening Year Cumulative (2025)	Horizon Year (2040)
21	McCall Bl., Bradley Rd. to the I-215 Freeway	No	D*	C*	C*	C*	C*
22	McCall Bl., I-215 Freeway to Encanto Dr.	No	D*	C*	C*	C*	C*
23	McCall Bl., Encanto Dr. to Sherman Rd.	No	--	D*	D*	C*	C*
24	McCall Bl., Sherman Rd. to Antelope Rd.	No	--	--	D*	C*	C*
25	McCall Bl., Antelope Rd. to Menifee Rd.	No	C*	C*	C*	C*	C*
27	Encanto Dr., Ethanac Rd. to McLaughlin Rd.	No	--	--	--	D*	C*
28	Encanto Dr., McLaughlin Rd. to Rouse Rd.	No	--	--	--	D*	D*
29	Ethanac Rd., Murrieta Rd. to Barnett Rd.	No	--	--	--	--	C*
30	Encanto Dr., Chambers Dr. to Shadel Rd.	No	--	--	--	D*	C*
31	Encanto Dr., Shadel Rd. to McCall Bl.	No	--	--	--	D	C*
32	Sherman Rd., SR-74 to Ethnac Rd.	No	--	--	--	D*	C*
33	Sherman Rd., Ethanac Rd. to McLaughlin Rd.	No	--	C*	C*	C*	C*
34	Sherman Rd., McLaughlin Rd. to Rouse Rd.	No	--	--	--	--	C*
42	Menifee Rd., SR-74 to Biscayne Av.	No	--	--	--	--	C*
43	Menifee Rd., Biscayne Av. To Rouse Rd.	No	D*	C*	C*	C*	C*
44	Menifee Rd., Rouse Rd. to McCall Bl.	No	--	--	--	--	C*
Intersections That Meet Traffic Signal Warrants							
8	Bradley Rd. / Cherry Hills Bl.	No	--	--	--	D	--
15	Encanto Dr. / Ethanac Rd.	No	D	C	C	C	C
27	Sherman Rd. / Ethanac Rd.	No	--	--	--	--	C*
28	Sherman Rd. / McLaughlin Rd.	No	--	--	--	--	C*
29	Sherman Rd. / Rouse Rd.	No	--	--	--	--	C*
31	Sherman Rd. / Chambers Av.	No	--	--	--	--	C
36	Antelope Rd. / Ethanac Rd.	No	--	--	--	--	C*
37	Antelope Rd. / Rouse Rd. (North)	No	--	--	--	--	C*
38	Antelope Rd. / Rouse Rd. (South)	No	--	--	--	--	C*
40	Antelope Rd. / McCall Bl.	No	--	C*	C*	C*	C*
Freeway Segments							

#	FACILITY	CMP FACILITY?	EXISTING PLUS PROJECT (E+P)	OPENING YEAR CUMULATIVE (2020)	OPENING YEAR CUMULATIVE (2023)	OPENING YEAR CUMULATIVE (2025)	HORIZON YEAR (2040)
1	I-215 Freeway Southbound, Case Rd. to Ethanac Rd.	Yes	--	C±	C±	C±	
2	I-215 Freeway Southbound, Ethanac Rd. to McCall Bl.	Yes	--	C±	C±	C±	C±
3	I-215 Freeway Southbound, McCall Bl. to Newport Rd.	Yes	--	C±	C±	C±	D±
FREEWAY JUNCTION MERGE/DIVERGE LOCATIONS							
1	I-215 Freeway Southbound, Off-Ramp at Ethanac Road	Yes	C±	C±	C±	C±	C±
2	I-215 Freeway Southbound, On-Ramp at Ethanac Rd.	Yes	--	C±	C±	C*	
3	I-215 Freeway Southbound, Off-Ramp at McCall Boulevard	Yes	C±	C*	C±	C*	C±
4	I-215 Freeway Southbound, On-Ramp at McCall Bl.	Yes	--	C±	C±	C±	C±
6	I-215 Freeway Northbound, Off-Ramp at Ethanac Rd.	Yes	--	--	--	--	C±
8	I-215 Freeway Northbound, Off-Ramp at McCall Bl	Yes	--	--	--	C±	C±

Notes: "D" = Direct Impact; "C" = Cumulatively-Considerable Impact; "--" = No Impact/Less-than-Significant Impact.

* = Although mitigation is proposed in the form of fair-share contributions or fee payments to TUMF or DIF, the timing of required improvements is unknown; thus, it cannot be assured that the required improvements would be in place prior to the development phase shown above, and impacts would therefore be significant and unavoidable.

± = At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the City of Menifee (or other neighboring jurisdictions) on the SHS roadway segments and impacts would therefore be significant and unavoidable.

Table S-2 Summary of Impacts, Mitigation Measures, and Conclusions

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
4.1 Aesthetics						
Summary of Impacts						
Threshold a: Would the Project have a substantial adverse effect on a scenic vista?	Less-than-Significant Impact	CRDR 4.1-1 The Project is required to comply with the Design Guidelines of the proposed Specific Plan No. 2017-187. Compliance with these Project design features would be assured by the City's future review of implementing building permits for compliance with the Specific Plan's design features that would serve to reduce and/or avoid impacts relating to aesthetics.	Project Applicant	City of Menifee Community Development and Building and Safety Departments	Prior to Project approval	Less-than-Significant Impact
Threshold b: Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Less-than-Significant Impact	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold c: In non-urbanized areas, would the Project substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, impacts would be potentially significant if the Project were to conflict with applicable zoning and other regulations governing scenic quality?	Less-than-Significant Impact	City Regulation and Design Requirement CRDR 4.1-1 provided under the discussion and analysis of Threshold a, would apply.	Project Applicant	City of Menifee Community Development and Building and Safety Departments	Prior to Project approval	Less-than-Significant Impact
Threshold d: Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Significant Direct Impact	MM 4.1-1 Prior to approval of any improvement plans for the 12.9-acre community park/community center on site that propose sports field lighting exceeding 25 feet in height, the Project Applicant shall prepare and the City of Menifee Building and Safety Department shall approve a Lighting Impact Study (LIS). The required LIS shall demonstrate that the proposed lighting elements would not expose adjacent residential structures or the adjacent Life Care Center building to lighting levels exceeding 0.8 foot-candles during pre-curfew hours (before 11:00 pm) or 0.2 foot-candles during post-curfew hours (after 11:00 pm to dusk) as measured on both the vertical and horizontal planes. If necessary, the required LIS shall identify modifications to the design of the proposed lighting	Project Applicant	City of Menifee Building and Safety Department	Prior to the issuance of building permits	Less-than-Significant Impact

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		elements and/or shall impose operational constraints on the use of the lighting elements (e.g., requiring that all lighting elements be extinguished prior to 11:00 pm) to ensure that the nearby residential and Life Care Center structures are not exposed to lighting levels exceeding 0.8 foot-candles during pre-curfew hours (before 11:00 pm) or 0.2 foot-candles during post-curfew hours (after 11:00 pm to dusk).				
		City Regulations and Design Requirements CRDR 4.1-1 provided under the discussion and analysis of Threshold a, which requires compliance with the Specific Plan Design Guidelines related to lighting, would apply.	Project Applicant	City of Menifee Building and Safety Department	Prior to the issuance of building permits	
		CRDR 4.1-2 The Project is required to comply with City of Menifee Municipal Code Chapter 6.01, which is intended to restrict the permitted use of certain light fixtures emitting light into the night sky which could have a detrimental effect on astronomical observation and research. Municipal Code Chapter 6.01 sets forth requirements for lamp source and shielding of light emissions for outdoor fixtures to reduce "skyglow" or light pollution that affects day or nighttime views from the Mt. Palomar Observatory (located approximately 31 miles southeast of the Project site in northern San Diego County). Compliance with Municipal Code Chapter 6.01 would ensure the Project does not include light fixtures that would emit light into the night sky and would reduce lighting-related impacts.	Project Applicant	City of Menifee Building and Safety Department	Prior to the issuance of building permits	
4.2 Air Quality						
Summary of Impacts						
Threshold a:. Would the Project conflict with or obstruct implementation of the applicable air quality plan?	Significant Direct and Cumulatively-Considerable Impact	MM 4.2-1 Prior to issuance of building permits, the Project Applicant shall demonstrate that the proposed building components would surpass by a minimum of 5% the 2019 Title 24 performance standards or shall comply with the Title 24 requirements in effect at the time, whichever is more stringent, established under the Building Energy Efficiency Standards contained in	Project Applicant	City of Menifee Building and Safety Division	Prior to issuance of building permits	Significant Direct and Cumulatively-Considerable

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		the California Code of Regulations (CCR), Title 24, Part 6 (Title 24, Title 24 Energy Efficiency Standards).				
		MM 4.2-2 Prior to issuance of building permits, the Project Applicant shall demonstrate that the proposed roofs of the buildings are designed to accommodate maximally sized photovoltaic (PV) solar arrays taking into consideration limitations imposed by other rooftop equipment, roof warranties, building and fire code requirements, and other physical or legal limitations. The Project shall develop each Project building with the necessary electrical system and other infrastructure to accommodate maximally sized PV arrays in the future. The electrical system and infrastructure shall be clearly labeled with noticeable and permanent signage which informs future tenant/purchasers of the existence of this infrastructure.	Project Applicant	City of Menifee Building and Safety Division	Prior to issuance of building permits	
		MM 4.2-3 Prior to approval of implementing commercial plot plan(s) within Planning Area 16 of the Legado Specific Plan, the City of Menifee Planning Division shall ensure that the plot plan(s) include a minimum of three (3) electric-vehicle charging stations. The electric-vehicle charging stations also shall be depicted on building plans for implementing development within Planning Area 16. Prior to issuance of occupancy permits for the proposed commercial land uses within Planning Area 16, the City of Menifee Building and Safety Department shall ensure that a minimum of three electric-vehicle charging stations have been installed on-site.	Project Applicant	City of Menifee Building and Safety Division	Prior to issuance of occupancy permits	
Threshold b: Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard?	Significant Direct and Cumulatively-Considerable Impact	CRDR 4.2-1 The Project is required to comply with the provisions of South Coast Air Quality Management District Rule 403, "Fugitive Dust" by implementing the following dust control measures during construction activities, such as earth moving activities, grading, and equipment travel on unpaved roads. Compliance with Rule 403 would ensure dust control measures are	Project Applicant & Project Construction Team	City of Menifee Public Works and Engineering Departments	Prior to grading permit issuance	Significant Direct and Cumulatively-Considerable Impact

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		implemented on the Project site to reduce construction-related air emissions. Prior to grading permit issuance, the City shall verify that the following notes are included on the grading plan. Project contractors shall be required to ensure compliance with the notes and permit periodic inspection of the construction site by City of Menifee staff or its designee to confirm compliance. These notes also shall be specified in approved bid documents for construction issued to prospective construction contractors. o All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour (mph) per SCAQMD guidelines in order to limit fugitive dust emissions. o The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the midmorning, afternoon, and after work is done for the day. o The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 mph or less. CRDR 4.2-2 The Project is required to comply with the provisions of South Coast Air Quality Management District Rule 1113, Table of Standards, by requiring that all architectural coatings must consist of low VOCs (i.e., VOCs of less than 50 grams per liter [g/L]) unless otherwise specified in the SCAQMD Table of Standards. Compliance with Rule 1113 would ensure architectural coatings consist of low VOCs on the Project site to reduce construction-related air emissions. Prior to building permit issuance, the City shall verify that the following note is included on the building plans. Project contractors shall be required to ensure compliance with the note and permit periodic inspection of the construction site	Project Applicant & Project Construction Team	City of Menifee Building and Safety Department	Prior to building permit issuance	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		by City of Menifee staff or its designee to confirm compliance. This note also shall be specified in bid documents issued to prospective construction contractors. o All architectural coatings must consist of low VOCs (i.e., VOCs of less than 50 grams per liter [g/L]) unless otherwise specified in the SCAQMD Table of Standards pursuant to SCAQMD Rule 1113.				
		CRDR 4.2-3 The Project is required to comply with applicable SCAQMD rules for construction activities on the Project site. SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to: Rule 1403 (Asbestos); Rule 431.2 (Low Sulfur Fuel); and Rule 1186 / 1186.1 (Street Sweepers). Compliance with applicable SCAQMD rules for construction activities would ensure applicable measures are implemented on the Project site during construction to reduce construction-related air emissions.	Project Applicant & Project Construction Team	City of Menifee Building and Safety Department, Public Works Department of Engineering Department	Prior to grading permit issuance	
		CRDR 4.2-4 The Project is required to comply with the provisions of SCAQMD Rule 402, "Nuisance" which requires that a person shall not discharge air contaminants or other materials that would cause health or safety hazards to any considerable number of persons or the public. Compliance with Rule 402 would ensure nuisance air contaminants or other materials are not emitted which would help to reduce construction-related air emissions.	Project Applicant & Project Construction Team	City of Menifee Building and Safety; Public Works; and Engineering Departments	Prior to the issuance of building permits	
		CRDR 4.2-5 The Project is required to comply with SCAQMD Rule 445, which prohibits the installation of permanent wood-burning devices into new development, and limits the installation of other permanent indoor or outdoor wood-burning devices and gaseous-fueled devices. Compliance with SCAQMD Rule 445 would prohibit the use of wood burning stoves and fire places which would	Project Applicant & Project Construction Team	City of Menifee Building and Safety Department	Prior to the issuance of grading or building permits	

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		reduce air emissions during operation of the Project. CRDR 4.2-6 In conformance with the Legado Specific Plan (Specific Plan No. 2017-187), the Project is required to create pedestrian connections that would be constructed at selected roads as set forth in the Legado Specific Plan (Specific Plan No. 2017-187), in order to provide pedestrian access to the various uses and activity centers within the Project. Facilitating pedestrian access encourages people to walk instead of drive. The Project would not impose barriers to pedestrian access and interconnectivity. Furthermore, the mix of uses within the Specific Plan as proposed by the Project acts to reduce travel distances and regional vehicle miles traveled (VMT) by consolidating trips and reducing requirements for multiple trips. CRDR 4.2-7 The Project is required by the Legado Specific Plan (Specific Plan No. 2017-187) to create local "light" vehicle networks, such as NEV networks. NEVs offer an alternative to traditional vehicle trips and can legally be used on roadways with speed limits of 35 MPH or less (unless specifically restricted). To create an NEV network, the Project shall implement NEV lanes. Compliance with the NEV network requirement in the Legado Specific Plan would ensure the NEV network is installed and would encourage the use of alternative transportation to reduce air emissions during operation of the Project. Mitigation Measures MM 4.2-1 through MM 4.2-3 provided under the discussion and analysis of Threshold a, would apply.	Project Applicant & Project Construction Team Project Applicant	City of Menifee Building and Safety; Community Development; Public Works; and Engineering Departments City of Menifee Engineering and Public Works Departments	Prior to the issuance of construction permits Prior to the issuance of building permits	
Threshold c: Would the Project expose sensitive receptors to substantial pollutant concentrations?	Less-than-Significant Impact	City Regulation and Design Requirements CRDR 4.2-1 provided under the discussion and analysis of Threshold c, would apply.	Project Applicant	City of Menifee Building and Safety Department	Prior to grading permit issuance	Less-Than-Significant Impact
Threshold d: Would the Project result in other emissions (such as those leading to odors) affecting a substantial number of people?	Less-than-Significant Impact	City Regulation and Design Requirements CRDR 4.2-4 provided under the discussion and analysis of Threshold c, would apply.	Project Applicant & Project	City of Menifee Building and Safety; Public Works; and	Prior to the issuance of building permits	Less-than-Significant Impact

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
			Construction Team	Engineering Departments		
4.3 BIOLOGICAL RESOURCES						
Summary of Impacts						
Threshold a: Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Significant Direct and Cumulatively-Considerable Impact	CRDR 4.3-1 The Project Applicant shall make payment of Western Riverside County MSHCP fees pursuant to Riverside County Ordinance No. 810, as adopted by the City of Menifee. Fees shall be paid in compliance with Ordinance No. 810. CRDR 4.3-2 The Project Applicant shall make payment of Western Riverside County MSHCP fees pursuant to Riverside County Ordinance No. 663, as adopted by the City of Menifee. Fees shall be paid in compliance with Ordinance No. 663. CRDR 4.3-3 To ensure compliance with the Western Riverside County MSHCP, the following shall be required: o As part of its review of implementing discretionary applications (e.g., building permits), the City of Menifee shall assure that landscaping plans do not include the use of invasive plant species listed in Volume I, Table 6-2 of the MSHCP. o The Project is required to comply with the provisions of the Project's NPDES permit, and the Project's Storm Water Pollution Prevention Program (SWPPP) during construction. Prior to approval of grading permits, the Project's construction contractor shall develop, obtain City approval, and implement a SWPPP to address runoff and potential water quality degradation during construction. Compliance with the NPDES permit and the SWPPP would identify and implement an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate discharge to surface water	Project Applicant Project Applicant Project Applicant	City of Menifee Planning Division City of Menifee Planning Division City of Menifee (see below) City of Menifee Community Development Department City of Menifee Engineering and Public Works Departments	Prior to grading permit issuance Prior to grading permit issuance Prior to grading or construction permit issuance	Less-than-Significant Impact

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		from storm water and non-storm water discharges during Project construction. o All construction plans (i.e., grading permits, building permits, etc.) shall include the following note, compliance with which shall be assured by the construction contractor: "Nighttime construction is allowed only with special approval from the City of Menifee. During any nighttime construction activities, all lighting shall direct lighting away from the existing MSHCP conserved lands adjacent to the northwest corner of the Project site." o Prior to issuance of grading or construction permits, the City of Menifee shall review plans to ensure that all lighting along the perimeter of the west boundary of the Project site, particularly street lamps, shall be downcast luminaries and shall be shielded and oriented in a manner that will prevent spillage or glare into the MSHCP conserved lands.		City of Menifee Community Development Department City of Menifee Engineering and Public Works Departments		
		MM 4.3-2 In accordance with MSHCP Objective 6, prior to issuance of grading permits or other permits authorizing ground disturbance or discing, the Project Applicant shall retain a qualified biologist to perform a subsequent pre-grading burrowing owl survey unrelated to the previous burrowing owl surveys conducted for the Project site. The subsequent pre-grading burrowing owl survey shall occur between dawn and 12 p.m. at all potentially suitable habitat sites within the Project's limits of disturbance within 30 days prior to Project commencement of any ground-disturbing activities at the Project site. If no owls and/or sign are detected at the time of the subsequent burrowing owl survey, then a pre-construction survey as detailed below shall be implemented. If only burrowing owl sign is detected, and it cannot be discerned whether the species is still occupying the	Project Applicant and Project Biologist	City of Menifee Planning Division	Prior to grading permit issuance	

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		site, either (a) additional visit(s) will be performed until it can be determined whether burrowing owl occupies the site or not or (b) assume occupation and implement a Burrowing Owl Management Plan (see below). If additional site visits determine the species is absent, then the pre-construction survey provided below shall only be required; alternatively, if the burrowing owl is confirmed present on-site during the subsequent pre-grading survey, then a Burrowing Owl Management Plan shall be prepared and implemented. • Pre-Construction Survey: The pre-construction survey shall be required in the event the subsequent pre-grading surveys confirm the burrowing owl is absent from the Project site and off-site disturbance areas. The survey shall be performed by a qualified biologist that will survey the site for the presence/absence of burrowing owls within 30 days prior to commencement of ground-disturbing activities at the Project site. If burrowing owls are detected on-site during the pre-construction survey, the owls shall be relocated/excluded from the site outside of the breeding season following accepted protocols, and subject to the approval of the RCA and Wildlife Agencies (i.e., CDFW and/or USFWS). • Burrowing Owl Management Plan: In the event that burrowing owl is determined to be present during the subsequent pre-grading survey, or in the event that an assumption is made that the burrowing owl occurs on-site, a burrowing owl management plan shall be prepared and implemented in coordination with the Western Riverside County Regional Conservation Authority (RCA) and CDFW that shall detail the acceptable				

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		protocol for relocation of owls from the Project site, passively and/or actively. Per the MSHCP, passive relocation may include use of one-way doors or collapse of burrows when owls are present outside of the nesting season; and active relocation may include translocation with translocation sites located in the MSHCP Conservation Area in consultation with the Wildlife Agencies. Per the requirements of the MSHCP translocation sites shall be identified, taking into consideration unoccupied Habitat areas, presence of burrowing mammals, existing colonies, and effects to other MSHCP Covered Species. Furthermore, a Biological Monitoring Work Plan will be submitted to the City of Menifee and approved prior to the issuance of a grading permit. The Work Plan will outline the details of the daily biological monitoring schedule, BMPs, and the timeline for completing the Burrowing Owl Relocation Plan. If additional site visits determine the species is absent, then the pre-construction survey (as discussed above) shall instead be implemented. A copy of the results of the pre-construction survey (and all additional surveys), as well as copies of the Burrowing Owl Management Plan, if required, shall be provided to the City of Menifee Community Development Department for review and approval (in the case of the Burrowing Owl Management Plan) prior to any vegetation clearing and ground disturbance activities. MM 4.3-3 Vegetation clearing of each phase of Project construction shall be conducted outside of the nesting season (February 1 through August 31). If avoidance of the nesting season is not feasible,	Project Applicant and Project Biologist	City of Menifee Planning Division	Prior to ground disturbing activities	

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		then a qualified biologist shall conduct a nesting bird survey within seven (7) days prior to any ground disturbance, including discing, demolition activities, and grading. The nesting bird survey shall be submitted to the City of Menifee for review and approval prior to any vegetation clearing and ground disturbing activities during nesting season. If active nests of native species are identified, the biologist shall establish suitable buffers around the nests, and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests. Typically established buffers are greater for raptors than songbirds and depend upon the species, the nesting stage, and type of construction activity proposed. The buffer should be 300 feet for raptors and 150 feet for songbirds, unless specifically determined by a qualified biologist familiar with the nesting phenology of the nesting species.				
Threshold b: Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Significant Direct and Cumulatively-Considerable Impact	MM 4.3-1 Prior to the issuance of grading permits, the Project Applicant shall provide evidence to the City of Menifee Planning Division that impacts to 0.68 acre of MSCHP riparian/riverine resources , potential impacts to 0.02 acre of off-site MSHCP riparian/riverine resources (if such impacts would occur), and 0.12 acre of on-site vernal pool resources are mitigated through compensatory preservation at a minimum 3:1 (mitigation: impact) ratio. Mitigation shall occur through one of the following methods: off-site mitigation, targeting in-lieu fee mitigation with a local Resource Conservation District; or payment to another approved mitigation bank. In the event that appropriate mitigation credits are unavailable from an authorized mitigation bank, anywhere locally at the time of purchase, the Project Applicant shall submit a revised DBESP that proposes an alternate mitigation strategy. The alternate mitigation strategy may include an applicant-responsible mitigation in the same watershed. The proposed alternate mitigation would require Wildlife Agency concurrence before impacts to the 0.68 acre of riparian/riverine resources and 0.12 acre of on-site	Project Applicant	City of Menifee Planning Division and local Resource Conservation District	Prior to the issuance of grading permits	Less-than-Significant Impact

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		vernal pool resources could occur. Additionally, if potential impacts to the 0.02 acre of off-site riparian/riverine resources were to occur, the proposed alternate mitigation would require Wildlife Agency concurrence before potential impacts to the 0.02 acre of riparian/riverine resources could occur. Evidence of compliance with this requirement shall be provided prior to the issuance of grading permits. County Regulations and Design Requirements CRDR 4.3-1 through CRDR 4.3-3 provided under the discussion and analysis of Threshold a, would apply.				
Threshold c: Would the Project have a substantial adverse effect on state or protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Significant Direct and Cumulatively-Considerable Impact	MM 4.3-4 Impacts to 0.68 acre of on-site ACOE, RWQCB, and CDFW jurisdiction and potential impacts to 0.02 acre of potential off-site ACOE, RWQCB, and CDFW jurisdiction (if such impacts would occur) shall be mitigated at a minimum 3:1 ratio through off-site mitigation, targeting in-lieu fee mitigation with a local Resource Conservation District (RCD), or other approved mitigation bank.	Project Applicant	California Department of Fish and Wildlife and City of Menifee Community Development Department	Prior to grading permit issuance	Less-than-Significant Impact
Threshold d: Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	No Impact	No mitigation is required	N/A	N/A	N/A	No Impact
Threshold e: Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No Impact	CRDR 4.3-4 The Project shall comply with the City of Menifee's Tree Preservation Ordinance No. 2015-167 (Municipal Code Chapter 9.86), which provides guidelines for tree removal and tree preservation. Compliance with Ordinance No. 2015-167 would ensure tree removal and tree plantings on-site occur in accordance with the requirements of Ordinance No. 2015-167.	Project Applicant	City of Menifee Engineering and Public Works Departments	Prior to grading permit issuance	No Impact
Threshold f: Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Significant Direct and Cumulatively-Considerable Impact	MM 4.3-5 Prior to the issuance of grading permits, the Project Applicant shall obtain a Section 404 Permit from the U.S. Army Corps of Engineers (ACOE) and a Section 401 Permit from the Regional Water Quality Control Board (RWQCB)	Project Applicant	California Department of Fish and Wildlife and City of Menifee Community	Prior to grading permit issuance	Less-than-Significant Impact

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		for impacts to 0.68 acre of ACOE and RWQCB jurisdictional areas on-site and potential impacts to 0.02 acre of potential ACOE and RWQCB jurisdictional areas off-site (if such impacts would occur).		Development Department		
		MM 4.3-6 Prior to the issuance of grading permits, the Project Applicant shall obtain a Section 1602 Streambed Alteration Agreement from the CDFW for impacts to 0.68 acre of CDFW jurisdictional areas on-site and potential impacts to 0.02 acre of potential CDFW jurisdictional areas off-site (if such impacts would occur).	Project Applicant	California Department of Fish and Wildlife and City of Menifee Community Development Department	Prior to grading permit issuance	Less-than-Significant Impact
		City Regulations and Design Requirements CRDR 4.3-1 through CRDR 4.3-3 and Mitigation Measures MM 4.3-1 through MM 4.3-4 provided under the discussion and analysis of Thresholds a and b, would apply.	Project Applicant	City of Menifee Community Development Department and Engineering and Public Works Departments	Prior to grading or construction permit issuance	Less-than-Significant Impact
4.4 Cultural Resources						
Summary of Impacts						
Threshold a: Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	Less-than-Significant	No mitigation is required	N/A	N/A	N/A	Less-than-Significant Impact
Threshold b: Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	Significant Direct and Cumulatively-Considerable Impact	MM 4.4-1 If during ground disturbance activities, unique cultural resources are discovered that were not assessed by the archaeological report(s) and/or environmental assessment conducted prior to Project approval, the following procedures shall be followed. Unique cultural resources are defined, for this condition only, as being multiple artifacts in close association with each other, but may include fewer artifacts if the area of the find is determined to be of significance due to its sacred or cultural importance as determined in consultation with the Native American Tribe(s). i. All ground disturbance activities within 100 feet of the discovered cultural resources shall be halted until a meeting is convened between the Project Applicant, the Project Archaeologist, the Tribal Representative(s)	Project Applicant and Project Archeologist	City of Menifee Community Development Department	During grading or ground disturbance activities and if any cultural material is found on-site	Less-than-Significant Impact

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		and the Community Development Director to discuss the significance of the find. ii. At the meeting, the significance of the discoveries shall be discussed and after consultation with the Tribal Representative(s) and the Project Archaeologist, a decision shall be made, with the concurrence of the Community Development Director, as to the appropriate mitigation (documentation, recovery, avoidance, etc.) for the cultural resources. iii. Further ground disturbance shall not resume within the area of the discovery until an agreement has been reached by all parties as to the appropriate mitigation. Work shall be allowed to continue outside of the buffer area and will be monitored by additional Tribal Monitors if needed. iv. Treatment and avoidance of the newly discovered resources shall be consistent with the Cultural Resources Management Plan and Monitoring Agreements entered into with the appropriate tribes. This may include avoidance of the cultural resources through project design, in-place preservation of cultural resources located in native soils and/or re-burial on the Project property so they are not subject to further disturbance in perpetuity as identified in Non-Disclosure of Reburial Condition. v. If the find is determined to be significant and avoidance of the site has not been achieved, a Phase III data recovery plan shall be prepared by the Project Archeologist, in consultation with the Tribe, and shall be submitted to the City for their review and approval prior to implementation of the said plan. vi. Pursuant to Calif. Pub. Res. Code § 21083.2(b) avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the Project Applicant and the Tribe(s) cannot agree on the				

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		significance or the mitigation for the archaeological or cultural resources, these issues will be presented to the City Community Development Director for decision. The City Community Development Director shall make the determination based on the provisions of the California Environmental Quality Act with respect to archaeological resources, recommendations of the project archeologist and shall take into account the cultural and religious principles and practices of the Tribe. Notwithstanding any other rights available under the law, the decision of the City Community Development Director shall be appealable to the City Planning Commission and/or City Council." Evidence of compliance with this mitigation measure, if a significant archaeological resource is found, shall be provided to City of Menifee upon the completion of a treatment plan and final report detailing the significance and treatment finding. MM 4.4-2 In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries: a) One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Menifee Community Development Department: i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resources. ii. Reburial of the resources on the Project property. The measures for reburial shall include, at least, the following: Measures and provisions to protect the future reburial area from any future	Project Applicant, Project Archeologist and Native American Monitor	City of Menifee Community Development Department	During grading or ground disturbance activities and if any cultural material is found on-site	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed, with an exception that sacred items, burial goods and Native American human remains are excluded. Any reburial process shall be culturally appropriate. Listing of contents and location of the reburial shall be included in the confidential Phase IV report. The Phase IV Report shall be filed with the City under a confidential cover and not subject to Public Records Request. iii. If preservation in place or reburial is not feasible then the resources shall be curated in a culturally appropriate manner at a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence of curation in the form of a letter from the curation facility stating that subject archaeological materials have been received and that all fees have been paid, shall be provided by the landowner to the City. There shall be no destructive or invasive testing on sacred items, burial goods and Native American human remains. Results concerning finds of any inadvertent discoveries shall be included in the Phase IV monitoring report. Evidence of compliance with this mitigation measure, if a significant archaeological resource is found, shall be provided to City of Menifee upon the completion of a treatment plan and final report detailing the significance and treatment finding. MM 4.4-3 Prior to issuance of a grading permit the Project Applicant shall retain a Riverside County qualified archaeologist to monitor all ground disturbing activities in an effort to identify any unknown archaeological resources.	Project Applicant and Project Archeologist	City of Menifee Community Development Department	Prior to issuance of a grading permit	

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		The Project Archaeologist and the Tribal Monitor(s) shall manage and oversee monitoring for all initial ground disturbing activities and excavation of each portion of the Project site including clearing, grubbing, tree removals, mass or rough grading, trenching, stockpiling of materials, rock crushing, structure demolition and etc. The Project Archaeologist and the Tribal Monitor(s), shall have the authority to temporarily divert, redirect or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of cultural resources in coordination with any required special interest or Tribal Monitors. The Project Applicant shall submit a fully executed copy of the contract to the Community Development Department to ensure compliance with this condition of approval. Upon verification, the Community Development Department shall clear this condition. In addition, the Project Archaeologist, in consultation with the Consulting Tribe(s), the contractor, and the City, shall develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB 52 to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. A consulting tribe is defined as a tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB 52 consultation process, and has completed AB 52 consultation with the City as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB 52. Details in the Plan shall include: a. Project grading and development scheduling; b. The Project Archeologist and the Consulting Tribes(s) shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker				

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		Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Consulting Tribe(s) shall make themselves available to provide the training on an as-needed basis; c. The protocols and stipulations that the contractor, City, Consulting Tribe(s) and Project Archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.				
		MM 4.4-4 Tribal Monitor(s) from the Pechanga Band of Luiseño Indians shall be required on-site during all ground-disturbing activities, including grading, stockpiling of materials, engineered fill, rock crushing, etc. The Project Applicant shall retain a qualified Tribal Monitor(s) from the Pechanga Band of Luiseño Indians. Prior to issuance of a grading permit, the Project Applicant shall submit a copy of a signed contract between the above-mentioned Tribe and the Project Applicant for the monitoring of the Project to the City of Menifee Community Development Department and to the Engineering Department. The Tribal Monitor(s) shall have the authority to temporarily divert, redirect or halt the ground-disturbance activities to allow recovery of cultural	Project Applicant and Native American Monitor	City of Menifee Community Development Department	Prior to issuance of a grading permit	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		resources, in coordination with the Project Archaeologist.				
		MM 4.4-5 Tribal Monitor(s) from the Soboba Band of Luiseño Indians shall be required on-site during all ground-disturbing activities, including grading, stockpiling of materials, engineered fill, rock crushing, etc. The Project Applicant shall retain a qualified Tribal Monitor(s) from the Soboba Band of Luiseño Indians. Prior to issuance of a grading permit, the Project Applicant shall submit a copy of a signed contract between the above-mentioned Tribe and the Project Applicant for the monitoring of the Project to the City of Menifee Community Development Department and to the Engineering Department. The Tribal Monitor(s) shall have the authority to temporarily divert, redirect or halt the ground-disturbance activities to allow recovery of cultural resources, in coordination with the Project Archaeologist.	Project Applicant and Native American Monitor	City of Menifee Community Development Department	Prior to issuance of a grading permit	
		MM 4.4-6 Prior to final inspection, the Project Applicant shall prompt the Project Archeologist to submit two (2) copies of the Phase III Data Recovery report (if required for the Project) and the Phase IV Cultural Resources Monitoring Report that complies with the Community Development Department's requirements for such reports. The Phase IV report shall include evidence of the required cultural/historical sensitivity training for the construction staff held during the pre-grade meeting. The Community Development Department shall review the reports to determine adequate mitigation compliance. Provided the reports are adequate, the Community Development Department shall clear this condition. Once the report(s) are determined to be adequate, two (2) copies shall be submitted to the Eastern Information Center (EIC) at the University of California Riverside (UCR) and one (1) copy shall be submitted to the Consulting Tribe(s) Cultural Resources Department(s).	Project Applicant and Project Archeologist	City of Menifee Community Development Department	Prior to final inspection	

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		MM 4.4-7 Prior to any grading in the associated areas, the Project Applicant shall meet with the Project Archaeologist and the Consulting Tribe(s) in order to assess CA-RIV 9288 and CA-RIV-9289 to determine the suitability for relocation to a permanent open space area. The Consulting Tribe(s) shall work with the Project Archaeologist, Project Applicant, and the grading contractor or appropriate personnel to ensure that every effort is made to relocate the Features safely and to discuss the most appropriate methods for relocation. Using professional archaeological methods, the milling slicks and ringing stone artifacts associated with Sites RIV-9288 and Site RIV-9289 shall be relocated to the planned open space area in the northeastern portion of the Project site. Furthermore, the rock art site associated with Site P-33-028165 shall be preserved in place within the planned open space area in the northeastern portion of the Project site. Before construction activities may resume in the affected area, any visible artifacts shall be recovered and recorded and the features recorded using professional archaeological methods. The current Department of Parks and Recreation forms for the sites shall be updated, detailing which features were relocated, the process taken, and updated maps using sub meter GIS technology to document the new location of each feature. The relocation information shall be included in a Phase IV Monitoring Report. The site record should clearly indicate that the Features are not in their original location and why they were relocated.	Project Applicant	City of Menifee Community Development Department	Prior to commencement of construction activities	
		MM 4.4-8 Sites CA-RIV-9288 and CA-RIV-9289 will be impacted during grading and construction activities and the soils surrounding them will be disturbed. Prior to any grading in the associated areas, the Project Applicant, the Pechanga Tribe, and the City will formalize a written agreement to identify the area that will be subject to "Controlled Grading" during construction of the Project. The Pechanga Tribe, the Project Applicant, and the City will develop an exhibit that outlines the area subject	Project Applicant	City of Menifee Community Development Department	Prior to any grading in the areas associated with Sites CA-RIV-9288 and CA-RIV-9289	

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		to controlled grading, and that area will be highlighted on the rough grading plans, precise grading plans or other off-site improvement plans that may impact this site. "Controlled Grading" shall include, without limitation, the slow and deliberate excavation and removal of soils employing the smallest reasonable cuts in certain areas using light scrapers (for example Caterpillar 623 or 627), dozers (for example D6-D8), front end loaders, excavators, skip loaders, dump trucks, and motor graders. A controlled grading plan will be monitored by the Project Archeologist and Pechanga Tribal Monitor(s) to ensure the systematic removal of the ground surface surrounding these features are monitored to allow for the identification of resources. Results of all controlled grading activities shall be included in the Phase IV monitoring report.				
Threshold c: Would the Project disturb any human remains, including those interred outside of formal cemeteries?	Less-than-Significant Impact with Mitigation Incorporated	MM 4.4-9 If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to Public Resource Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within the period specified by law (24 hours). Subsequently, the Native American Heritage Commission shall identify the "most likely descendant." The most likely descendant shall then make recommendations and engage in consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98.Evidence of compliance with this mitigation measure, if human remains are found, shall be provided to the City of Menifee upon the completion of a treatment plan and final report detailing the significance and treatment finding.	Project Applicant, Project Construction Team, and Project Archeologist	City of Menifee Planning Division	During grading or ground disturbance activities and in the event human remains are discovered on-site	Less-than-Significant Impact

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4.5 ENERGY						
Summary of Impacts						
Threshold a: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less-than-Significant Impact	CRDR 4.5-1 In order to demonstrate compliance with California Code of Regulations Title 13, Motor Vehicles, section 2449(d)(3), Idling, signage shall be posted on site restricting idling of construction equipment to a maximum of five (5) minutes. This requirement shall be noted on the Project's grading plans.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of grading permits	Less-than-Significant Impact
		CRDR 4.2-5, CRDR 4.2-6, and CRDR 4.2-7 discussed in Section 4.2, *Air Quality*, shall apply.	Project Applicant & Project Construction Team	City of Menifee Building and Safety; Community Development; Public Works; and Engineering Departments	Prior to the issuance of building permits	
		CRDR 4.7-1 and CRDR 4.7-2 discussed in Section 4.7, *Greenhouse Gas Emissions*, shall apply.	Project Applicant	City of Menifee Planning Division, Public Works Department, Engineering Department; and Building and Safety Department	Prior to Project approval; Prior to the issuance of building permits associated with future implementing developments	
		Mitigation Measures MM 4.2-1, MM 4.2-2, and MM 4.2-3 discussed in Section 4.2, *Air Quality*, shall apply.	Project Applicant	City of Menifee Building and Safety Division	Prior to issuance of building and/or occupancy permits	
		Mitigation Measures MM 4.7-1, MM 4.7-2, MM 4.7-3, MM 4.7-4, and MM 4.7-5 discussed in Section 4.7, *Greenhouse Gas Emissions*, shall apply.	Project Applicant	City of Menifee Building and Safety Department	Prior to approval of landscaping plans associated with future implementing development permits; Prior to issuance of building permits for each development phase; Prior to issuance of occupancy permits	

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Threshold b: Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less-than-Significant Impact	CRDR 4.5-1 discussed above under Threshold a shall apply.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of grading permits	Less-than-Significant Impact
		CRDR 4.2-5, CRDR 4.2-6, and CRDR 4.2-7 discussed in Section 4.2, *Air Quality*, shall apply.	Project Applicant & Project Construction Team	City of Menifee Building and Safety; Community Development; Public Works; and Engineering Departments	Prior to the issuance of building permits	
		CRDR 4.7-1 and CRDR 4.7-2 discussed in Section 4.7, *Greenhouse Gas Emissions*, shall apply.	Project Applicant	City of Menifee Planning Division, Public Works Department, Engineering Department; and Building and Safety Department	Prior to Project approval; Prior to the issuance of building permits associated with future implementing developments	
		Mitigation Measures MM 4.2-1, MM 4.2-2, and MM 4.2-3 discussed in Section 4.2, *Air Quality*, shall apply.	Project Applicant	City of Menifee Building and Safety Division	Prior to issuance of building and/or occupancy permits	
		Mitigation Measures MM 4.7-1, MM 4.7-2, MM 4.7-3, MM 4.7-4, and MM 4.7-5 discussed in Section 4.7, *Greenhouse Gas Emissions*, shall apply.	Project Applicant	City of Menifee Building and Safety Department	Prior to approval of landscaping plans associated with future implementing development permits; Prior to issuance of building permits for each development phase; Prior to issuance of occupancy permits	
4.6 GEOLOGY AND SOILS						
Summary of Impacts						
Threshold a: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	Significant Direct Impact	CRDR 4.6-1 The Project is required to comply with the provisions of the California Building Code (California Code of Regulations, Title 24). Compliance with Title 24 would ensure	Project Applicant	City of Menifee Building and Safety Department	Prior to the issuance of building permits	Less-than-Significant Impact

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides?		Project implements building requirements in order to geological impacts that would have the potential to occur during operation of the Project. CRDR 4.6-2 The Project is required to comply with the provisions of City of Menifee Ordinance No. 2016-205 (Municipal Code Chapter 8.04). Ordinance No. 2016-205 requires that all projects comply with California Building Codes and the International Building Codes. These codes establish site-specific investigation requirements, construction standards, and inspection procedures to ensure that development does not pose a threat to the health, safety, and welfare of the public. Compliance with City of Menifee Ordinance No. 2016-205 would ensure the Project complies with applicable Building Codes and would reduce geology impacts to proposed structures. MM 4.6-1 Prior to issuance of grading permits, the Director of Public Works and Engineering for the City of Menifee (or his/her designee) shall verify that all of the recommendations given in the Project's March 16, 2017 (revised November 30, 2017) "Preliminary Geotechnical Evaluation for Proposed Approximately 331 Acre "Fleming Ranch" Development, City of Menifee, Riverside County, California" by LGC, are incorporated into the construction and grading plans. The recommendations shall include, but not be limited to the following: • <u>Site Earthwork</u> Earthwork on-site shall be performed in accordance with the following recommendations, future grading plan review report(s), the 2016 CBC/City of Menifee grading requirements, and the General Earthwork and Grading Specifications included in Appendix E of the Geotechnical Evaluation. In case of conflict, the following recommendations shall supersede those included in Appendix E of the	Project Applicant Project Applicant	City of Menifee Building and Safety Department City of Menifee Public Works Department and Engineering Department	Prior to the issuance of building permits Prior to the issuance of grading permits	

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		Geotechnical Evaluation. The following recommendations shall be considered preliminary and may be revised within the future grading plan review report or based on the actual conditions encountered during site grading. *Site Preparation* Prior to grading of areas to receive structural fill or engineered improvements, the areas shall be cleared of existing asphalt, surface obstructions, and demolition debris. Vegetation and debris shall be removed and properly disposed of off-site. Holes resulting from the removal of buried obstructions, which extend below proposed finish grades, shall be replaced with suitable compacted fill material. If cesspools or septic systems are encountered they shall be removed in their entirety. The resulting excavation shall be backfilled with properly compacted fill soils. As an alternative, cesspools may be backfilled with lean sand-cement slurry. Any encountered wells shall be properly abandoned in accordance with regulatory requirements. At the conclusion of the clearing operations, a representative of LGC Geotechnical shall observe and accept the site prior to further grading. *Removal Depths and Limits* In order to provide relatively uniform bearing conditions for the planned improvements, a minimum removal depth of approximately 2 to 6 feet below existing grade, or 1-foot below the deepest footing, whichever is deeper shall be adhered to. Where				

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		practical, the envelope for removals shall extend laterally a minimum distance of 5 feet beyond the edges of the proposed improvements. Refer to the Geotechnical Map, Sheet 1, for details. For retaining walls, free-standing walls, and screen walls, removals shall extend at least 2 feet beneath the existing grade or 1-foot beneath the base of foundations, whichever is deeper. Within pavement and hardscape areas, removals shall extend to a depth of at least 2 feet below existing grades. Removals within areas of design cut (relative to pavement subgrade) shall be performed to a depth that is a minimum of 2 feet below existing grades or 1-foot below pavement subgrade, whichever is deeper. In general, the envelope for over-excavation shall extend laterally a minimum distance of 2 feet beyond the edges of the proposed improvements. Local conditions may be encountered during excavation that could require additional removals beyond the above-noted minimums in order to obtain an acceptable subgrade. The actual depths and lateral extents of grading shall be determined by the Geotechnical Consultant, based on subsurface conditions encountered during grading. Several methods will be utilized in determining the suitability of the material observed in the removal bottom excavations. Visual observation of material, how it performs as the construction equipment passes over it, probing and occasional field density testing of the removal bottoms will be performed by our field				

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		technician and/or field geologist. When field density test data is utilized for approval of native material, an in-place relative compaction of 85 percent or greater and a degree of saturation of 85 percent or greater will be considered suitable. Removal areas shall be accurately staked in the field by the Project Surveyor. *Temporary Excavations* Temporary excavations shall be performed in accordance with Project plans, specifications, and all Occupational Safety and Health Administration (OSHA) requirements. Excavations shall be laid back or shored in accordance with OSHA requirements before personnel or equipment are allowed to enter. During the field evaluation conducted by LGC, the majority of the site soils upper approximate 5 feet are anticipated to be OSHA Type "C" soils (refer to the attached boring logs included in the Geotechnical Evaluation). Soil conditions shall be regularly evaluated during construction to verify conditions are as anticipated. The Contractor shall be responsible for providing the "competent person" required by OSHA standards to evaluate soil conditions. Sandy soils are present and shall be considered susceptible to caving. Close coordination with the Geotechnical Consultant shall be maintained to facilitate construction while providing safe excavations. Excavation safety is the sole responsibility of the Contractor.				

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		Vehicular traffic, stockpiles, and equipment storage shall be set back from the perimeter of excavations a distance equivalent to a 1:1 projection from the bottom of the excavation. Once an excavation has been initiated, it shall be backfilled as soon as practical. Prolonged exposure of temporary excavations may result in some localized instability. Excavations shall be planned so that they are not initiated without sufficient time to shore/fill them prior to weekends, holidays, or forecasted rain. It should be noted that any excavation that extends below a 1:1 (horizontal to vertical) projection of an existing foundation will remove existing support of the structure foundation. If requested, temporary shoring parameters shall be provided. *Removal Bottoms and Subgrade Preparation* Removal bottoms shall consist of dense alluvial fan deposit or competent bedrock. In general, removal bottom areas and any areas to receive compacted fill shall be scarified to a minimum depth of 6 inches, brought to a near-optimum moisture condition, and re-compacted per project recommendations. Removal bottoms and areas to receive fill shall be observed and accepted by the Geotechnical Consultant prior to subsequent fill placement. *Material for Fill* From a geotechnical perspective, the on-site soils are generally considered suitable for use as general compacted fill, provided they are screened of organic materials, construction debris				

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		and oversized material (8 inches in greatest dimension). Generation of oversize material should be anticipated. For fill depths less than 10 feet below proposed finish grade, oversize material shall be removed from site fills and/or crushed into smaller pieces (less than 8 inches in greatest dimension) and well-blended into fill soils. As an alternative, a deeper excavation may be performed in order to create an area with fill deeper than 10 feet for disposal of oversize material in accordance with Appendix E of the Geotechnical Evaluation. Additionally, oversize material may be placed in "non-structural" areas such as proposed passive park areas. Oversize material placed in nonstructural areas shall be clearly delineated as "non-structural" and potential long-term settlement shall be anticipated in these areas. From a geotechnical viewpoint, any required import soils for general fill (i.e., non-retaining wall backfill) shall consist of clean, granular soils of "Very Low" to "Low" expansion potential (expansion index 50 or less based on ASTM D 4829), and generally free of organic materials, construction debris and material greater than 8 inches in maximum dimension. Import for required retaining wall backfill shall meet the criteria outlined in the following paragraph. Source samples shall be provided to the Geotechnical Consultant for laboratory testing a minimum of four working days prior to planned importation. Retaining wall backfill shall consist of sandy soils with a maximum of 35 percent fines (passing the No. 200				

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		sieve) per American Society for Testing and Materials (ASTM) Test Method D1140 (or ASTM D6913/D422) and a "Very Low" expansion potential (EI of 20 or less per ASTM D4829). Soils shall also be screened of organic materials, construction debris, and material greater than 3 inches in maximum dimension. The site may contain soils that are not suitable for retaining wall backfill due to their fines content or due to oversize materials, therefore select grading and stockpiling or import may be required by the contractor for obtaining suitable retaining wall backfill soil. Aggregate base (crushed aggregate base or crushed miscellaneous base) shall conform to the requirements of Section 200-2 of the Standard Specifications for Public Works Construction ("Greenbook") for untreated base materials (except processed miscellaneous base) or Caltrans Class 2 aggregate base. *Placement and Compaction of Fills* Material to be placed as fill shall be brought to near-optimum moisture content (generally between optimum and 2 percent above optimum moisture content) and recompacted to at least 90 percent relative compaction (per ASTM D1557). Significant moisture conditioning of on-site soils shall be required in order to achieve adequate compaction. The optimum lift thickness to produce a uniformly compacted fill will depend on the type and size of compaction equipment used. In general, fill shall be placed in uniform lifts not exceeding 8 inches in				

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		compacted thickness. Each lift shall be thoroughly compacted and accepted prior to subsequent lifts. Generally, placement and compaction of fill shall be performed in accordance with local grading ordinances and with observation and testing performed by the geotechnical consultant. During backfill of excavations, the fill shall be properly benched into firm and competent soils of temporary backcut slopes as it is placed in lifts. Aggregate base material shall be compacted to at least 95 percent relative compaction at or slightly above optimum moisture content per ASTM D1557. Subgrade below aggregate base shall be compacted to at least 90 percent relative compaction per ASTM D1557 at or slightly above optimum moisture content. *Trench and Retaining Wall Backfill and Compaction* The on-site soils may generally be suitable as trench backfill, provided the soils are screened of material greater than 6 inches in diameter, and organic matter. If trenches are shallow or the use of conventional equipment may result in damage to the utilities, sand having a Sand Equivalent (SE), per Caltrans Test Method (CTM) 217, of 30 or greater may be used to bed and shade the pipes. Sand backfill within the pipe bedding zone may be densified by jetting or flooding and then tamping to ensure adequate compaction. Subsequent trench backfill shall be compacted in uniform thin lifts by mechanical means to at least the				

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		recommended minimum relative compaction (per ASTM D1557). Retaining wall backfill shall consist of sandy soils as outlined in preceding Section, *Material for Fill*. The limits of select sandy backfill shall extend at minimum ½ the height of the retaining wall or the width of the heel (if applicable), whichever is greater (Refer to Figure 2, of the Geotechnical Evaluation). Retaining wall backfill soils shall be compacted in relatively uniform thin lifts to at least 90 percent relative compaction (per ASTM D1557). Jetting or flooding of retaining wall backfill materials shall not be permitted. A representative from LGC Geotechnical shall observe, probe, and test the backfill to verify compliance with the Project recommendations. *Shrinkage and Bulking* Volumetric changes in earth quantities will occur when excavated on-site earth materials are replaced as properly compacted fill. Table 3 of the Geotechnical Evaluation depicts an estimate of shrinkage and bulking factors for the various geologic units found on-site. Subsidence due to earthwork equipment is expected to be on the order of 0.1 to 0.2 feet. It shall be stressed that these values are only estimates and that actual shrinkage factors are extremely difficult to predict. The effective shrinkage of on-site soils will depend primarily on the type of compaction equipment and method of compaction used on-site by				

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		the contractor. Additionally, the on-site geology is very complex; the above estimates are generalized groupings of similar lithologies and shall be expected to vary across the site and with depth. The above shrinkage estimates are intended as an aid for others in determining preliminary earthwork quantities. However, these estimates shall be used with some caution since they are not absolute values. Contingencies shall be made for balancing earthwork quantities based on actual shrinkage and subsidence that occurs during grading. If importing/exporting a large volume of soils is not considered feasible or economical, a balance area shall be designated on-site that can fluctuate up or down based on the actual volume of soil. The balance area, if needed, shall be able to accommodate on the order of 5 percent (plus or minus) of the total grading volume be considered. • Preliminary Foundation Recommendations Preliminary conventional and post-tensioned foundation measures are provided in the following sections. Please note that the following foundation measures are preliminary and must be confirmed by LGC Geotechnical at the completion of Project plans (i.e., foundation, grading and site layout plans) as well as completion of earthwork. At the completion of grading, if soils with a different expansion potential (EI greater than 50) are encountered, updated geotechnical foundation recommendations shall be provided.				

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		Provisional Conventional Foundation Design Parameters Conventional foundations may be designed in accordance with Wire Reinforcement Institute (WRI) procedure for slab-on-ground foundations per Section 1808 of the 2016 CBC to resist expansive soils. The following preliminary soil parameters may be used: • Effective Plasticity Index: 20 • Climatic Rating: Cw = 15 • Reinforcement: Per structural designer. • Minimum Perimeter Footing Depth: 15 inches below lowest adjacent grade. • Moisture condition (presoak) slab subgrade to 100% of optimum moisture content to a minimum depth of 12 inches prior to trenching. The recommended moisture content shall be maintained up to the time of concrete placement. *Provisional Post-Tensioned Foundation Design Parameters* The geotechnical parameters provided in Table 4 of the Geotechnical Evaluation may be used for post-tensioned slab foundations. These parameters have been determined in general accordance with the Post-Tensioning Institute (PTI) Standard Requirements for Design of Shallow Post-Tensioned Concrete Foundations on Expansive Soils referenced in Chapter 18 of the 2016 CBC. In utilizing these parameters, the Foundation Engineer shall design the foundation system in accordance with the allowable deflection criteria of applicable codes and the requirements				

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		of the structural designer/architect. Other types of stiff slabs may be used in place of the CBC post-tensioned slab design provided that, in the opinion of the Foundation Structural Designer, the alternative type of slab is at least as stiff and strong as that designed by the CBC/PTI method to resist expansive soils. The design parameters are recommended based on the anticipated nature of the soil (with respect to expansion potential). Please note that implementation of the design parameters will not eliminate foundation movement (and related distress) should the moisture content of the subgrade soils fluctuate. It is the intent of these recommendations to help maintain the integrity of the proposed structures and reduce (not eliminate) movement, based upon the anticipated site soil conditions. Should future owners not properly maintain the areas surrounding the foundation, for example by overwatering, then highly expansive soils are anticipated at the maximum differential movement of the perimeter of the foundation to the center of the foundation to be on the order of a couple of inches. Soils of lower expansion potential are anticipated to show less movement. *Foundation Subgrade Preparation and Maintenance* Moisture conditioning of the subgrade soils shall be required prior to trenching the foundation. The recommendations specific to the anticipated site soil conditions are presented herein. The subgrade moisture condition of the building pad soils shall be maintained				

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		at near-optimum moisture content up to the time of concrete placement. This moisture content shall be maintained around the immediate perimeter of the slab during construction and up to occupancy of the homes. The geotechnical parameters provided herein assume that if the areas adjacent to the foundation are planted and irrigated, these areas will be designed with proper drainage and adequately maintained so that ponding, which causes significant moisture changes below the foundation, does not occur. Mitigation Measures herein do not account for excessive irrigation and/or incorrect landscape design. Plants shall only be provided with sufficient irrigation for life and not overwatered to saturate subgrade soils. Sunken planters placed adjacent to the foundation, shall either be designed with an efficient drainage system or liners to prevent moisture infiltration below the foundation. Some lifting of the perimeter foundation beam should be expected even with properly constructed planters. In addition to the factors mentioned above, future homeowners shall be made aware of the potential negative influences of trees and/or other large vegetation. Roots that extend near the vicinity of foundations can cause distress to foundations. Future homeowners (and the owner's landscape architect) shall not plant trees/large shrubs closer to the foundations than a distance equal to half the mature height of the tree or 20 feet, whichever is more conservative unless specifically provided with root				

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		barriers to prevent root growth below the house foundation. It is the homeowner's responsibility to perform periodic maintenance during hot and dry periods to ensure that adequate watering has been provided to keep soils from separating or pulling back from the foundation. Future homeowners shall be informed and educated regarding the importance of maintaining a constant level of soil-moisture. The homeowners shall be made aware of the potential negative consequences of both excessive watering, as well as allowing potentially expansive soils to become too dry. Expansive soils can undergo shrinkage during drying, and swelling during the rainy winter season or when irrigation is resumed. This can result in distress to building structures and hardscape improvements. The builder shall provide these recommendations to future homeowners. *Slab Underlayment Guidelines* Post-construction moisture migration shall be expected below the foundation. The Foundation Engineer/Architect shall determine whether the use of a capillary break (sand or gravel layer), in conjunction with the vapor retarder, is necessary or required by code. Sand layer thickness and location (above and/or below vapor retarder) shall also be determined by the Foundation Engineer/Architect. • Soil Bearing and Lateral Resistance Provided the provisions of the earthwork-related provisions of the Mitigation Measure are implemented, an allowable soil bearing pressure of				

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		2,000 pounds per square foot (psf) may be used for the design of footings having a minimum width of 12 inches and minimum embedment of 15 inches below lowest adjacent ground surface. This value may be increased by 400 psf for each additional foot of embedment and 400 psf for each additional foot of foundation width to a maximum value of 2,500 psf. These allowable bearing pressures are applicable for level (ground slope equal to or flatter than 5H:1V) conditions only. Bearing values indicated are for total dead loads and frequently applied live loads and may be increased by ⅓ for short duration loading (i.e., wind or seismic loads). In utilizing the above-mentioned allowable bearing capacity, and provided the earthwork-related provisions of the Mitigation Measure are implemented, foundation settlement due to static loads is anticipated to be 1 inch. Differential settlement may be taken as ½-inch over a horizontal span of 40 feet. Resistance to lateral loads can be provided by friction acting at the base of foundations and by passive earth pressure. For concrete/soil frictional resistance, an allowable coefficient of friction of 0.35 may be assumed with dead-load forces. An allowable passive lateral earth pressure of 270 psf per foot of depth (or pcf) to a maximum of 2,700 psf may be used for the sides of footings poured against properly compacted fill. Allowable passive pressure may be increased to 360 pcf (maximum of 3,600 psf) for short duration seismic loading. This passive				

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		pressure is applicable for level (ground slope equal to or flatter than 5H:1V) conditions. Frictional resistance and passive pressure may be used in combination without reduction. The upper foot of passive resistance shall be neglected if finished grade will not be covered with concrete or asphalt. The provided allowable passive pressures are based on a factor of safety of 1.5 and 1.1 for static and seismic loading conditions, respectively. • Foundation Setback from Top-of-Slope and Bottom-of-Slope Foundations shall have adequate setback from top and bottom of slopes. Per the 2016 CBC, the minimum top-of-slope setback shall be H/3, with a maximum required setback of 40 feet, where H is the total height of the slope. This distance is measured horizontally from the outside bottom edge of the footing to the slope face. As an alternative to moving the building footprint, setback requirements may be accomplished by deepened footings or deep foundations. The minimum bottom-of-slope setback shall be H/2, with a maximum required setback of 15 feet. Refer to Chapter 18 of the 2016 CBC. • Lateral Earth Pressures for Retaining Walls The following lateral earth pressures may be used for the preliminary design of the subject site retaining walls up to approximately 6 feet in height. Lateral earth pressures for approved sandy soils which meet indicated Project requirements are provided below. Lateral earth pressures are				

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		provided as equivalent fluid unit weights, in psf per foot of depth (or pcf). These values do not contain an appreciable factor of safety; thus, the retaining wall designer shall apply the applicable factors of safety and/or load factors during design. A soil unit weight of 125 pcf may be assumed for calculating the actual weight of soil over the wall footing. The following lateral earth pressures are presented in Table 5 of the Geotechnical Evaluation for approved granular soils a maximum of 35 percent fines (passing the No. 200 sieve per ASTM D1140) and an Expansion Index of 20 or less per ASTM D4829. The retaining wall designer shall clearly indicate on the retaining wall plans the required sandy soil backfill. It should be noted that select grading and/or import will be required for the Project. The lateral earth pressures provided above may be increased by a factor of 1.5 for a 2:1 (horizontal to vertical) sloping backfill condition. If the wall can yield enough to mobilize the full shear strength of the soil, it can be designed for "active" pressure. If the wall cannot yield under the applied load, the earth pressure will be higher. This shall include 90-degree corners of retaining walls. Such walls shall be designed for "at-rest." The equivalent fluid pressure values assume free-draining conditions. If conditions other than those assumed above are anticipated, the equivalent fluid pressure values shall be provided on an individual-case basis by the Geotechnical Engineer.				

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		Surcharge loading effects from any adjacent structures shall be evaluated by the retaining wall designer. In general, structural loads within a 1:1 (horizontal to vertical) upward projection from the bottom of the proposed retaining wall footing will surcharge the proposed retaining wall. In addition to the recommended earth pressure, retaining walls adjacent to streets shall be designed to resist a uniform lateral pressure of 100 psf due to normal street vehicle traffic, if applicable. The retaining wall designer shall contact the Geotechnical Engineer for any required geotechnical input in estimating surcharge loads. If required, the retaining wall designer may use a seismic lateral earth pressure increment of 5 pcf. This increment shall be applied in addition to the provided static lateral earth pressure using a triangular distribution with the resultant acting at H/3 in relation to the base of the retaining structure (where H is the retained height). Per Section 1803.5.12 of the 2016 CBC, the seismic lateral earth pressure is applicable to structures assigned to Seismic Design Category D through F for retaining wall structures supporting more than 6 feet of backfill height. This seismic lateral earth pressure is estimated using the procedure outlined by the Structural Engineers Association of California. Retaining wall structures shall be provided with appropriate drainage and appropriately waterproofed. To reduce, but not eliminate, saturation of near-surface (upper approximate 1-foot) soils in front of the retaining walls, the perforated subdrain pipe shall be				

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		located as low as possible behind the retaining wall. The outlet pipe shall be sloped to drain to a suitable outlet. In general, and where feasible, retaining wall outlet pipes shall not be connected to area drains. If subdrains are connected to area drains, special care and information shall be provided to homeowners to maintain these drains. Typical retaining wall drainage is illustrated in Figure 2 of the Geotechnical Evaluation. It shall be noted that the recommended subdrain does not provide protection against seepage through the face of the wall and/or efflorescence. Efflorescence is generally a white crystalline powder (discoloration) that results when water containing soluble salts migrates over a period of time through the face of a retaining wall and evaporates. If such seepage or efflorescence is undesirable, retaining walls shall be waterproofed to reduce this potential. Soil bearing and lateral resistance (friction coefficient and passive resistance) are provided in Mitigation Section, *Soil Bearing and Lateral Resistance*. Earthwork considerations (temporary backcuts, backfill, compaction, etc.) for retaining walls are provided in Mitigation Section, *Site Earthwork*, and the subsequent earthwork related sub-sections. • <u>Control of Surface Water and Drainage Control</u> From a geotechnical perspective, compacted finished grade soils adjacent to proposed residences shall be sloped away from the proposed residence and towards an approved drainage device or unobstructed swale,				

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		where feasible. Drainage swales, wherever feasible, shall not be constructed within 5 feet of buildings. Where lot and building geometry necessitates that the side yard drainage swales be routed closer than 5 feet to structural foundations, the use of area drains together with drainage swales shall be used, if feasible. Drainage swales used in conjunction with area drains shall be designed by the Project Civil Engineer so that a properly constructed and maintained system will prevent ponding within 5 feet of the foundation. Planters with open bottoms adjacent to buildings shall be avoided. Planters shall not be designed adjacent to buildings unless provisions for drainage, such as catch basins, liners, and/or area drains, are made. Overwatering must be avoided. • <u>Subsurface Water Infiltration</u> Regulatory requirements mandate that storm water be infiltrated below grade rather than collected in a conventional storm drain system. Typically, a combination of methods are implemented to reduce surface water runoff and increase infiltration including; permeable pavements/pavers for roadways and walkways, directing surface water runoff to grass-lined swales, retention areas, and/or drywells, etc. It shall be noted that collecting and concentrating surface water for the purpose of intentionally infiltrating below grade conflicts with the geotechnical engineering objective of directing surface water away from				

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		slopes, structures and other improvements. The geotechnical stability and integrity of a site is reliant upon appropriately handling surface water. In general, surface water shall not be intentionally infiltrated into the subsurface soils. The developed Project site will consist of compacted fill over dense formational materials. As such, surface water shall not be intentionally infiltrated into subsurface soils on the Project site. • Preliminary Asphalt Concrete Pavement Sections Preliminary testing of the Project site indicated an R-Value of 57. The following provisional minimum asphalt concrete (AC) street sections are provided in Table 6 of the Geotechnical Evaluation based on an assumed R-Value of 40 for Traffic Indices (TI) of 5.5 (or less) and 6.0. These mitigation measures shall be confirmed with R-Value testing of representative near-surface soils at the completion of grading and after underground utilities have been installed and backfilled. Final street sections shall be confirmed by the Project Civil Engineer based upon the final design Traffic Index. If requested, LGC Geotechnical will provide sections for alternate TI values. Due to anticipated construction traffic prior to the completion of the Project, if feasible, the total thickness (base course and capping course) of asphalt concrete shall be placed at essentially the same time. Construction traffic loading on only the base course of the asphalt concrete will increase the potential for pavement distress. It shall be noted that construction traffic such				

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		as concrete trucks will likely exceed traffic loading after completion of construction. An alternative (i.e., placement of the asphalt concrete capping course at the completion of construction) is to increase the total asphalt concrete thickness indicated above by 1-inch. The thicknesses indicated in this Mitigation Measure are for minimum thicknesses. Increasing the thickness of any or all of the above layers will reduce the likelihood of the pavement experiencing distress during its service life. The above measures are based on the assumption that proper maintenance and irrigation of the areas adjacent to the roadway will occur through the design life of the pavement. Failure to maintain a proper maintenance and/or irrigation program may jeopardize the integrity of the pavement. Earthwork recommendations regarding aggregate base and subgrade are provided in the previous Mitigation Section, *Site Earthwork*. • <u>Nonstructural Concrete Flatwork</u> Nonstructural concrete flatwork (such as walkways, bicycle trails, patio slabs, etc.) have a potential for cracking due to changes in soil volume related to soil-moisture fluctuations. If feasible and desired, to reduce the potential for excessive cracking and lifting, concrete shall be designed in accordance with the minimum guidelines outlined in Table 7 of the Geotechnical Evaluation. These guidelines will reduce the potential for irregular cracking and promote cracking along construction				

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		joints, but will not eliminate all cracking or lifting. Thickening the concrete and/or adding additional reinforcement will further reduce cosmetic distress. • Pre-Construction Documentation and Construction Monitoring A program of documentation and monitoring shall be drafted and considered before the onset of any earthwork. The documentation and monitoring shall include detailed documentation of the existing improvements, buildings, and utilities around the area of proposed grading, with particular attention to any distress that is already present prior to the start of work. • Geotechnical Plan Review When available, grading and foundation plans shall be reviewed by LGC Geotechnical in order to verify the geotechnical Mitigation Measures are implemented. Updated recommendations and/or additional field work may be necessary. Grading, foundation, any other improvement plans, and final Project drawings shall be reviewed by LGC Geotechnical prior to construction to verify that the geotechnical recommendations, provided herein as Mitigation Measure 0, have been appropriately incorporated. Additional or modified geotechnical recommendations may be required based on the proposed design. • Geotechnical Observation and Testing During Construction The recommendations provided in the Geotechnical Evaluation, incorporated herein as Mitigation Measure 0 are				

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		based on limited subsurface observations and geotechnical analysis. The interpolated subsurface conditions shall be verified in the field during construction by a representative of LGC Geotechnical. Geotechnical observation and/or testing shall be performed by LGC Geotechnical at the following stages: • During grading (removal bottoms, fill placement, etc); • During utility trench and retaining wall backfill and compaction; • After presoaking building pads and other concrete-flatwork subgrades, and prior to placement of aggregate base or concrete; • Preparation of pavement subgrade and placement of aggregate base; • After building and wall footing excavation and prior to placing reinforcement and/or concrete; and • When any unusual soil conditions are encountered during any construction operation subsequent to issuance of this report.				
Threshold b: Would the Project result in substantial soil erosion or the loss of topsoil?	Less-than-Significant Impact	CRDR 4.6-3 The Project is required to comply with the provisions of the Project's NPDES permit, and the Project's SWPPP for construction activities. Compliance with the NPDES permit and the SWPPP would identify and implement an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate discharge to surface water from stormwater and non-stormwater discharges during construction of the Project. CRDR 4.6-4 The Project is required to comply with the provisions of SCAQMD Rule 403, by addressing blowing dust from the Project's construction activities. Compliance with Rule 403 would ensure dust control measures are	Project Applicant Project Applicant	City of Menifee Public Works Department and Engineering Department City of Menifee Public Works Department and Engineering Department	Prior to grading permit issuance Prior to grading permit issuance	Less-than-Significant Impact

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		implemented on the Project site to reduce construction-related geology impacts.				
Threshold c: Would the Project 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?	Significant Direct Impact	Mitigation Measure 4.6-1 provided under the discussion and analysis of Threshold a, would apply.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to the issuance of grading permits	Less-than-Significant Impact
Threshold d: Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Significant Direct Impact	Mitigation Measure 4.6-1 provided under the discussion and analysis of Threshold a, would apply.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to the issuance of grading permits	Less-than-Significant Impact
Threshold e: Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No Impact	No mitigation is required	N/A	N/A	N/A	No Impact
Threshold f: Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Significant Direct and Cumulatively-Considerable Impact	MM 4.6-2 Prior to the issuance of grading permits, the Project Applicant shall provide a Paleontological Resources Impact Mitigation Program (PRIMP). The following information shall be provided at a minimum in the PRIMP, in addition to other industry standards and Society of Vertebrate Paleontology standards: I) Description of the proposed site and planned grading operations; II) Description of the level of monitoring required for all earth-moving activities; III) Identification and qualifications of the qualified paleontological monitor to be employed for grading operations monitoring; IV) Identification of personnel with authority and responsibility to temporarily halt or divert grading equipment to allow for recovery of large specimens; V) Direction for any fossil discoveries to be immediately reported to the property owner who	Project Applicant	City of Menifee Planning Division	Prior to grading permit issuance	Less-than-Significant Impact

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		in turn will immediately notify the Community Development Department of the discovery; VI) Means and methods to be employed by the paleontological monitor to quickly salvage fossils as they are unearthed to avoid construction delays; VII) Sampling of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates; VIII) Procedures and protocol for collecting and processing of samples and specimens; IX) Fossil identification and curation procedures to be employed; X) Identification of the permanent repository to receive any recovered fossil material; XI) All pertinent exhibits, maps and references; XII) Procedures for reporting of findings; and XIII) Identification and acknowledgement of the developer for the content of the PRIMP as well as acceptance of financial responsibility for monitoring, reporting and curation fees. The property owner and/or applicant on whose land the paleontological fossils are discovered shall provide appropriate funding for monitoring, reporting, delivery and curating the fossils at the institution where the fossils will be placed, and will provide confirmation to the City that such funding has been paid to the institution. All reports shall be signed by the Project Paleontologist and all other professionals responsible for the report's content (e.g. Professional Geologist), as appropriate. One original signed copy of the report(s) shall be submitted to the office of the Community Development Department along with a copy of this Mitigation Measure and the grading plan for appropriate case processing and tracking. MM 4.6-3 Prior to the issuance of grading permits, the Project Applicant shall retain a qualified Project Paleontologist or Paleontological	Project Applicant	City of Menifee Planning Division	Prior to grading permit issuance	

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		Monitor to manage and oversee mass grading and excavation activities in areas identified as having a "high" sensitivity to contain paleontological resources. Monitoring shall occur in accordance with the approved PRIMP required pursuant to Mitigation Measure MM 4.11-1. Monitoring shall be conducted full-time in areas of grading or excavation in undisturbed surficial exposures of Old and Very Old Alluvial Deposits, as shown on Figure 2 (Geology Map) of the Project's Paleontological Resources Assessment (Technical Appendix F3). Paleontological monitors shall be equipped to salvage fossils as they are unearthed to minimize construction delays and to remove samples of sediment that are likely to contain the remains of small fossil invertebrates and vertebrates. Ground-disturbing activities in rocks with no paleontological sensitivity (the Granodiorite to Tonalite of the Domenigoni Valley Pluton, Gabbro, or Intermixed Mesozoic Schist and Cretaceous Granitic Rocks) do not require paleontological monitoring. The Project Applicant shall provide written verification that a City of Menifee-certified Paleontologist or Paleontological Monitor has been retained to manage and oversee mass grading and excavation activities in areas identified as having a "high" sensitivity to contain paleontological resources. This verification shall be presented in a letter from the Paleontologist or Paleontological Monitor to the City of Menifee Planning Division. MM 4.6-4 In the event that a previously unidentified paleontological resource is discovered on the Project site, the Paleontological Monitor shall have the authority to temporarily redirect construction away from the area of the find in order to assess its significance. In the event that paleontological resources are encountered when a Paleontological Monitor is not present, work in the immediate area of the find shall be redirected and a Paleontologist shall be contacted to assess the find for significance. If determined to be significant, the fossil shall be collected from the field. Preparation	Project Applicant and Project Paleontologist	City of Menifee Planning Division	In the event that a previously unidentified paleontological resource is discovered on the Project site (prior to certificated of occupancy permits)	

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		of recovered specimens to a point of identification and permanent preservation, including screen-washing of sediments to recover small invertebrates and vertebrates, if indicated by the results of test sampling. Preparation of individual vertebrate fossils is often more time-consuming than for accumulations of invertebrate fossils. Any and all fossils encountered during Project grading activities will be deposited at a museum repository, such as the Western Science Center Museum on Searl Parkway in Hemet, Riverside County, California. All costs of the paleontological monitoring and mitigation program, including any one-time charges by the receiving institution, are the responsibility of the Project Applicant. Evidence of compliance with this mitigation measure, if a paleontological resource is found, shall be provided to the City of Menifee prior the issuance of any certificate of occupancy if such resources are found on-site. MM 4.6-5 If any paleontological material is discovered on the property, all paleontological material collected during the grading monitoring program shall be prepared to the point of identification, identified to the lowest taxonomic level possible, cataloged, and curated into the permanent collections at the Western Science Center, or other approved museum repository. The collections and associated records shall be transferred, including title, to an appropriate curation facility, to be accompanied by payment of the fees necessary for permanent curation, Evidence of compliance with this mitigation measure shall be provided to the City of Menifee Planning Division in the form of a report of findings by the Project Paleontologist to document the results of the monitoring program and indicate the curation facility received the paleontological materials and that all fees have been paid. MM 4.6-6 Prior to the issuance of the first certificate of occupancy, in the event any resources are found on-site during construction activities, a	Project Applicant and Project Paleontologist Project Applicant	City of Menifee Planning Division City of Menifee Planning Division	If any paleontological material is discovered on the property (prior to certificate of occupancy permits) Prior to the first certificate of occupancy issuance	

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		final monitoring and mitigation report of findings and significance documenting the field and analysis results, and interpreting the artifact and research data within the research context, shall be completed and submitted to the satisfaction of the City of Menifee. The report shall include (at a minimum) the following: lists of all fossils recovered and necessary maps and graphics to accurately record their original location. A letter documenting receipt and acceptance of all fossil collections by the receiving institution must be included in the final report. A final copy of the report shall be submitted to the City of Menifee Planning Division and the Project Applicant.				
4.7 GREENHOUSE GAS EMISSIONS						
Summary of Impacts						
Threshold a: Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Cumulatively-Considerable Impact	CRDR 4.7-1 Pedestrian connections, as set forth in the Legado Specific Plan (Specific Plan No. 2017-187), shall be constructed at selected roads within the Project, providing pedestrian access to the various uses and activity centers within the Project. Facilitating pedestrian access encourages people to walk instead of drive. The Project shall not impose barriers to pedestrian access and interconnectivity. Furthermore, the mix of uses within the Specific Plan as proposed by the Project would reduce travel distances and regional vehicle miles traveled (VMT) by consolidating trips and reducing requirements for multiple trips. CRDR 4.7-2 The Project is required by the Legado Specific Plan (Specific Plan No. 2017-187) to create local "light" vehicle networks, such as NEV networks. NEVs offer an alternative to traditional vehicle trips and can legally be used on roadways with speed limits of 35 MPH or less (unless specifically restricted). To create an NEV network, the Project will implement NEV lanes. Compliance with the NEV network requirement in the Legado Specific Plan would ensure the NEV network is installed and would encourage the use of alternative transportation to reduce GHG emissions during operation of the Project.	Project Applicant Project Applicant	City of Menifee Planning Division City of Menifee Planning Division, Public Works Department, and Engineering Department	Prior to Project approval Prior to the issuance of building permits associated with future implementing developments	Significant and Unavoidable Cumulatively-Considerable Impact

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		CRDR 4.7-3 As per information provided by the Project Applicant, the Project is required to comply with SCAQMD Rule 445, which prohibits the use of wood burning stoves and fireplaces in new development. Compliance with SCAQMD Rule 445 would prohibit the use of wood burning stoves and fire places which would reduce GHG emissions during operation of the Project.	Project Applicant	City of Menifee Building and Safety Department	Prior to the issuance of building permits	
		MM 4.7-1 Prior to issuance of building permits, and to reduce water demands and associated energy use, prior to approval of landscaping plans associated with future implementing development permits, the Project Applicant shall prepare, and the City of Menifee shall approve, a Water Conservation Strategy that demonstrates a minimum 20% reduction in outdoor water usage when compared to baseline water demand (total expected water demand without implementation of the Water Conservation Strategy). Planning Area 18 of the Legado Specific Plan shall not be subject to the minimum 20% reduction in outdoor water usage requirement. In addition, the City shall review building permit applications to ensure the following requirements are implemented: o The City shall review landscaping plans to verify that the landscaping palette emphasizes drought-tolerant plants consistent with provisions of the City of Menifee requirements; and o The City shall review proposed irrigation plans to ensure the installation of water-efficient irrigation techniques consistent with City of Menifee requirements.	Project Applicant	City of Menifee Planning Division, Public Works Department, and Engineering Department	Prior to approval of landscaping plans associated with future implementing development permits	
		MM 4.7-2 Prior to issuance of building permits, and to reduce water consumption and the associated energy usage, the Project shall be required to be designed to comply with the mandatory reductions in indoor water usage contained in the incumbent CalGreen Code and any mandated reduction in outdoor water usage	Project Applicant	City of Menifee Building and Safety Department	Prior to issuance of building permits for each development phase	

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		contained in the City's water efficient landscape requirements. In addition, the City shall review building permit application to ensure the following requirement is implemented: o The City shall review building plans to require that all faucets, high-efficiency toilets (HETs), and other plumbing fixtures are EPA Certified WaterSense labeled or equivalent.				
		MM 4.7-3 Prior to issuance of building permits the Project Applicant shall demonstrate that the proposed building components would surpass by a minimum of 5% the 2019 Title 24 performance standards or shall comply with the Title 24 requirements in effect at the time, whichever is more stringent, established under the Building Energy Efficiency Standards contained in the California Code of Regulations (CCR), Title 24, Part 6 (Title 24, Title 24 Energy Efficiency Standards).	Project Applicant	City of Menifee Building and Safety Department	Prior to issuance of building permits	
		MM 4.7-4 Prior to issuance of building permits, the Project Applicant shall demonstrate that the proposed roofs of the buildings are designed to accommodate maximally sized photovoltaic (PV) solar arrays taking into consideration limitations imposed by other rooftop equipment, roof warranties, building and fire code requirements, and other physical or legal limitations. The Project shall develop each Project building with the necessary electrical system and other infrastructure to accommodate maximally sized PV arrays in the future. The electrical system and infrastructure shall be clearly labeled with noticeable and permanent signage which informs future tenant/purchasers of the existence of this infrastructure.	Project Applicant	City of Menifee Building and Safety Department	Prior to issuance of building permits	
		MM 4.7-5 Prior to approval of implementing commercial plot plan(s) within Planning Area 16 of the Legado Specific Plan, the City of Menifee Planning Division shall ensure that the plot plan(s)	Project Applicant	City of Menifee Building and Safety Department	Prior to issuance of occupancy permits and verified during Project review	

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		include a minimum of three (3) electric-vehicle charging stations. The electric-vehicle charging stations also shall be depicted on building plans for implementing development within Planning Area 16. Prior to issuance of occupancy permits for the proposed commercial land uses within Planning Area 16, the City of Menifee Building and Safety Department shall ensure that a minimum of three electric-vehicle charging stations have been installed on-site.				
Threshold b: Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Cumulatively-Considerable Impact	City Regulation and Design Requirements CRDR 4.7-1 through CRDR 4.7-3 and Mitigation Measures 4.7-1 through 4.7-5 provided under the discussion and analysis of Threshold a, would apply.	Project Applicant	City of Menifee Planning Division, Public Works Department, and Engineering Department	Prior to the issuance of building permits associated with future implementing developments and verified during Project review Prior to approval of landscaping plans associated with future implementing development permits Prior to issuance of occupancy permits	Significant and Unavoidable Cumulatively-Considerable Impact
4.8 HAZARDS AND HAZARDOUS MATERIALS						
Summary of Impacts						
Threshold a: Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less-than-Significant Impact	No mitigation is required	N/A	N/A	N/A	Less-than-Significant Impact
Threshold b: Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Less-than-Significant Impact	No mitigation is required	N/A	N/A	N/A	Less-than-Significant Impact

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Threshold c: Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one- quarter mile of an existing or proposed school?	Less-than-Significant Impact	No mitigation is required	N/A	N/A	N/A	Less-than-Significant Impact
Threshold d: Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	No Impact	No mitigation is required	N/A	N/A	N/A	No Impact
Threshold e: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the project area?	Less-than-Significant Impact	CRDR 4.8-2 To ensure compliance with the requirements of the MARB AIA as regulated by the Riverside County ALUC, during development review and prior to final building inspection, the City of Menifee shall ensure that implementing projects within the Legado Specific Plan comply with the following ALUC mandatory conditions of approval, which include but are not limited to the following: o Any new outdoor lighting that is installed shall be hooded or shielded so as to prevent either the spillage of lumens or reflection into the sky. Outdoor lighting shall be downward facing. (ALUC, 2017, pp. 1-2) o The following uses/activities are not included in the Project and shall be prohibited at the site (ALUC, 2017, p. 2): (a) Any use which would direct a steady light or flashing light of red, white, green, or amber colors associated with airport operations toward an aircraft engaged in an initial straight climb following takeoff or toward an aircraft engaged in a straight final approach toward a landing at an airport, other than an FAA-approved navigational signal light or visual approach slope indicator. (b) Any use which would cause sunlight to be reflected towards an aircraft engaged in an	Project Applicant	City of Menifee Public Works Department and Engineering Department and Community Development Department	Prior to issuance of occupancy permits and during Project review	Less-than-Significant Impact

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		initial straight climb following takeoff or towards an aircraft engaged in a straight final approach towards a landing at an airport. (c) Any use which would generate smoke or water vapor or which would attract large concentrations of birds, or which may otherwise affect safe air navigation within the area. (Such uses include landscaping utilizing water features, aquaculture, production of cereal grains, sunflower, and row crops, composting operations, trash transfer stations that are open on one or more sides, recycling centers containing putrescible wastes, construction and demolition debris centers, fly ash disposal, and incinerators.) (d) Any use which would generate electrical interference that may be detrimental to the operation of aircraft and/or aircraft instrumentation. o A notice of 'Airport in the Vicinity' (refer to Attachment 1 to ALUC Development Review-Directors Determination Letter included in EIR Technical Appendix M) shall be provided to all potential purchasers of the proposed lots and to tenants of the homes thereon. (ALUC, 2017, p. 2) o All new aboveground detention or bioretention basins on the site shall be designed so as to provide for a maximum 48-hour detention period following the conclusion of the storm event for the design storm (may be less, but not more), and to remain totally dry between rainfalls. Vegetation in and around the detention/bioretention basin(s) that would provide food or cover for bird species that would be incompatible with airport operations shall not be utilized in project landscaping. (ALUC, 2017, p. 2)				
Threshold f: Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No Impact	No mitigation is required	N/A	N/A	N/A	No Impact

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Threshold g: Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	Less-than-Significant Impact		N/A	N/A	N/A	Less-than-Significant Impact
4.9 HYDROLOGY AND WATER QUALITY						
Summary of Impacts						
Threshold a: Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less-than-Significant Impact	CRDR 4.9-1 The Project is required to comply with the provisions of the Project's NPDES permit, and the Project's SWPPP during construction. Compliance with the NPDES permit and the SWPPP would identify and implement an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate discharge to surface water from storm water and non-storm water discharges during Project construction. CRDR 4.9-2 The Project shall be required to comply with the provisions of the Project's Drainage Study and the provisions of the proposed Specific Plan No. 2017-187. Compliance with these provisions would be assured by the City's future review of the Final Map and implementing grading and building permits for compliance with the provisions that require the development of three (3) water quality/detention basins in order to properly attenuate Project-related drainage flows. These provisions would serve to reduce and/or avoid impacts related to hydrology and water quality.	Project Applicant Project Applicant	City of Menifee Public Works Department and Engineering Department City of Menifee Public Works Department and Engineering Department	Prior to grading permit issuance Prior to grading permit issuance	Less-than-Significant Impact
Threshold b: Would the Project substantially decrease groundwater supplies or interfere with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	Less-than-Significant Impact	No mitigation is required	N/A	N/A	N/A	Less-than-Significant Impact
Threshold c: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner, which would:	Less-than-Significant Impact	City Regulation and Design Requirements CRDR 4.9-1 and CRDR 4.9-2 provided under the discussion and analysis of Thresholds a & f, would apply.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to grading permit issuance	Less-than-Significant Impact

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
i) Result in substantial erosion or siltation on- or off-site; ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; iii) 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; or iv) Impede or redirect flood flows?						
Threshold d: In flood hazard, tsunami, or seiche zones, would the Project risk release of pollutants due to Project inundation?	Less-than-Significant Impact	CRDR 4.9-3 The Project was reviewed for compliance with General Plan Action S-27 and Action S-65 through the preparation of the Project's Drainage Study. The Project was found to be consistent with General Plan Action S-27 and Action S-65 as stated below. All future implementing developments on the Project site would be required to be consistent with General Plan Action S-27 and Action S-65 as a condition of approval. Compliance with General Plan Action S-27 and Action S-65 would reduce the risk of flooding as a result of dam failure on the Project site. ▪ Action S-27: Prepare and distribute informational materials to owners of properties within the flood zones (Zones A, AE and X) and inundation zones (Exhibit bS-2.1, Dams with the Potential to Inundate the Menifee General Plan Area) regarding the potential for flooding in their area, including the potential for flooding of access routes to and from their neighborhoods. ▪ Action S-65: Require all essential and critical facilities (including but not limited to essential City offices and buildings, medical facilities, schools, child care centers, and nursing homes) in or within 200 feet of Flood Zones A, AE and X, or within the dam inundation	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to grading permit issuance	Less-than-Significant Impact

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		pathways, to develop disaster response and evacuation plans that address the actions that will be taken in the event of flooding or inundation due to catastrophic failure of a dam. City Regulation and Design Requirement CRDR 4.9-2 provided under the discussion and analysis of Threshold a would apply.				
Threshold e: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No Impact	No mitigation is required	N/A	N/A	N/A	No Impact
4.10 LAND USE AND PLANNING						
Summary of Impacts						
Threshold a: Would the Project physically divide an established community?	Less-than-Significant Impact	No mitigation is required	N/A	N/A	N/A	Less-than-Significant Impact
Threshold b: Would the Project cause a significant environmental effect due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Less-than-Significant Impact	City Regulation and Design Requirement CRDR 4.8-1 provided under the discussion and analysis of Subsection 4.8, *Hazards and Hazardous Materials*, Threshold e, would apply.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to final building inspection	Less-than-Significant Impact
4.11 NOISE						
Summary of Impacts						
Threshold a: Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Significant Direct Impact	CRDR 4.11-1 All construction activities shall adhere to City of Menifee Municipal Code, Section 8.01.010, which requires projects within one-fourth mile from an occupied residence to operate Monday through Saturday, except nationally recognized holidays, from 6:30 a.m. to 7:00 p.m and prohibits construction from occurring on Sunday or nationally recognized holidays unless approval is obtained from the City Building Official or City Engineer. Compliance with City of Menifee Municipal Code Section 8.01.010 would reduce construction-related noise impacts. CRDR 4.11-2 All construction activities and haul truck deliveries shall adhere to City of Menifee Municipal Code, Section 9.09.030(B),	Project Applicant Project Applicant	City of Menifee Building and Safety Department or Engineering Department City of Menifee Building and Safety Department	Prior to construction activities Prior to construction activities	Less-than-Significant Impact

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		which prohibits construction activities that make loud noise from occurring between 6:00 p.m. and 6:00 a.m. during the months of June through September, and between 6:00 p.m. and 7:00 a.m. during the months of October through May, and on Sundays and Federal holidays. Compliance with City of Menifee Municipal Code Section 9.09.030 would reduce construction-related noise impacts. MM 4.11-1 Prior to approval of grading plans and/or issuance of building permits, the City of Menifee shall review grading and building plans to ensure the following notes are included on the plans. Project contractors shall be required to comply with these notes and maintain written records of such compliance that can be inspected by the City of Menifee upon request. a) All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractors shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site. b) Construction equipment staging areas shall be located such that the greatest distance is maintained between construction-related noise sources and noise-sensitive receivers nearest the Project site (i.e., to the center) during all Project construction. c) The construction contractor shall design a haul route exhibit that includes delivery routes that minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise. The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 6:00 a.m. and 6:00 p.m. from June to September, and 7:00 a.m. to 6:00 p.m. from October to May, with no activity allowed on Sundays and nationally recognized holidays).	Project Applicant	City of Menifee Building and Safety Department, Planning Division, Public Works Department, and Engineering Department	Prior to grading and building permit issuance	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		MM 4.11-2 Prior to the issuance of any grading and building permits, the City of Menifee shall verify that final building plans require the construction of minimum six-foot tall noise barriers between the outdoor living areas (backyards) along the Project's perimeter and Antelope Road, Sherman Road, Chambers Avenue, Rouse Road, and/or the planned commercial and detention basin uses within Planning Areas 16, 17, and 19. The noise barriers shall adhere to the following design requirements: a) The recommended noise control barriers shall be constructed so that the top of each wall extends to the recommended height above the pad elevation of the lot it is shielding. When the road is elevated above the pad elevation, the barrier shall extend to the recommended height above the highest point between the residential home and the road. b) The barriers shall provide a weight of at least 4 pounds per square foot of face area with no decorative cutouts or line-of-sight openings between shielded areas and the roadways. The barrier must present a solid face from top to bottom. c) Unnecessary openings or decorative cutouts shall not be made. All gaps (except for weep holes) should be filled with grout or caulking. The noise barrier shall be constructed using one of the following materials: • Masonry block; • Stucco veneer over wood framing (or foam core), or one-inch thick tongue and groove wood of sufficient weight per square foot; • Glass (1/4-inch-thick), or other transparent material with sufficient weight per square foot • capable of providing a minimum transmission loss of 20 dBA; • Earthen berm; or • Any combination of these construction materials.	Project Applicant	City of Menifee Building and Safety Department and Planning Division	Prior to the issuance of building permits	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		During the final building inspection, the City of Menifee Building Inspector shall ensure that the sound barriers were constructed to adhere to the requirements stated herein, as well as the design specifications shown on the final approved building plans. MM 4.11-3 Prior to the issuance of building permits for residential uses, the City of Menifee shall verify that final building plans require the following: • First- and second-story windows with a minimum STC rating of 27 be installed at all residential homes adjacent to I-215, Encanto Drive, Sherman Road, Antelope Road, Rouse Road, and Chambers Avenue. • All exterior doors shall be well weather-stripped and have minimum STC ratings of 25. • Any penetrations of exterior walls by pipes, ducts, or conduits, the space between the wall and pipes, ducts, or conduits shall be caulked or filled with mortar to form an airtight seal. • Roof sheathing of wood construction shall be per manufacturer's specification or caulked plywood of at least one-half inch thick. • Ceilings shall be per manufacturer's specification or well-sealed gypsum board of at least one-half inch thick. • Insulation with at least a rating of R-19 shall be used in the attic space. • A forced air circulation system (e.g. air conditioning) or active ventilation system (e.g. fresh air supply) shall be provided which satisfies the requirements of the Uniform Building Code. During final building inspection, the City of Menifee Building Inspector shall ensure that the above-listed requirements have been met. MM 4.11-4 Prior to the issuance of building permits for commercial and/or community recreation center uses, the City of Menifee shall	Project Applicant	City of Menifee Building and Safety Department	Prior to the issuance of building permits	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		verify that final building plans require the following for commercial uses within Planning Areas 16 and 17 and for the community recreation center within Planning Area 18 of the Legado Specific Plan: • First- and second-story windows with a minimum STC rating of 32 be installed at commercial buildings facing I-215. • All exterior doors shall be well weather-stripped and have minimum STC ratings of 25. Well-sealed perimeter gaps around the doors are essential to achieve the optimal STC rating. • At any penetrations of exterior walls by pipes, ducts, or conduits, the space between the wall and pipes, ducts, or conduits shall be caulked or filled with mortar to form an airtight seal. • Roof sheathing shall be per manufacturer's specification. Ceilings shall be per manufacturer's specification. Ceiling/roof Insulation, if required under manufacturer's specification, shall have a minimum rating of R-19. • A forced air circulation system (e.g. air conditioning) or active ventilation system (e.g. fresh air supply) shall be provided which satisfies the requirements of the Uniform Building Code. During final building inspection, the City of Menifee Building Inspector shall ensure that the above-listed requirements have been met. MM 4.11-5 Prior to issuance of building permits for proposed residential, commercial, and community recreation center uses, the Project Applicant shall prepare a final noise study to verify that proposed building elements would meet the interior noise level standards for residential (45 dBA CNEL) and commercial/community recreation center (50 dBA CNEL) land uses. If necessary, additional measures may be included as necessary to meet the applicable interior noise standards.	Project Applicant	City of Menifee Building and Safety Department	Prior to issuance of building permits	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		MM 4.11-6 Prior to approval of grading plans and/or issuance of building permits, the City of Menifee shall review grading and building plans to ensure the plans prohibit the use of large construction equipment (e.g., dozers, graders, scrapers) within 200 feet of nearby occupied sensitive uses. Large construction equipment includes equipment capable of generating noise levels in excess of 68 dBA Leq (10-minute) at 50 feet and vibration levels of 80 VdB at sensitive receiver locations. However, such large construction equipment may be allowed within 200 feet of nearby sensitive receptors if it can be demonstrated that specific pieces of large construction equipment can demonstrate compliance with the 68 dBA Leq (10-minute) at 50 feet criteria and will generate vibration levels at adjacent sensitive uses which remain below 80 VdB. For any such equipment, the contractor shall maintain a record demonstrating that the equipment would not generate noise or vibration standards specified herein, which shall be made available for inspection by the City of Menifee upon request.	Project Applicant	City of Menifee Building and Safety Department, Public Works Department, and Engineering Department	Prior to approval of grading plans and/or issuance of building permits	
		MM 4.11-7 Prior to issuance of any grading and building permits, the City of Menifee shall verify that the Project's grading and building plans include the installation of temporary construction noise barriers at the following locations: a) A minimum 8-foot high temporary construction noise barrier at the Project's site boundaries adjacent to sensitive receiver locations R7 (western property line of Hans Christensen Middle School); b) A minimum 8-foot high temporary barrier adjacent to sensitive receiver location R9 (northern property line of Bell Air Mobile Estates); and c) A minimum 8-foot high temporary barrier adjacent to sensitive receiver location R10 (north and east property lines of Life Care Center). The temporary noise barriers shall remain on the Project site for the duration of Project construction.	Project Applicant	City of Menifee Building and Safety Department	Prior to issuance of any grading and building permits	

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		The noise barriers shall adhere to the following design requirements: a) The temporary noise barriers shall have a solid face from top to bottom; b) The temporary noise barriers shall provide a minimum transmission loss of 20 dBA (Federal Highway Administration, Noise Barrier Design Handbook). The noise barrier shall be constructed using an acoustical blanket (e.g. vinyl acoustic curtains or quilted blankets) attached to the construction site perimeter fence or equivalent temporary fence posts; and c) The noise barrier must be maintained, and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired. The noise control barrier and associated elements shall be completely removed, and the site appropriately restored upon the conclusion of the construction activity. Project contractors shall be required to comply with this requirement and maintain records of such compliance that can be inspected by the City of Menifee upon request. The Project contractor shall also be required to adhere to the noise barrier design specifications stated herein.				
Threshold b: Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?	Significant Direct Impact	Mitigation Measure MM 4.11-6 provided under the discussion and analysis of Threshold a, respectively, would apply.	Project Applicant	City of Menifee Building and Safety Department, Public Works Department, and Engineering Department	Prior to approval of grading plans and/or issuance of building permits	Less-than-Significant Impact
Threshold c: Would the Project be located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	Less-than-Significant Impact	No mitigation is required	N/A	N/A	N/A	Less-than-Significant Impact
4.12 PUBLIC SERVICES						
Summary of Impacts						

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Threshold a: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for Fire Protection Services?	Less-than-Significant Impact	CRDR 4.12-1 As a condition of Project approval, the Project would be required to conform to all mandatory local, state, and federal laws, ordinances, and standards relating to fire safety. Among other items, these requirements include conformance with the Uniform Building Code Section 1503, which requires that all buildings be constructed with fire retardant roofing material, as well as standard Riverside County Fire Department conditions of approval (COAs) for specific plans, which prohibit flag lots and require alternative/secondary access routes to neighborhoods. The alternative/secondary access routes would be required to be maintained throughout construction and buildout of the Project. Compliance with fire safety laws would ensure that the Project's is constructed in a manner that would reduce impacts to fire protection services and response times. CRDR 4.12-2 The Project would be required to adhere to City of Menifee Ordinance No. 2017-232 (Municipal Code Chapter 8.02), which requires payment of a development impact fee (DIF) to assist the City in providing for fire protection facilities, including fire stations. Payment of the DIF fee would ensure that funds are available for capital improvements, such as land/equipment purchases and fire station construction.	Project Applicant Project Applicant	City of Menifee Fire Department and Building and Safety Department City of Menifee Building and Safety Department	Prior to building permit issuance Prior to issuance of the certificate of occupancy for residential uses, and prior to permit issuance for commercial (non-residential) uses	Less-than-Significant Impact
Threshold b: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for Police Protection Services?	Less-than-Significant Impact	CRDR 4.12-3 The Project would be required to adhere to City of Menifee Ordinance No. 2017-232 (Municipal Code Chapter 8.02), which requires payment of a development impact fee (DIF) to assist the City in providing for sheriff protection facilities, including sheriff stations. Payment of the DIF fee would ensure that funds are available for additional sheriff personnel as well as capital improvements, such as land/equipment purchases and sheriff station construction.	Project Applicant	City of Menifee Planning Department	Prior to issuance of the certificate of occupancy	Less-than-Significant Impact
Threshold c: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or	Less-than-Significant Impact	CRDR 4.12-4 The Project is required to comply with Public Education Code § 17072.10-18, which requires mandatory payment of school impact fees. Payment of school impact fees would	Project Applicant	Menifee Union School District and Perris Union High School District	Prior to issuance of the certificate of occupancy	Less-than-Significant Impact

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
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 Schools?		ensure that funds are available for capital improvements such as land/equipment purchases and school construction.				
Threshold d: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for Parks?	Less-than-Significant Impact	CRDR 4.12-5 The Project would be required to comply with the City of Menifee Municipal Code Chapter 9.55 and City Council Resolution No. 15-143, which sets forth a parkland standard of 5.0 acres per 1,000 residents, specifies parkland dedication requirements, and imposes in-lieu park impact fees to address potential parkland deficiencies. Compliance with the parkland standard would ensure adequate parkland is available in the City of Menifee for Project residents. CRDR 4.12-6 The Project would be required to construct a 12.9-acre community park/community center, 1.3-acre private recreation center, and 79 acres of paseos/neighborhood parks. Construction of the 12.9-acre community park/community center, 1.3-acre private recreation center, and 7.9 acres of paseos/neighborhood parks would serve the parkland needs of the Project's population.	Project Applicant Project Applicant	City of Menifee Building and Safety Department City of Menifee Planning Division and Community Services Department	Prior to issuance of the certificate of occupancy Prior to issuance of the first certificate of occupancy for Phase 1 of the Project for the paseo/neighborhood parks located within PA 3, PA 4, and PA 10 and private recreation center, prior to issuance of building permits for 50% (which would occur under Phase 2) of the Project for the community park, and prior to the first certificate of occupancy for Phase 2 for the paseo/neighborhood parks in PA 5, PA 11, and PA 12.	Less-than-Significant Impact
Threshold e: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or	Less-than-Significant Impact	CRDR 4.12-7 The Project would be required to adhere to City of Menifee Ordinance No. 2017-232 (Municipal Code Chapter 8.02), which requires payment of a development impact fee (DIF) to	Project Applicant	City of Menifee Building and Safety Department	Prior to issuance of the certificate of occupancy	Less-than-Significant Impact

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
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 Other public facilities?		assist the City in providing for library facilities. Payment of the DIF fee would ensure that funds are available for capital improvements, such as land/equipment purchases and library construction.				
4.13 Recreation						
Summary of Impacts						
Threshold a: Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Less-than-Significant Impact	CRDR 4.13-1 The Project would be required to comply with the City of Menifee Municipal Code Chapter 9.55 and City Council Resolution No. 15-143, which sets forth a parkland standard of 5.0 acres per 1,000 residents, specifies parkland dedication requirements, and imposes in-lieu park impact fees to address potential parkland deficiencies. Compliance with the parkland standard would ensure adequate parkland is available in the City of Menifee for Project residents.	Project Applicant	City of Menifee Public Works Department, Engineering Department, and Community Services Department	Prior to issuance of the first certificate of occupancy for Phase 1 of the Project for the paseo/neighborhood parks located within PA 3, PA 4, and PA 10 and private recreation center, prior to issuance of building permits for 50% (which would occur under Phase 2) of the Project for the community park, and prior to the first certificate of occupancy for Phase 2 for the paseo/neighborhood parks in PA 5, PA 11, and PA 12.	Less-than-Significant Impact
		CRDR 4.13-2 The Project would be required to construct a 12.9-acre community park/community center, and 7.9 acres of paseos/neighborhood parks. Construction of the 12.9-acre community park/community center, and 7.9 acres of paseos/neighborhood parks would serve the parkland needs of the Project's population.	Project Applicant	City of Menifee Public Works Department, Engineering Department, and Community Services Department	Prior to issuance of the first certificate of occupancy for Phase 1 of the Project for the paseo/neighborhood parks located within PA 3, PA 4, and PA 10 and private recreation center, prior to issuance of building permits for 50% (which would	

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
					occur under Phase 2) of the Project for the community park, and prior to the first certificate of occupancy for Phase 2 for the paseo/neighborhood parks in PA 5, PA 11, and PA 12.	
Threshold b: Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	Less-than-Significant Impact	City Regulation and Design Requirement CRDR 4.13-2 provided under the discussion and analysis of Threshold a, would apply.	Project Applicant	City of Menifee Public Works Department, Engineering Department, and Community Services Department	Prior to issuance of the first certificate of occupancy for Phase 1 of the Project for the paseo/neighborhood parks located within PA 3, PA 4, and PA 10 and private recreation center, prior to issuance of building permits for 50% (which would occur under Phase 2) of the Project for the community park, and prior to the first certificate of occupancy for Phase 2 for the paseo/neighborhood parks in PA 5, PA 11, and PA 12.	Less-than-Significant Impact
4.14 TRANSPORTATION						
Summary of Impacts						
Threshold a: Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	Significant Direct and Cumulatively-Considerable Impact	CRDR 4.14-1 Prior to issuance of each occupancy permit, appropriate Transportation Uniform Mitigation Fee (TUMF) fees shall be paid by the property owner/developer in amounts determined by the City Council Resolution in effect at the time of issuance of the building permit. Payment of TUMF fees would ensure that funds are available for roadway improvements at facilities identified in the TUMF Facilities List.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits and/or based on the recommendations of the approved TIA.	Significant and Unavoidable Cumulatively-Considerable Impact

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		CRDR 4.14-2 Prior to the issuance of occupancy permits for residential uses and prior to issuance of permits for commercial uses, appropriate Development Impact Fees (DIF) shall be paid by the property owner/developer pursuant to City of Menifee Ordinance No. 2017-232 (Municipal Code Chapter 8.02). Payment of DIF fees would ensure that funds are available for roadway improvements at facilities identified in the DIF Facilities List.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits and/or based on the recommendations of the approved TIA.	
		CRDR 4.14-3 The Project would be subject to constructing frontage improvements to the roadways immediately surrounding the Project site, per the requirements of Specific Plan No. 2017-187 (SP 2017-187), detailed in EIR Subsection 3.2.1.C, *Vehicular Circulation*, or as warranted by the Project's Traffic Impact Analysis. Frontage improvements to the following roadways would occur in conjunction with, and during the same Phase as development of the Planning Area located immediately adjacent to the roadway: o Sherman Road; o Antelope Road; o Rouse Road; o Chambers Avenue; and o Encanto Drive.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of each occupancy permit and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		CRDR 4.14-4 The Project Applicant shall provide for the following intersection and roadway segment configurations, which shall be constructed prior to occupancy of Phase 1 of the Project, with appropriate DIF fee credits: o Encanto Drive at Rouse Road (Intersection #17) ▪ Install a traffic signal; ▪ Northbound Approach: One shared through-right turn lane.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of each occupancy permit and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		▪ Southbound Approach: One left turn lane with a minimum of 150-feet of storage and one through lane. ▪ Eastbound Approach: Not Applicable (N/A) ▪ Westbound Approach: One shared left-right turn lane and one right turn lane. o Trumble Road at Rouse Road (Intersection #23) ▪ Northbound Approach: N/A ▪ Southbound Approach: One shared left-right turn lane ▪ Eastbound Approach: One left turn lane and one through lane. ▪ Westbound Approach: One through lane and one right turn lane. o Brady Lane/Street A at Rouse Road (Intersection #24) ▪ Install a stop control on Street A; ▪ Northbound Approach: One shared left-through-right turn lane. ▪ Southbound Approach: One shared left-through-right turn lane. ▪ Eastbound Approach: One left turn lane with a minimum of 100-feet of storage, one through lane, and one shared through-right turn lane. ▪ Westbound Approach: One left turn lane with a minimum of 100-feet of storage, one through lane, and one shared through-right turn lane. o Sherman Road at Rouse Road (Intersection #29) ▪ Northbound Approach: One left turn lane with a minimum of 150-feet of storage, one through lane, and one shared through-right turn lane. ▪ Southbound Approach: One left turn lane with a minimum of 100-feet of storage, one through lane, and one shared through-right turn lane.				

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		▪ Eastbound Approach: One left turn lane with a minimum of 100-feet of storage, one through lane, and one shared through-right turn lane. ▪ Westbound Approach: One left turn lane with a minimum of 150-feet of storage, one through lane, and one shared through-right turn lane. o Sherman Road at Street B (Intersection #30) ▪ Install a roundabout; ▪ Northbound Approach: One shared left-through-right turn lane. ▪ Southbound Approach: One shared left-through-right turn lane. ▪ Eastbound Approach: One shared left-through-right turn lane. ▪ Westbound Approach: One shared left-through-right turn lane. o Sherman Road at Chambers Avenue (Intersection #31) ▪ Northbound Approach: One left turn lane with a minimum of 150-feet of storage, one through lane, and one shared through-right turn lane. ▪ Southbound Approach: One left turn lane with a minimum of 250-feet of storage, one through lane, and one shared through-right turn lane. ▪ Eastbound Approach: One shared through-left turn lane, and one right turn lane. ▪ Westbound Approach: One shared left-through-right turn lane. o Dawson Road/Street C at Rouse Road (Intersection #34) ▪ Install stop control on Street C; ▪ Northbound Approach: One shared left-through-right turn lane. ▪ Southbound Approach: One shared left-through-right turn lane. ▪ Eastbound Approach: One left turn lane with a minimum of 100-feet of storage, one				

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		through lane, and one shared through-right turn lane. ▪ Westbound Approach: One left turn lane with a minimum of 100-feet of storage, one through lane, and one shared through-right turn lane. o Rouse Road – Encanto Drive to Eastern Boundary of Legado Specific Plan Planning Area 9 (Roadway Segments #11 through #13 and a portion of #14): Construct Rouse Road between Encanto Drive and the eastern boundary of Legado Specific Plan Planning Area 9 to its ultimate half-section width as a secondary roadway (100- to 111-foot right-of-way). o Sherman Road – Rouse Road to Chambers Avenue (Roadway Segments #35 and #36): Construct Sherman Road between Rouse Road and Chambers Avenue to its ultimate full-section width as a major roadway with a 12- to 44-foot raised median (122-foot right-of-way).				
		CRDR 4.14-5 The Project Applicant shall provide for the following intersection and roadway segment improvements, which shall be constructed prior to occupancy of Phase 2 of the Project, with appropriate DIF fee credits: o Encanto Road at Chambers Avenue (Intersection #18) ▪ Install a traffic signal; ▪ Northbound Approach: One shared through-right turn lane. ▪ Southbound Approach: One left turn lane with a minimum of 250-feet of storage and one through lane. ▪ Eastbound Approach: Not Applicable (N/A) ▪ Westbound Approach: One shared left-right turn lane.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of each occupancy permit and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		o Street A at Chambers Avenue (Intersection #25) ▪ Install stop control on Street A; ▪ Northbound Approach: N/A ▪ Southbound Approach: One shared left-right lane. ▪ Eastbound Approach: One left turn lane with a minimum of 100-feet of storage and one through lane. ▪ Westbound Approach: One through lane and one shared through-right lane. o Sherman Road at Chambers Avenue (Intersection #31) ▪ Northbound Approach: One left turn lane with a minimum of 150-feet of storage, one through lane, and one shared through-right turn lane. ▪ Southbound Approach: One left turn lane with a minimum of 250-feet of storage, one through lane, and one shared through-right turn lane. ▪ Eastbound Approach: One left turn lane, one through lane, and one right turn lane. ▪ Westbound Approach: One left turn lane, one through lane, and one shared through-right turn lane. o Street C/Concord Lane at Chambers Avenue (Intersection #35) ▪ Install stop control on Street C; ▪ Northbound Approach: One shared left-through-right turn lane. ▪ Southbound Approach: One shared left-through-right turn lane. ▪ Eastbound Approach: One left turn lane with a minimum of 100-feet of storage, one through lane, and one shared through-right turn lane. ▪ Westbound Approach: One shared left-through-right turn lane. o Antelope Road at Rouse Road (South) (Intersection #38) ▪ Install stop control on Rouse Road (eastbound approach);				

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		▪ Northbound Approach: One northbound left turn lane and one through lane. ▪ Southbound Approach: One southbound shared through-right turn lane. ▪ Eastbound Approach: One left turn lane and one right turn lane. ▪ Westbound Approach: N/A o Rouse Road – Eastern Boundary of Legado Specific Plan Planning Area 9 to Antelope Road (Portion of Roadway Segment #14): Construct Rouse Road between the eastern boundary of Legado Specific Plan Planning Area 9 and Antelope Road to its ultimate half-section width as a secondary roadway (107-foot right-of-way). o Chambers Avenue – Encanto Drive to eastern boundary of the Sports Park in Planning Area 18 of the Legado Specific Plan (Roadway Segment #16 and a portion of #17): Construct Chambers Avenue between Encanto Drive and the eastern boundary of Planning Area 18 of the Legado Specific Plan to its ultimate full-section width as a secondary roadway with painted median (98- to 106-foot right-of-way). o Chambers Avenue – Eastern boundary of the Sports Park in Legado Ranch Specific Plan Planning Area 18 to Street C (Roadway Segment #18 and a portion of #17): Construct Chambers Avenue between the eastern boundary of Planning Area 18 of the Legado Specific Plan and Street C to its ultimate half-section width as a secondary roadway with painted median (98- to 106-foot right-of-way). o Antelope Road – Rouse Road to Northern Boundary of Legado Specific Plan Planning Area 13 (Portion of Roadway Segment 40): Construct Antelope Road between Rouse Road and the northern boundary of Legado Specific Plan Planning Area 13 its ultimate half-section				

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		width as a major roadway (118- to 128-foot right-of-way). CRDR 4.14-6 The following intersection and roadway segment improvements shall be constructed prior to occupancy of Phase 3 of the Project, with appropriate DIF fee credits: o Antelope Road at Chambers Road (Intersection #39) ▪ Install a stop control on Chambers Road; ▪ Northbound Approach: One left turn lane with a minimum of 200-feet of storage and one through lane. ▪ Southbound Approach: One shared through-right turn lane. ▪ Eastbound Approach: One shared left-right turn lane. ▪ Westbound Approach: N/A ▪ Sight distance at each project access point should be reviewed with respect to standard Caltrans and City of Menifee sight distance standards. o Encanto Drive – Rouse Road to Chambers Avenue (Roadway Segment #29): Improve Encanto Drive between Rouse Road and Chambers Avenue to its ultimate full-section width as a major highway (93-foot right-of-way) o Chambers Avenue – Street C to Antelope Road (Roadway Segment A): Improve Chambers Avenue between Street C (Concord Lane) and Antelope Road to its ultimate half-section width as a secondary roadway with painted median (104-foot right-of-way) o Antelope Road – Northern Boundary of Legado Specific Plan Planning Area 13 and Chambers Avenue (Portion of Roadway Segment 40): Improve Antelope Road between the northern boundary of Legado Specific Plan Planning Area 13 and Chambers	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of each occupancy permit and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		Avenue to its ultimate half-section width as a major roadway (118- to 128-foot right-of-way).				
		MM 4.14-1 Prior to the issuance of grading permits or improvement plans affecting Encanto Drive, Rouse Road, Chambers Avenue, Sherman Road, or Antelope Road, the Project Applicant shall prepare and the City of Menifee shall approve a temporary traffic control plan. The temporary traffic control plan shall comply with the applicable requirements of the California Manual on Uniform Traffic Control Devices. A requirement to comply with the temporary traffic control plan shall be noted on all grading and improvement plans affecting Encanto Drive, Rouse Road, Chambers Avenue, Sherman Road, or Antelope Road and also shall be specified in bid documents issued to prospective construction contractors.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance grading permits	
		MM 4.14-2 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall construct a traffic signal and an eastbound right turn lane at the intersection of Encanto Drive and Ethanac Road (Intersection #15).	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 1 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-3 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the intersection of Murrieta Road at Ethanac Road (Intersection #2): • Construct a northbound left turn lane. The City of Menifee shall establish a fair-share funding program for this improvement and shall only use the funds paid by the Project Applicant for the purpose of implementing this improvement.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 1 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		The Project's fair share of the above-listed improvement for Phase 1 of the Project is 6.8%. MM 4.14-4 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements at the intersection of Bradley Road at McCall Boulevard (Intersection #7): • Construct a second westbound left turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 1 of the Project is 20.2%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 1 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-5 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Encanto Drive and Ethanac Road (Intersection #15): • Construct a northbound left turn lane; and • Modify the traffic signal to implement overlap phasing on the eastbound right turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 1 of the Project is 13.5%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 1 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-6 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary	Project Applicant	City of Menifee Public Works Department and	Prior to issuance of occupancy permits for Phase 1 and/or based	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Sherman Road at McCall Boulevard (Intersection #33): • Construct a third westbound through lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 1 of the Project is 19.7%.		Engineering Department	on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-7 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Antelope Road at McCall Boulevard (Intersection #40): • Construct an eastbound left turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 1 of the Project is 11.0%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 1 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-8 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Menifee Road at Pinacate Road (SR-74) (Intersection #42): • Construct a northbound left turn lane; • Construct a southbound left turn lane; and • Modify the traffic signal to protect the northbound and southbound left turn movements.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 1 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 2 of the Project is 3.1%. MM 4.14-9 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Menifee Road at McCall Boulevard (Intersection #44): • Construct a second northbound left turn lane (the de facto northbound right turn lane shall be eliminated in order to accommodate the second northbound left turn lane); • Construct an eastbound right turn lane; and • Modify the traffic signal to implement overlap phasing on the eastbound right turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 1 of the Project is 7.3%. MM 4.14-10 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of McCall Boulevard from Bradley Road to I-215 Freeway (Roadway Segment #21): • Widen the roadway to six lanes.	Project Applicant Project Applicant	City of Menifee Public Works Department and Engineering Department City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 1 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval. Prior to issuance of occupancy permits for Phase 1 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 1 of the Project is 17.0%. MM 4.14-11 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of McCall Boulevard from I-215 Freeway to Encanto Drive (Roadway Segment #22): • Widen the roadway to six lanes. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 1 of the Project is 18.1%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 1 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-12 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of McCall Boulevard from Encanto Drive to Sherman Road (Roadway Segment #23): • Widen the roadway to six lanes. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 1 of the Project is 15.7%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 1 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		MM 4.14-13 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of Menifee Road from Biscayne Avenue to Rouse Road (Roadway Segment #43): • Widen the roadway to four lanes. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 1 of the Project is 11.0%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 1 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-14 Prior to issuance of occupancy permits for Phase 2 of the Project, the Project Applicant shall construct the following improvements to the intersection of Encanto Drive at McCall Boulevard (Intersection #20): • Construct an eastbound right turn lane; • Construct a southbound right turn lane; and • Modify the traffic signal to implement overlap phasing on the southbound right turn lane.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 2 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-15 The following improvements shall only be required if the improvements have not been constructed by others prior to issuance of occupancy permits for Phase 2 of the Project. Prior to issuance of occupancy permits for Phase 2 of the Project, the Project Applicant shall implement the following improvements to the intersection of Antelope Road at Rouse Road (South) (Intersection #38): • Construct a northbound left turn lane; • Construct a northbound through lane; and • Construct a southbound shared through-right turn lane.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 2 and/or based on the recommendations of the approved TIA.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		In the event the improvements listed below have been constructed by others, this Mitigation Measure shall no longer apply. MM 4.14-16 Prior to issuance of occupancy permits for Phase 2 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the intersection of Murrieta Road at Ethanac Road (Intersection #2): • Construct a northbound right turn lane. The City of Menifee shall establish a fair-share funding program for this improvement and shall only use the funds paid by the Project Applicant for the purpose of implementing this improvement. The Project's fair share of the above-listed improvement for Phase 2 of the Project is 6.8%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 2 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-17 Prior to issuance of occupancy permits for Phase 2 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Menifee Road at Pinacate Road (SR-74) (Intersection #42): • Modify the traffic signal to accommodate overlap phasing for the northbound right turn lane; and • Construct an eastbound right turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 2 of the Project is 3.2%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 2 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		MM 4.14-18 Prior to issuance of occupancy permits for Phase 2 of the Project, the Project Applicant shall use reasonable efforts to make a monetary contribution to the City of Perris, to be held in trust, for the following improvement to the roadway segment of Ethanac Road from Case Road to I-215 Freeway (Roadway Segment #5): • Widen the roadway to six lanes. The City of Perris shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 2 of the Project is 9.0%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 2 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-19 Prior to issuance of occupancy permits for Phase 2 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of McCall Boulevard from Sherman Road to Antelope Road (Roadway Segment #24): • Widen the roadway to six lanes. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 2 of the Project is 9.3%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 2 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-20 Prior to issuance of occupancy permits for Phase 2 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of McCall Boulevard from Antelope Road to Menifee Road (Roadway Segment #25):	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 2 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		• Widen the roadway to six lanes. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 2 of the Project is 9.5%.				
		MM 4.14-21 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall construct a traffic signal at the intersection of Bradley Road at Cherry Hills Boulevard (Intersection #8), with potential appropriate fee credits.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-22 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall construct a traffic signal and a southbound left turn lane at the intersection of Encanto Drive and McLaughlin Road (Intersection #16).	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-23 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall construct the following improvements at the intersection of Encanto Drive at Shadel Road (Intersection #19): • Install a traffic signal; and • Construct a southbound left turn lane.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-24 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall construct the following improvements at the intersection of Encanto Drive at McCall Boulevard (Intersection #20): • Construct a second eastbound left turn lane; and	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		• Construct a westbound right turn lane. MM 4.14-25 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall construct a third eastbound through lane at the intersection of Sherman Road at McCall Boulevard (Intersection #33).	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-26 Prior to issuance of occupancy permits for Phase 3 of the Project (Project buildout), the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, to be held in trust by the City of Menifee, for the following improvements to the intersection of Goetz Road at Ethanac Road (Intersection #1): • Construct a second southbound left turn lane; and • Modify the traffic signal to accommodate overlap phasing for the northbound and westbound right turn lanes. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 4.0%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-27 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Murrieta Road at Ethanac Road (Intersection #2): • Construct an eastbound right turn lane; and	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		• Restripe to provide a southbound left and southbound through/right turn lanes. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 7.1%. MM 4.14-28 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Menifee Road at Pinacate Road (SR-74) (Intersection #42): • Construct a second westbound left turn lane; and • Construct a southbound right turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 3.6%. MM 4.14-29 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the intersection of Menifee Road at McCall Boulevard (Intersection #44): • Construct a southbound right turn lane. The City of Menifee shall establish a fair-share funding program for this improvement and shall only use the funds paid by the Project Applicant for the purpose of implementing this improvement.	Project Applicant Project Applicant	City of Menifee Public Works Department and Engineering Department City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval. Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		The Project's fair share of the above-listed improvements for Phase 3 of the Project is 8.8%. MM 4.14-30 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of Encanto Drive from Ethanac Road to McLaughlin Road (Roadway Segment #27): • Widen the roadway to four lanes. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 51.1%. MM 4.14-31 Prior to issuance of occupancy permits for Phase 3 of the Project (Project buildout), the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Goetz Road at Ethanac Road (Intersection #1): • Construct a second northbound left turn lane; • Construct a third eastbound through lane; • Construct a third westbound through lane; and • Modify the traffic signal to accommodate overlap phasing for the southbound right turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements.	Project Applicant Project Applicant	City of Menifee Public Works Department and Engineering Department City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval. Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval .	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		The Project's fair share of the above-listed improvements for Phase 3 of the Project is 1.6%. MM 4.14-32 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Murrieta Road at Ethanac Road (Intersection #2): • Construct a second eastbound left turn lane; • Construct a third eastbound through lane; • Construct a second westbound left turn lane; and • Construct a third westbound through lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 2.8%. MM 4.14-33 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the intersection of Murrieta Road at McCall Boulevard (Intersection #3): • Modify the traffic signal to protect the eastbound and westbound left turn lanes. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 4.0%.	Project Applicant Project Applicant	City of Menifee Public Works Department and Engineering Department City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval . Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval .	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		MM 4.14-34 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Sun City Boulevard at McCall Boulevard (Intersection #4): • Construct a northbound left turn lane; • Construct first and second southbound left turn lanes; • Construct a second westbound left turn lane; and • Construct a westbound right turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 3.6%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-35 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the intersection of Barnett Road at Ethanac Road (Intersection #5): • Construct a third westbound through lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvement for Phase 3 of the Project is 2.9%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-36 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall use reasonable efforts to make a fair-share monetary contribution to the City	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		of Perris, to be held in trust, for the following improvements to the intersection of Case Road at Ethanac Road (Intersection #6): • Modify the traffic signal to accommodate overlap phasing for the southbound and westbound right turn lanes; • Construct a second eastbound left turn lane; and • Construct a third eastbound through lane. The City of Perris shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 3.3%.			recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-37 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Bradley Road at McCall Boulevard (Intersection #7): • Construct a second northbound right turn lane; • Construct an eastbound right turn lane; and • Modify the traffic signal to accommodate overlap phasing for the eastbound right turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 4.3%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-38 Prior to issuance of occupancy permits for Phase 3 of the Project, the	Project Applicant	City of Menifee Public Works Department and	Prior to issuance of occupancy permits for	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		Project Applicant shall use reasonable efforts to make a fair-share monetary contribution to the City of Perris, to be held in trust, for the following improvement to the intersection of I-215 Southbound Ramps at Bonnie Drive (Intersection #9): • Construct a second northbound left turn lane. The City of Perris shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 2.5%.		Engineering Department	Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-39 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Encanto Drive and Ethanac Road (Intersection #15): • Construct a second northbound left turn lane; • Modify the traffic signal to implement overlap phasing on the northbound right turn lane; • Construct a third eastbound through lane; and • Construct a third westbound through lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 7.5%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-40 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		trust, for the following improvements to the intersection of Encanto Drive and McLaughlin Road (Intersection #16): • Construct a second southbound through lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 23.4%.			recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-41 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Encanto Drive at McCall Boulevard (Intersection #20): • Restripe the southbound left as a southbound shared left-through lane; and • Modify the traffic signal to accommodate overlap phasing on the southbound and eastbound right turn lanes; and split phasing on the northbound and southbound approaches. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 10.3%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-42 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Trumble Road at SR-74 (Intersection #21):	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		• Construct a second eastbound left turn lane; and • Modify the traffic signal to implement overlap phasing on the southbound right turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 5.4%.				
		MM 4.14-43 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Trumble Road at Ethanac Road (Intersection #22): • Construct a northbound left turn lane; • Restripe southbound approach with left turn lane and shared through-right turn lane • Construct an eastbound shared through-right turn lane; and • Construct a westbound shared through-right turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 6.3%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-44 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Sherman Road at SR-74 (Intersection #26): • Construct a southbound left turn lane;	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		• Construct a third eastbound through lane; • Construct an eastbound right turn lane; • Construct a second westbound left turn lane; • Construct a third westbound through lane; and • Modify the traffic signal to implement overlap phasing on the northbound right turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 3.5%. MM 4.14-45 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Sherman Road at Ethanac Road (Intersection #27): • Construct a northbound left turn lane; • Construct a second northbound left turn lane; • Construct a northbound right turn lane; • Construct a southbound left turn lane; • Construct a southbound right turn lane; • Construct two eastbound left turn lanes; • Construct a third eastbound through lane; • Construct an eastbound right turn lane; • Construct a westbound left turn lane; • Construct a third westbound through lane; • Modify the traffic signal to accommodate overlap phasing for the southbound right turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 8.6%. MM 4.14-46 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Sherman Road at McLaughlin Road (Intersection #28): • Construct a northbound left turn lane; • Construct a southbound left turn lane; • Construct an eastbound left turn lane; and • Construct a westbound left turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 19.5%. MM 4.14-47 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements at the intersection of Sherman Road at Rouse Road (Intersection #29). • Construct a second southbound through lane; and • Construct an eastbound right turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 35.3%.	Project Applicant Project Applicant	City of Menifee Public Works Department and Engineering Department City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval. Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		MM 4.14-48 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Sherman Road at McCall Boulevard (Intersection #33): • Construct a second eastbound left turn lane; • Construct a westbound right turn lane; and • Modify the traffic signal to accommodate overlap phasing for the southbound right turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 8.9%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-49 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Antelope Road at Ethanac Road (Intersection #36): • Install a traffic signal; • Construct a northbound left turn lane; • Restripe northbound shared left-through-right turn lane as a through lane; • Construct two southbound left turn lanes; • Construct second southbound through lane; • Construct southbound right turn lane; • Construct two eastbound left turn lanes; • Restripe eastbound right turn as a shared through-right turn lane;	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		• Construct two westbound left turn lanes; • Construct a third westbound through lane; • Construct a westbound right turn lane; and • Modify the traffic signal to accommodate overlap phasing for the westbound right turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 2.2%. MM 4.14-50 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Antelope Road at Rouse Road (North) (Intersection #37): • Construct a northbound left turn lane; • Construct a southbound left turn lane; • Construct a second eastbound through lane; and • Construct a second westbound through lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 5.2%. MM 4.14-51 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the	Project Applicant Project Applicant	City of Menifee Public Works Department and Engineering Department City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval. Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		intersection of Antelope Road at Rouse Road (South) (Intersection #38): • Construct a southbound right turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvement for Phase 3 of the Project is 12.7%.			the approved TIA and Project's Conditions of Approval.	
		MM 4.14-52 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Antelope Road at McCall Boulevard (Intersection #40): • Construct a southbound left turn lane; and • Construct a southbound right turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 4.9%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-53 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Palomar Road at SR-74 (Intersection #41): • Construct a second northbound through lane; and • Modify the traffic signal to accommodate overlap phasing for the northbound right turn lane.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 2.8%. MM 4.14-54 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Menifee Road at Pinacate Road (SR-74) (Intersection #42): • Construct a second northbound left turn lane; • Construct a third northbound through lane; • Construct a second southbound left turn lane; • Construct a third southbound through lane; • Construct a second eastbound left turn lane; and • Modify the traffic signal to accommodate overlap phasing for the eastbound right turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 1.7%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-55 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		intersection of Menifee Road/Rouse Road/Turtle Point Drive (Intersection #43): • Construct a second northbound left turn lane; • Construct a third northbound through lane; • Construct a third southbound through lane; • Construct an eastbound left turn lane; • Construct an eastbound right turn lane; and • Modify the traffic signal to accommodate overlap phasing for the eastbound right turn lane. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 2.5%.			Project's Conditions of Approval.	
		MM 4.14-56 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Menifee Road at McCall Boulevard (Intersection #44): • Construct a northbound right turn lane; • Construct a second southbound left turn lane; • Construct a third southbound through lane; • Construct a third westbound through lane; • Construct a second westbound right turn lane; and • Modify the traffic signal to accommodate overlap phasing for the northbound, southbound, and westbound right turn lanes.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 3.0%. MM 4.14-57 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of Ethanac Road from Goetz Road to Murrieta Road (Roadway Segment #3): • Widen the roadway to six lanes. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 2.0%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-58 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of Ethanac Road Murrieta Road to Barnett Road (Roadway Segment #4): • Widen the roadway to six lanes. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 2.5%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-59 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall use reasonable efforts to	Project Applicant	City of Menifee Public Works Department and	Prior to issuance of occupancy permits for Phase 3 and/or based	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		make a monetary contribution to the City of Perris, to be held in trust, for the following improvement to the roadway segment of Ethanac Road from I-215 Freeway to Encanto Drive (Roadway Segment #6): • Widen the roadway to six lanes. The City of Perris shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 6.9%.		Engineering Department	on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-60 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall use reasonable efforts to make a monetary contribution to the City of Perris, to be held in trust, for the following improvement to the roadway segment of Ethanac Road from Encanto Drive to Trumble Road (Roadway Segment #7): • Widen the roadway to six lanes. The City of Perris shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 4.1%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-61 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of Ethanac Road from Trumble Road to Sherman Road (Roadway Segment #8): • Widen the roadway to six lanes.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 4.4%. MM 4.14-62 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of Ethanac Road from Sherman Road to Antelope Road (Roadway Segment #9): • Widen the roadway to six lanes. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 2.0%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-63 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of Rouse Road from Antelope Road (North) to Menifee Road (Roadway Segment #15): • Widen the roadway to four lanes. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 5.3%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-64 Prior to issuance of occupancy permits for Phase 3 of the Project, the	Project Applicant	City of Menifee Public Works Department and	Prior to issuance of occupancy permits for	

Threshold	Level Of Significance Before Mitigation	City Regulations[1] And Design Requirements (CRDRs) And/Or Mitigation Measures (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level Of Significance After Mitigation
		Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of Menifee Road from SR-74 to Biscayne Avenue (Roadway Segment #42): • Widen the roadway to six lanes. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 3.6%.		Engineering Department	Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	
		MM 4.14-65 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of Menifee Road from Biscayne Avenue to Rouse Road (Roadway Segment #43): • Widen the roadway to six lanes. The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 2.3%.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance of occupancy permits for Phase 3 and/or based on the recommendations of the approved TIA and Project's Conditions of Approval.	

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Threshold b: Would the Project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	No Impact	No mitigation is required	N/A	N/A	N/A	No Impact
Threshold c: Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Less-than-Significant Impact	No mitigation is required	N/A	N/A	N/A	Less-than-Significant Impact
Threshold d: Would the Project result in inadequate emergency access?	Significant Direct Impact	Mitigation Measure MM 4.14-1 provided under the discussion and analysis of Threshold a, respectively, would apply.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance grading permits	Less-than-Significant Impact
4.15 TRIBAL CULTURAL RESOURCES						
Summary of Impacts						
Threshold a: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth is subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	Less-than-Significant Impact	• Unless otherwise required by law, the site of any reburial of Native American human remains or associated grave goods shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, pursuant to the specific exemption set forth in California Government Code Section 6254 (r), parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code 6254 (r). Mitigation Measures MM 4.4-1 through MM 4.4-9, which are presented in EIR Subsection 4.4, *Cultural Resources*, shall apply	Project Applicant, Project Archeologist and Native American Monitor	City of Menifee Community Development Department and	During grading or ground disturbance activities and if any cultural material is found on-site Prior to issuance of a grading permit Prior to issuance of a grading permit Prior to final inspection Prior to commencement of construction activities Prior to any grading in the areas associated with Sites CA-RIV-9288 and CA-RIV-9289	Less-than-Significant Impacts
4.16 UTILITIES AND SERVICE SYSTEMS						

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Summary of Impacts						
Threshold a: Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Less-than-Significant Impact	No mitigation is required	N/A	N/A	N/A	Less-than-Significant Impact
Threshold b: Would the Project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	Less-than-Significant Impact	No mitigation is required	N/A	N/A	N/A	Less-than-Significant Impact
Threshold c: Would the Project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Less-than-Significant Impact	No mitigation is required	N/A	N/A	N/A	Less-than-Significant Impact
Threshold d: Would the Project generate solid waste in excess of State or local standards, or in excess of the capacity or local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Less-than-Significant Impact	No mitigation is required	N/A	N/A	N/A	Less-than-Significant Impact
Threshold e: Would the Project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Less-than-Significant Impact	No mitigation is required	N/A	N/A	N/A	Less-than-Significant Impact
Threshold f: Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less-than-Significant Impact	No mitigation is required	N/A	N/A	N/A	Less-than-Significant Impact
4.17 WILDFIRE						

THRESHOLD	LEVEL OF SIGNIFICANCE BEFORE MITIGATION	CITY REGULATIONS[1] AND DESIGN REQUIREMENTS (CRDRS) AND/OR MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Summary of Impacts						
Threshold a: Would the Project substantially impair an adopted emergency plan or emergency evacuation plan?	Significant Direct Impact	Mitigation Measure MM 4.14-1, which is presented in EIR Subsection 4.14, *Transportation*, shall apply.	Project Applicant	City of Menifee Public Works Department and Engineering Department	Prior to issuance grading permits	Less-than-Significant Impact
Threshold b: Due to slope, prevailing winds, and other factors, would the Project exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	Less-than-Significant Impact	City Regulation and Design Requirement CRDR 4.12-1 and CRDR 4.12-2, which is presented in EIR Subsection 4.12, *Public Services*, shall apply.	Project Applicant	City of Menifee Fire Department and Building and Safety Department	Prior to building permit issuance Prior to issuance of the certificate of occupancy for residential uses, and prior to permit issuance for commercial (non-residential) uses	Less-than-Significant Impact
Threshold c: Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Less-than-Significant Impact	No mitigation is required	N/A	N/A	N/A	Less-than-Significant Impact
Threshold d: Would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Less-than-Significant Impact	No mitigation is required	N/A	N/A	N/A	Less-than-Significant Impact

1. The term "City Regulations" is not limited to City of Menifee regulations. In this table and throughout this EIR, the term "City Regulations" includes federal and state regulations applicable to projects within the City of Menifee.

1.0 INTRODUCTION

1.1 PROJECT SCOPE

This Environmental Impact Report (EIR) addresses the proposed Legado Specific Plan (Project) located in the City of Menifee (City), California. The Project site is located east of I-215 and Encanto Drive, south of Rouse Road, west of the future extension of Antelope Road, and generally north of Chambers Avenue. The Project proposes to develop an approximately 331.0-acre site consisting of up to 1,061 residential dwelling units, 20.1 acres of commercial retail accommodating up to 225,000 square feet (s.f.) of retail space, and a 12.9-acre community park/community center. The Project also accommodates landscaping, roadways, open space, and drainage infrastructure. Section 3.0, *Project Description*, provides a detailed description of the discretionary approvals required to implement the Project (i.e., Specific Plan, Change of Zone, Tentative Parcel Map, Tentative Tract Map, and a Development Agreement), ministerial (i.e., non-discretionary) approvals that would be required after approval of the Project's discretionary actions (e.g. grading permits, building permits, etc.), as well as an overview of the Project's construction and operational characteristics.

1.2 PURPOSE AND LEGAL AUTHORITY

This EIR has been prepared in compliance with the California Environmental Quality Act (Public Resources Code § 2100 *et. seq.* ("CEQA"), as amended, and the CEQA State Guidelines (Title 14 California Code of Regulations § 15000 *et. seq.*) ("CEQA Guidelines"), as amended. As stated by the CEQA Guidelines § 15002(a), the basic purposes of CEQA are to:

- Inform governmental decision makers and the public about the potential, significant environmental effects of proposed [government actions (including the discretionary approval of private development projects)];
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- If a project will be approved involving significant environmental effects, disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose.

The public agency with the principal responsibility for carrying out or approving a project or the first public agency to make a discretionary decision to proceed with a proposed project should ordinarily act as the "Lead Agency" pursuant to CEQA Guidelines §§ 15050-15051. The City of Menifee is the Lead Agency for the Project evaluated in this EIR.

Under CEQA if a Lead Agency determines that there is substantial evidence in light of the whole record that a project may have a significant effect on the environment, the agency must prepare an EIR (CEQA Guidelines § 15064(a)(1)). The purpose of an EIR is to inform public agency decision-makers and the public of the potentially significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project (CEQA Guidelines § 15121(a)).

This EIR is an informational document intended for use by the Lead Agency decision makers, trustee and responsible agencies, and members of the public in evaluating the physical environmental effects of the Project. Governmental approvals requested from the City of Menifee by the Project Applicant to implement the Project include the proposed Legado Specific Plan (SP 2017-187), a Change of Zone (CZ 2017-188), two Tentative Tract Maps (TTM 37408) and (TTM 37409), a Tentative Tract Map (TTM 37391), a Development Agreement (DA 2018-277), and other related discretionary and administrative actions that are required to construct and operate the Project described in Section 3.0, *Project Description*.

As a first step in the CEQA compliance process, an Initial Study was prepared by the City of Menifee pursuant to CEQA Guidelines § 15063 to determine if the Project could have a significant effect on the environment. The Initial Study determined that implementation of the Project has the potential to result in significant environmental effects, and a Project EIR, as defined by CEQA Guidelines § 15161, is required. As stated in CEQA Guidelines § 15161, a Project EIR should "…focus primarily on the changes in the environment that would result from the development project," and "…examine all phases of the project including planning, construction, and operation." This EIR represents the independent judgment of the City of Menifee (as the Lead Agency) and evaluates the physical environmental effects that could result from constructing and operating the Project. Pursuant to CEQA Guidelines § 15123(b)(3), an EIR must contain a summary of issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects of the Project. Acting as Lead Agency, the City of Menifee will consider the following issues regarding the Project: a) evaluation of this EIR to determine if the physical environmental impacts are adequately disclosed; b) assessment of the adequacy and feasibility of identified mitigation measures and the potential addition, modification to, or deletion of mitigation measures, standard conditions of approval, or Project design features; c) consideration of alternatives to the Project that would reduce or eliminate significant environmental effects of the Project; and, if necessary, d) consideration of Project benefits that override the Project's unavoidable and unmitigable significant effects on the environment.

Accordingly, and in conformance with CEQA Guidelines § 15121(a), the purposes of this EIR are to: (1) disclose information by informing public agency decision makers and the public generally of the significant environmental effects associated with all phases of the Project, (2) identify possible ways to minimize or avoid those significant effects, and (3) to describe a reasonable range of alternatives to the Project that would feasibly attain most of the basic Project objectives but would avoid or substantially lessen its significant environmental effects.

Pursuant to CEQA Guidelines §§ 15040 through 15043, and upon completion of the CEQA review process, the City will have the legal authority to:

1. Approve the Project;
2. Require feasible changes in any or all activities involved in the Project in order to substantially lessen or avoid significant effects on the environment;
3. Disapprove the Project if necessary in order to avoid one or more significant effects on the environment that would occur if the Project was approved as proposed; or
4. Approve the Project even though the Project would cause a significant effect on the environment if the City makes a fully informed and publicly disclosed decision that: a) there is no feasible way to lessen the effect or avoid the significant effect: and b) identifies expected benefits from the Project that will outweigh the policy of reducing or avoiding the significant environmental impacts of the Project.

1.3 SUMMARY OF THE PROJECT EVALUATED BY THIS EIR

For purposes of this EIR, the term "Project" refers to the discretionary actions required to implement the Legado Specific Plan, as proposed, and all of the activities associated with its implementation including planning, construction, and ongoing operations. The Project site consists of an approximately 331.0-acre property located east of Encanto Drive, south of Rouse Road, west of the future extension of Antelope Road, and generally north of Chambers Avenue in the City of Menifee.

The Project Applicant proposes the following discretionary actions, which are under consideration by the City of Menifee; these actions are considered "discretionary" because the City of Menifee Planning Commission and/or City Council would have the authority to approve, modify, or deny the Project Applicant's development proposal:

- **Specific Plan No. 2017-187 (SP 2017-187)** includes a land use plan, and provides development standards and design guidelines for architectural design and landscape architecture. The proposed land uses include up to 1,061 dwelling units, up to 225,000 s.f. of freeway-oriented commercial land uses on 20.1 acres, a 12.9-acre community park/community center, a 1.9-acre private recreation center, detention/water quality basins, and paseos/neighborhood parks. The land use plan also accommodates landscaping, roadways, open space, and drainage infrastructure.

- **Change of Zone No. 2017-188 (CZ 2017-188)** proposes to change zone classification of the site. At the time the Project's Notice of Preparation (NOP) was distributed for public review (2017), the Project's existing zoning designations were C-P-S (Scenic Highway Commercial) and R-1 (One-Family Dwellings) and CZ 2018-188 proposed to change the site's existing zoning from "Scenic Highway Commercial (C-P-S") and "One-Family Dwellings (R-1)" to "Specific Plan Zone (SP)." However, on December 18, 2019 the City of Menifee adopted a new zoning map that will go into effect on January 18, 2020. Pursuant to the new zoning map, the Project site's zoning designation will be SP "Fleming Ranch Specific Plan Zone." Thus, CZ No. 2017-188 would change the site's updated existing zoning designation from "Fleming Ranch Specific Plan Zone" to "Legado Specific Plan Zone" which among other objectives, is intended to encourage planned development of parcels and to permit comprehensive site planning and building design, while also providing a more flexible regulatory procedure than standard City Municipal Code zoning procedures.

- **Tentative Tract Map No. 37391 (TTM 37391)** proposes a large-lot subdivision map for conveyance purposes and would establish lots corresponding to the Planning Area boundaries as proposed by SP 2017-187. A majority of backbone roadway dedications would occur as part of the large-lot subdivision. TTM 37391 would establish a subdivision of 25 lots proposed for 263.5 acres of residential, recreation center, paseos/neighborhood parks and water quality basin uses, 20.1 acres of commercial uses, 12.9 acres of park uses, 6.3 acres of open space uses, while the remaining 28.2 acres are proposed for internal public roadways.

- **Vesting Tentative Tract Map. No. 37408 (TTM 37408)** proposes to subdivide the area west of Sherman Road excluding the proposed commercial area (149.6-acres of the 331.0-acre Project site) to reflect the land use configurations depicted in the Specific Plan land use plan. TTM 37408 would establish a subdivision of 475 residential lots (totaling 79.5 acres of residential uses) while the remaining lots (totaling 75.7 acres) are proposed for community park/community center uses, open space/recreation/landscape uses, water quality/detention basins, internal public roadways, park uses, and recreation center uses.

- **Vesting Tentative Tract Map. No. 37409 (TTM 37409)** proposes to subdivide the area east of Sherman Road (159.1-acres of the 331.0-acre Project site) to reflect the land use configurations depicted in the Specific Plan land use plan. TTM 37409 would establish a subdivision of 547 residential lots (totaling 85.4 acres of residential uses) while the remaining lots (totaling 73.7 acres) are proposed for open space/recreational uses, open space/conservation uses, water quality/detention basins, park uses, and internal public roadways.

- **Development Agreement (DA 2018-277)** proposes the establishment of provisions for development of the Project such as, but not limited to, infrastructure improvements, park benefits, vesting of development rights, and timing of public improvements.

Provided below is a list of known discretionary and ministerial actions needed to implement the Project. This EIR covers all federal, state, and local government approvals which may be needed to construct or implement the Project, whether explicitly noted below or not.

❑ City of Menifee Planning Commission

1. Recommendation to the City Council regarding certification of this EIR.
2. Recommendation to the City Council regarding adoption of SP 2017-187 by ordinance.
3. Recommendation to the City Council regarding approval of CZ 2017-188 by ordinance.
4. Recommendation to the City Council regarding approval of TTM 37391, TTM 37408, and TTM 37409 by resolution.
5. Recommendation to the City Council regarding approval of DA 2018-277 by ordinance.

❑ City of Menifee City Council

1. Certify this EIR and make appropriate CEQA findings.
2. Adoption of SP 2017-187 by ordinance.
3. Approval of CZ 2017-188 by ordinance.
4. Approval of TTM 37391, TTM 37408, and TTM 37409 by resolution.
5. Approval of DA 2018-277 by ordinance.

❑ Subsequent Project Approvals

Subsequent approvals associated with the Project and covered by this EIR may include, but are not limited to, the following:

1. Plot plans and/or conditional use permits by the City of Menifee, approving development of specific uses permitted or conditionally permitted by the approved zoning.
2. Tentative map(s) (including tentative map revisions) and/or final maps by the City of Menifee, to allow implementation of the Specific Plan.
3. Grading permits, road improvements, and drainage improvements by the City of Menifee and Riverside County Flood Control and Water Conservation District (RCFCWCD), to allow implementation of the Project.

4. Water and sewer system approvals by the Eastern Municipal Water District (EMWD) to construct the necessary infrastructure to provide domestic and reclaimed water service.
5. National Pollutant Discharge Elimination System (NPDES) Permit and Clean Water Act Section 401 Water Quality Certification and/or Report of Waste Discharge issued by the Regional Water Quality Control Board regarding water quality and the prevention of siltation, erosion, or water quality degradation.
6. Encroachment permits by the City to allow access within City rights-of-way, for construction of various roadway/circulation and utility improvements.
7. Clean Water Act Section 404 permits by the U.S. Army Corps of Engineers (ACOE) for impacts to waters of the United States.
8. Clean Water Act Section 401 permits by the Regional Water Quality Control Board (RWQCB) for impacts to jurisdictional waters.
9. 1602 Streambed Alteration permit pursuant to Division 2, Chapter 6, Section 1600 of the Fish and Game Code for impacts to California Department of Fish and Wildlife (CDFW) jurisdictional areas.

1.4 RESPONSIBLE AND TRUSTEE AGENCIES

The California Public Resource Code (§ 21104) requires that all EIRs be reviewed by responsible and trustee agencies (see also CEQA Guidelines § 15082 and § 15086(a)). As defined by CEQA Guidelines § 15381, "the term 'Responsible Agency' includes all public agencies other than the Lead Agency which have discretionary approval power over the project." A Trustee Agency is defined in CEQA Guidelines § 15386 as "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."

The CEQA Guidelines require that the applicable Responsible and Trustee Agencies review EIRs. For the purposes of the Project, the RCFCWCD, Santa Ana RWQCB, EMWD, ACOE, and United States Fish and Wildlife Service (USFWS) are Responsible Agencies and the CDFW is a Trustee Agency.

1.5 CEQA PROCESS OVERVIEW

The CEQA (Public Resources Code, §§ 21000- 21177) requires that all public agencies within the State of California, having land use approval over project activities that have the potential to affect the quality of the environment, shall regulate such activities so that impacts to the environment can be prevented to the extent feasible. Such activity is reviewed and monitored through the CEQA process, as provided in the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, §§ 15000-15387). CEQA distinguishes varied levels of documentation and public review based on a project's anticipated level of effect on the environment.

When it is determined through preliminary review that a project may likely have one or more significant effects upon the environment, then an EIR must be prepared. The "scope" of the EIR may be determined through preparation of an Initial Study and a public scoping process. The EIR should consider both the potential project-specific (direct and indirect) and cumulative environmental impacts that could result from the implementation of the proposed project.

Pursuant to CEQA Guidelines § 15121, the EIR is primarily an informational document intended to inform the City decision-makers and the general public of the potentially significant effects of the Project. The EIR should

disclose all known potentially significant impacts; identify feasible means to minimize or mitigate those effects; and, consider a number of feasible alternatives to the project that might further reduce significant impacts while still attaining the project objectives. The decision-makers must consider the information in an EIR before taking action on the Project. The EIR may constitute substantial evidence in the record to support the agency's action on the Project.

The EIR is prepared by or under the direction of the Lead Agency, which for the Project is the City of Menifee. The City of Menifee is the public agency that has the primary responsibility for approving or carrying out the Project. Further, Responsible and Trustee Agencies, which are public agencies that have a level of discretionary approval over some component of the Project, may rely upon the EIR prepared by the City of Menifee.

An EIR is prepared in two key stages. First, a Draft EIR is prepared and distributed for public and agency review. Once comments on the Draft EIR are received, responses to those comments and any additional relevant project information are prepared and compiled in a Final EIR. Both of these documents (i.e., the Draft EIR and the Final EIR), along with any related technical appendices, represent the complete record of the EIR. Throughout this document, the terms Final EIR or Draft EIR may be used interchangeably since both are part of the ultimate EIR record; however, "Draft EIR" may be used specifically when referring to information provided specifically in the volume made available for the CEQA-required 45-day public review period.

In accordance with CEQA Guidelines § 15087, this Draft EIR will be made available for review by the public and public agencies for a minimum period of 45 days to provide comments "on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated" (CEQA Guidelines § 152049(a)). Responses to written comments received during the public review period will be included in the Final EIR. During the decision-making process, the Project and its design features, objectives, merits, environmental consequences, and socioeconomic factors, among other information contained in the Project's administrative record will be considered by City of Menifee decision-makers. If the Final EIR is certified and the Project approved, the City of Menifee and other public agencies with permitting authority over all, or portions, of the Project would be able to rely on the Final EIR as part of their permitting processes to evaluate the environmental effects of the Project as they pertain to the approval or denial of applicable permits.

1.6 EIR Scope and Content

1.6.1 EIR Scope

As a first step in complying with the procedural requirements of CEQA, an Initial Study was prepared by the City of Menifee to preliminarily identify the environmental issue areas that may be adversely impacted by the Project. Following completion of the Initial Study, the City filed a Notice of Preparation (NOP) with the California Governor's Office of Planning and Research (State Clearinghouse) to indicate that an EIR would be prepared to evaluate the Project's potential to impact the environment. The NOP was filed with the State Clearinghouse and distributed to Responsible Agencies, Trustee Agencies, and other interested parties on November 14, 2017 for a 30-day public review period which ended on December 14, 2017. Subsequent to the filing of the NOP with the State Clearinghouse, the Project's name was changed from "Fleming Ranch Specific Plan" to "Legado Specific Plan." The Project's scope and scale did not increase following circulation of the NOP. The change in the Project's name is not considered substantial new information requiring recirculation of the NOP, because the scope and scale of the Project remained the same. Thus, recirculation of the NOP was not required as a result of the Project's name change. The NOP was distributed for public review to solicit

responses to help the City identify the full scope and range of potential environmental concerns associated with the Project so that these issues could be fully examined in this EIR. Comments on the NOP were received from the following individuals and agencies:

- Inland Empire Biking Alliance (IEBA)
- Native American Heritage Commission (NAHC)
- Pechanga Band of Luiseño Mission Indians
- Southern California Association of Governments (SCAG)
- South Coast Air Quality Management District (SCAQMD)
- Valley-Wide Recreation and Parks District (VWRPD)
- Ranch La Vita Homeowners Association
- Wittwer Parkin LLP
- Fawn Caldwell
- Reydine Eccles
- Thomas Giedroyce
- Lea Newland
- Valerie Perkins
- Denise Remington
- Tom Royce

In addition, a publicly-noticed EIR Scoping Meeting was held at the Hans Christensen Middle School located at 27625 Sherman Rd, Menifee, CA 92585 on November 30, 2017, which provided members of the general public an additional opportunity to comment on the scope of environmental issues to be addressed in this EIR. As a result of the Initial Study and in consideration of all comments received by the City on the NOP, Section 4.0 of this EIR evaluates the Project's potential to cause adverse effects to the following environmental issue areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards/Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Noise
- Paleontological Resources
- Public Services
- Recreation
- Transportation/Traffic
- Tribal Cultural Resources
- Utilities/Service Systems

Energy Conservation and Growth Inducements are discussed in Section 5.0, *Other CEQA Considerations* of this EIR. The Initial Study, NOP, public review distribution list, and written comments received by the City during the NOP public review period are provided in *Technical Appendix A* to this EIR. Please refer to Table 1-1, *Summary of NOP Comments,* for summarized comments received during NOP public review period.

Substantive issues raised in response to the NOP are summarized below in Table 1-1. The purpose of this table is to present the primary environmental issues of concern raised by public agencies and the general public during the NOP review period. The table is not intended to list every comment received by the City during the NOP review period. All applicable environmental comments received in responses to the NOP are

addressed in this EIR. The Lead Agency has not identified any issues of controversy associated with the Project after consideration of all comments received in response to the NOP.

Table 1-1 Summary of NOP Comments

COMMENTER	DATE	COMMENTS	LOCATION IN EIR WHERE COMMENT(S) ADDRESSED
Inland Empire Biking Alliance (IEBA)	December 14, 2017	- Request the traffic study measure and address bicyclists and usability of bikes within the Project area.	Subsection 4.14, *Transportation*
		- Request the use of the bicyclist metrics in the traffic study.	Subsection 4.14, *Transportation*
		- Request analysis of traffic safety in the EIR.	Subsection 4.14, *Transportation*
Native American Heritage Commission (NAHC)	November 17, 2017	- Request Native American consultation per AB 52 and SB 18.	Subsection 4.4, *Cultural Resources* and Subsection 4.15, *Tribal Cultural Resources*
		- Recommend conducting a cultural resources assessment that includes consultation with the regional California Historical Research Information System (CHRIS) Center, an archaeological inventory survey (if necessary), consultation with the NAHC regarding a Sacred Lands File search, and mitigation measures that address how to deal with unknown archaeological resources that may be encountered during grading activities.	Subsection 4.4, *Cultural Resources* and Subsection 4.15, *Tribal Cultural Resources*
Pechanga Band of Luiseño Mission Indians	December 14, 2017	- Request the Lead Agency notify, involve, and consult the Tribe with respect to the Project's CEQA environmental review process because the Project lies within the Pechanga Tribe's traditional territory, and to incorporate mitigation for any archeological resources that may exist on-site.	Subsection 4.4, *Cultural Resources* and Subsection 4.15, *Tribal Cultural Resources*
		- Recommend discussion of inadvertent discoveries related to cultural resources.	Subsection 4.4, *Cultural Resources* and Subsection 4.15, *Tribal Cultural Resources*
		- Request incorporation of Public Resources Code § 5097.98, which discusses procedures for discovery of human remains on-site.	Subsection 4.4, *Cultural Resources* and Subsection 4.15, *Tribal Cultural Resources*
Southern California Association of Governments (SCAG)	December 14, 2017	- The EIR should assess the Project's consistency with the 2016 Regional Transportation Plan	Subsection 4.10, *Land Use and Planning*

COMMENTER	DATE	COMMENTS	LOCATION IN EIR WHERE COMMENT(S) ADDRESSED
		(RTP) / Sustainable, Communities Strategy (SCS), particularly to the RTP/SCS goals.	
South Coast Air Quality Management District (SCAQMD)	December 5, 2017	- Recommend the Lead Agency use the CEQA Air Quality Handbook (1993) when preparing the air quality analysis.	Subsection 4.2, *Air Quality*
		- Recommend the Lead Agency use the CalEEMod land use emissions software when preparing the air quality analysis.	Subsection 4.2, *Air Quality*
		- Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project (including construction and operation) and all air pollutant sources related to the project.	Subsection 4.2, *Air Quality*
		- Request that the Lead Agency quantify criteria pollutant emissions and compare the results to the recommended regional significance thresholds. The SCAQMD also recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs).	Subsection 4.2, *Air Quality*
		- The SCAQMD also recommends the Lead Agency perform a mobile source health risk assessment dur to the Project's vicinity to diesel fueled highway vehicles.	Subsection 4.2, *Air Quality*
		- Request that the Lead Agency utilize the SCAQMD Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning when making local planning and land use decisions.	Subsection 4.2, *Air Quality*
		- In the event that significant adverse air quality impacts are identified in association with the Project, SCAQMD identifies consulting several sources for mitigation measures.	Subsection 4.2, *Air Quality*

COMMENTER	DATE	COMMENTS	LOCATION IN EIR WHERE COMMENT(S) ADDRESSED
Valley-Wide Recreation and Parks District (VWRPD)	December 12, 2017	- Stated the Project would be required to annex into Valley-Wide's Menifee North Park Community Facilities District for landscape maintenance.	Subsection 4.13, *Recreation*
		- Request analysis of park acreage provided on-site.	Subsection 4.13, *Recreation*
		- Request review of proposed parkland facilities, paseos/neighborhood parks, and conserved open space.	Subsection 4.13, *Recreation*
		- Request landscaped areas and all tentative tract maps are reviewed for compliance with Valley-Wide standards.	Subsection 4.13, *Recreation*
Ranch La Vita Homeowners Association	November 17, 2017	- Request analysis of increased pedestrian and vehicular traffic.	Subsection 4.14, *Transportation*
		- Request analysis of the lot sizes of the proposed residential homes.	Subsection 4.1, *Aesthetics*; Subsection 4.10, *Land Use and Planning*
		- Request analysis of traffic, parking, noise, and light pollution impacts due to the proposed community park/community center.	Subsection 4.14, *Transportation*; Subsection 4.11, *Noise*; and Subsection 4.1, *Aesthetics*.
		- Request analysis of recreation impacts.	Subsection 4.13, *Recreation*
Wittwer Parkin LLP	December 14, 2017	- Request discussion of the existing uses on-site.	Section 2.0, *Environmental Setting*
		- Request discussion of agricultural resources.	Section 5.0, *Other CEQA Considerations*
		- Request discussion about any soil contamination on-site.	Subsection 4.7, *Hazards and Hazardous Materials*
		- Request direct and cumulative analysis of air quality impacts.	Subsection 4.2, *Air Quality*
		- Request analysis of biological resources.	Subsection 4.3, *Biological Resources*
		- Request analysis of geology and soils.	Subsection 4.6, *Geology and Soils*
		- Request analysis of greenhouse gas emissions.	Subsection 4.7, *Greenhouse Gas Emissions*

COMMENTER	DATE	COMMENTS	LOCATION IN EIR WHERE COMMENT(S) ADDRESSED
		- Request analysis of hazards and hazardous materials.	Subsection 4.8, *Hazards and Hazardous Materials*
		- Request analysis of hydrology/water quality.	Subsection 4.9, *Hydrology and Water Quality*
		- Request analysis of land use and planning.	Subsection 4.10, *Land Use and Planning*
Fawn Caldwell	November 16, 2017	- Request analysis of biological resources, air quality, land use and planning, and community character.	Subsection 4.3, *Biological Resources*; Subsection 4.2, *Air Quality;* Subsection 4.10, *Land Use and Planning*; and Subsection 4.1, *Aesthetics*
		- Request analysis of habitat loss and impacts to the burrowing owl.	Subsection 4.3, *Biological Resources*
		- Request analysis of traffic at McCall Boulevard and Encanto Drive.	Subsection 4.14, *Transportation*
Reydine Eccles	November 29, 2017	- Request analysis of lighting impacts at the adjacent Senior Mobile Home Park and Life Care Center.	Subsection 4.1, *Aesthetics*
		- Request analysis of traffic and parking impacts.	Subsection 4.14, *Transportation*
		- Request analysis of impacts to recreation facilities.	Subsection 4.13, *Recreation*
		- Request analysis of size and density of the proposed residential homes.	Subsection 4.1, *Aesthetics*; Subsection 4.10, *Land Use and Planning*
		- Request analysis of the placement of the community park/community center.	Subsection 4.10, *Land Use and Planning*
Thomas Giedroyce	November 30, 2017	- Request clarification on the definition of an enhanced paseo (now referred to as paseos/neighborhood parks throughout the EIR).	Section 3.0, *Project Description* and Subsection 4.13, *Recreation*
		- Request analysis of trails and trail connections.	Subsection 4.13, *Recreation*
		- Request analysis of parks.	Subsection 4.13, *Recreation*
		- Request analysis of noise impacts.	Subsection 4.11, *Noise*

COMMENTER	DATE	COMMENTS	LOCATION IN EIR WHERE COMMENT(S) ADDRESSED
		- Request analysis of flooding and drainage impacts.	Subsection 4.9, *Hydrology and Water Quality*
		- Request analysis of population, traffic, and noise impacts.	Section 5.0, *Other CEQA Considerations*; Subsection 4.14, *Transportation and Traffic*; and Subsection 4.10, *Noise*
Lea Newland	November 16, 2017	- Request analysis of air quality impacts and dust during construction.	Subsection 4.2, *Air Quality*
		- Request analysis of streets and freeway access in the Project area.	Subsection 4.14, *Transportation*
Valerie Perkins	November 15, 2017 and November 27, 2017	- Request analysis of traffic impacts on McCall Road from Encanto Drivel Encanto Drive and Ethnac Road; the I-215; and the McCall Road/I-215 interchange.	Subsection 4.14, *Transportation*
		- Request analysis of impacts to surrounding scenic views.	Subsection 4.1, *Aesthetics*;
		- Request analysis of traffic and mitigation measures to widen roads in the Project area.	Subsection 4.14, *Transportation*
		- Request analysis of recreation	Subsection 4.13, *Recreation*
Denise Remington	November 30, 2017	- Request analysis on traffic on Encanto Drive.	Subsection 4.14, *Transportation*
		- Request analysis of flooding on Encanto Drive.	Subsection 4.9, *Hydrology and Water Quality*
		- Request analysis of cumulative traffic impacts resulting from development at Encanto Drive and McCall Boulevard.	Subsection 4.14, *Transportation*
		- Request impact to biological resources and sensitive animal species.	Subsection 4.3, *Biological Resources*
		- Request analysis of noise impacts during construction and operation of the Project.	Subsection 4.11, *Noise*
		- Request analysis of public services.	Subsection 4.12, *Public Services*
Tom Royce	December 7, 2017	- Request analysis on defensible space and fire-related hazards.	Subsection 487, *Hazards and Hazardous Materials*
Scoping Meeting Comments	November 30, 2017	- Request analysis of sensitive animal species.	Subsection 4.3, *Biological Resources*

COMMENTER	DATE	COMMENTS	LOCATION IN EIR WHERE COMMENT(S) ADDRESSED
		- Request analysis of impacts to mountain features in the area.	Subsection 4.1, *Aesthetics*; and Subsection 4.6, *Geology and Soils*
		- Request analysis of traffic impacts and the potential widening of Encanto Drive.	Subsection 4.14, *Transportation*
		- Request analysis of flooding impacts on Encanto Drive.	Subsection 4.8, *Hydrology and Water Quality*
		- Request analysis of traffic impacts in the neighboring jurisdiction in the City of Perris.	Subsection 4.14, *Transportation*
		- Request analysis of traffic impacts at freeway exits.	Subsection 4.14, *Transportation*
		- Request analysis of the density and lot sizes of the proposed residential uses.	Subsection 4.1, *Aesthetics*; and Subsection 4.10, *Land Use and Planning*
		- Request analysis of the aesthetics of the Project.	Subsection 4.1, *Aesthetics*
		- Request analysis of the phasing of the Project.	Section 3.0, *Project Description*
		- Request analysis of the drainage facilities on the Project site.	Subsection 4.9, *Hydrology and Water Quality*
		- Request analysis of school and public service facilities.	Subsection 4.12, *Public Services*
		- Request analysis of traffic impacts on McCall Boulevard.	Subsection 4.14, *Transportation*
		- Request analysis of cumulative developments in the area and their impact on traffic	Subsection 4.14, *Transportation*

1.6.2 CONTENT AND ORGANIZATION OF THIS EIR

This EIR contains all of the information required to be included in an EIR as specified by the CEQA Statutes and Guidelines (California Public Resources Code, Section 21000 *et. seq.* and California Code of Regulations, Title 14, Chapter 5). This EIR is organized in the following manner:

- **Section S.0, Executive Summary,** provides an overview of the EIR document and CEQA process. The Project, including its objectives, is described, and the location and regional setting of the Project site is documented. In addition, the Executive Summary discloses potential areas of controversy related to the Project, including those issues identified by other agencies and the public, and identifies potential alternatives to the Project that would reduce or avoid significant impacts, as required by CEQA. Finally, the Executive Summary provides a summary of the Project's impacts, mitigation measures, and conclusions, in a table that forms the basis of the EIR's Mitigation, Monitoring and Reporting Program.

- **Section 1.0, Introduction,** provides introductory information about the CEQA process and the responsibilities of the City of Menifee, serving as the Lead Agency for this EIR; a brief description of the Project; the purpose of this EIR; applications proposed by the Project Applicant that would require discretionary City approvals; permits and approvals required by other agencies; and an overview of the EIR format and content.

- **Section 2.0, Environmental Setting,** describes the environmental setting, including an overview of the regional and local setting, as well as descriptions of the Project site's physical conditions and surrounding context. The existing setting is defined as the condition of the Project site and surrounding area at the approximate date this EIR's NOP was released for public review on November 14, 2017. The setting discussion also addresses the relevant regional planning documents that apply to the Project site and vicinity.

- **Section 3.0, Project Description,** serves as the EIR's Project Description for purposes of CEQA and contains a level of specificity commensurate with the level of detail proposed by the Project, including the summary requirements pursuant to CEQA Guidelines § 15123. This section provides a detailed description of the Project, including its purpose and main objectives; design features; landscaping; site drainage; utilities; grading and construction characteristics; and operational characteristics expected over the Project's lifetime. In addition, the discretionary actions required of the City of Menifee and other government agencies to implement the Project are discussed.

- **Section 4.0, Environmental Analysis,** provides an analysis of the potential direct, indirect, and cumulative impacts that may occur from implementing the Project. The topics analyzed in this section include the topics summarized above under Section 1.6.1. Topics that were found to have no potential of being significantly impacted are discussed in Section 5.0, *Other CEQA Considerations*. A conclusion concerning significance is reached for each discussion; City regulations and design requirements and mitigation measures are presented as warranted. City regulations and design requirements (CRDRs) include standard regulatory requirements within the City, such as ordinances and General Plan policies, as well as components of the Project's design that would serve to reduce or avoid potential adverse environmental effects. Although the CRDRs do not technically meet CEQA's definition for mitigation, the CRDRs are identified herein to ensure Project compliance with the applicable regulations and design requirements. Mitigation measures also are presented throughout this EIR where necessary to avoid or reduce the magnitude of a significant impact. The environmental

changes identified in Section 4.0 and throughout this EIR are referred to as "effects" or "impacts" interchangeably. The CEQA Guidelines also describe the terms "effects" and "impacts" as being synonymous (CEQA Guidelines § 15358).

In the environmental analysis subsections of Section 4.0, the existing conditions are disclosed that are pertinent to the subject area being analyzed, accompanied by a specific analysis of physical impacts that may be caused by implementing the Project. Impacts are evaluated on a direct, indirect, and cumulative basis. Direct impacts are those that would occur directly as a result of the Project. Indirect impacts represent secondary effects that would result from Project implementation. Cumulative effects are defined in CEQA Guidelines § 15355 as "…two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."

The analyses in Section 4.0 are based in part upon technical reports that are appended to this EIR. Information also is drawn from other sources of analytical materials that directly or indirectly relate to the Project and are cited in Section 7.0, *References*. Where the analysis demonstrates that a physical adverse environmental effect may or would occur without undue speculation, feasible mitigation measures are recommended to reduce or avoid the significant effect where feasible. Mitigation measures must be fully enforceable, have an essential nexus to a legitimate governmental interest, and be "roughly proportional" to the impacts of the Project. The discussion then indicates whether the identified mitigation measures (if any feasible measures are identified) would reduce impacts to below a level of significance. In most cases, implementation of the mitigation measures would reduce the adverse environmental impacts to below a level of significance. If mitigation measures are not available or feasible to reduce an identified impact to below a level of significance, the environmental effect is identified as a significant and unavoidable adverse impact, for which a Statement of Overriding Considerations (SOC) would need to be adopted by the City of Menifee pursuant to CEQA Guidelines § 15093.

- **Section 5.0, Other CEQA Considerations,** includes specific topics that are required by CEQA. These include a summary of the Project's significant and unavoidable environmental effects, a discussion of the significant and irreversible environmental changes that would occur should the Project be implemented, an analysis of the Project's energy consumption, as well as potential growth-inducing impacts of the Project. Section 5.0 also includes a discussion of the potential environmental effects that were found not be significant during the preparation of this EIR.

- **Section 6.0, Project Alternatives,** describes and evaluates alternatives to the Project that could reduce or avoid the Project's adverse environmental effects. CEQA does not require an EIR to consider every conceivable alternative to the Project but rather to consider a reasonable range of alternatives that will foster informed decision making and public participation. A range of four alternatives is presented in Section 6.0.

- **Section 7.0, References,** cites all reference sources used in preparing this EIR and lists the agencies and persons that were consulted during preparation of this EIR. Section 7.0 also lists the persons who authored or participated in preparing this EIR.

CEQA requires that an EIR contain, at a minimum, certain specified content. Table 1-2, *Location of CEQA-Required Topics* provides a quick reference in locating the CEQA-required sections within this document.

Table 1-2 Location of CEQA-Required Topics

CEQA Required Topic	CEQA Guidelines Reference	Location in this EIR
Table of Contents	§ 15122	Table of Contents
Summary	§ 15123	Section S.0
Project Description	§ 15124	Section 3.0
Environmental Setting	§ 15125	Section 2.0
Consideration and Discussion of Environmental Impacts	§ 15126	Section 4.0
Significant Environmental Effects Which Cannot be Avoided if the Project is Implemented	§ 15126.2(b)	Section 4.0 & Subsection 5.1
Significant Irreversible Environmental Impacts Which Would be Involved in the Proposed Action Should it be Implemented	§ 15126.2(c)	Subsection 5.2
Growth-Inducing Impacts of the Project	§ 15126.2(d)	Subsection 5.3
Consideration and Discussion of Mitigation Measures Proposed to Minimize Significant Effects	§ 15126.4	Section 4.0 & Table S-1
Consideration and Discussion of Alternatives to the Project	§ 15126.6	Section 6.0
Effects Not Found to be Significant	§ 15128	Subsection 5.5
Organizations and Persons Consulted	§ 15129	Section 7.0 & Technical Appendices
Discussion of Cumulative Impacts	§ 15130	Section 4.0

1.7 Issues to be Resolved by the Decision-Making Body

The primary issues to be resolved by the decision-making body for the Project involves the Project's significant and unavoidable impacts in the issue areas of Air Quality; Greenhouse Gas Emissions; and Transportation and Traffic, which are addressed in EIR Sections 4.2, *Air Quality*; 4.6, *Greenhouse Gas Emissions*, and 4.14, *Transportation and Traffic*, respectively. The City of Menifee City Council will need to evaluate whether the mitigation measures proposed to reduce the Project's unavoidable impacts adequately reduce Project impacts to the maximum feasible extent. The City Council also will make a determination as to whether the Project's benefits outweigh these adverse environmental effects in support of adopting a Statement of Overriding Considerations pursuant to CEQA Guidelines § 15093. Finally, the City Council will decide whether to approve one of the Project alternatives in lieu of the Project, if it is determined that one of the alternatives is feasible and its approval would serve to substantially reduce or avoid significant environmental impacts.

Although this Subsection lists the primary issues to be resolved by the City, the entire EIR document reflects the City of Menifee's independent judgement regarding the level of significance of Project-related impacts. Thus, the City of Menifee City Council is required to concur with the findings of the EIR prior to certification. If the City of Menifee City Council does not agree with a conclusion(s) reached in the EIR (e.g., that an impact is not significant), the City Council has the responsibility to direct modifications to the EIR conclusion(s) to ensure the EIR reflects its independent judgment.

1.8 INCORPORATION BY REFERENCE

CEQA Guidelines § 15147 states that the "information contained in an EIR shall include summarized information sufficient to permit full assessment of significant environmental impacts by reviewing agencies and members of the public," and that the "placement of highly technical and specialized analysis and data in the body of an EIR shall be avoided." CEQA Guidelines § 15150 allows for the incorporation "by reference all or portions of another document…[and is] most appropriate for including long, descriptive, or technical materials that provide general background but do not contribute directly to the analysis of a problem at hand." The purpose of incorporation by reference is to assist the Lead Agency in limiting the length of this EIR. Where this EIR incorporates a document by reference, the document is identified in the body of the EIR, citing the appropriate section(s) of the incorporated document and describing the relationship between the incorporated part of the referenced document and this EIR. Refer to Section 7.0, *References*, for a list of the documents incorporated by reference.

The Project-specific detailed technical studies, reports, and supporting documentation that were used in preparing this EIR are bound separately as Technical Appendices. The Technical Appendices are available for review in electronic format online at https://www.cityofmenifee.us/325/Environmental-Notices-Documents and at the City of Menifee Planning Division, 29844 Haun Road, Menifee, CA 92586, during the City's regular business hours. The individual technical studies, reports, and supporting documentation that comprise the Technical Appendices are as follows:

A: Initial Study, Notice of Preparation, and Written Comments on the NOP
B: Air Quality Impact Analysis
C1: Biological Resources Report
C2: Jurisdictional Delineation Report
C3: Demonstration of Biologically Equivalent or Superior Preservation (DBESP)
C4: Addendum to the Biological Technical Report and the Jurisdictional Delineation Report
D: Cultural Resources Report
E: Energy Analysis
F1: Geotechnical Evaluation
F2: Geotechnical Discussion of Hydro-Collapse Potential
F3: Paleontological Resources Assessment
G: Greenhouse Gas Emissions Analysis
H: Phase I Environmental Site Assessment
I1: Drainage Study
I2: Preliminary Water Quality Management Plan
J: Noise Impact Analysis
K: Traffic Impact Analysis
L1: Water Supply Assessment
L2: Water Supply Assessment Update Letter
M: Written Correspondence

Other reference sources that are incorporated into this EIR by reference are listed in Section 7.0, *References*, of this EIR. In most cases, documents or websites not included in the EIR's Technical Appendices are cited by a link to the online location where the document/website can be viewed. References relied upon by this EIR also will be available for public review during the CEQA-required public review period of the EIR at the City of Menifee Planning Division, 29844 Haun Road, Menifee, CA 92586.

2.0 ENVIRONMENTAL SETTING

2.1 REGIONAL SETTING AND LOCATION

The Project site is located in the northern portion of the City of Menifee, within Riverside County, California. Western Riverside County abuts San Bernardino County to the northeast, Orange County to the west, and San Diego County to the south. Los Angeles County is located further to the northwest. Figure 2-1, *Regional Map*, depicts the Project site's location within the regional vicinity. Riverside County is located in an urbanized area of southern California commonly referred to as the Inland Empire. The Inland Empire is an approximately 28,000 square mile region comprising Riverside County, San Bernardino County, and the eastern tip of Los Angeles County. The Southern California Association of Governments (SCAG) estimates that the SCAG region will grow to 22 million people by the year 2040 – an increase of nearly four million people from the current population in the SCAG region (SCAG, 2016, p. 3). According to U.S. Census data, the 2010 population of Riverside County was 2,189,641 (USCB, 2016). SCAG forecast models predict that the population of Riverside County will grow to approximately 3,324,000 persons (an approximate 1.1 million persons increase) by the Year 2035 (SCAG, 2016).

As shown on Figure 2-1, the City of Menifee is bound to the west by the City of Canyon Lake and City of Lake Elsinore; to the north by the City of Perris; to the east by unincorporated Riverside County; and to the south by the City of Murrieta. Regional transportation facilities in the site's vicinity include I-215, located approximately 0.1 mile west of the Project site, State Route 74 (SR 74), located approximately 1.0 mile north of the Project site, and State Route 79 (SR 79), located approximately 5.4 miles to the east.

2.2 LOCAL SETTING AND LOCATION

As illustrated on Figure 2-2, *Vicinity Map*, and Figure 2-3, *USGS Topographic Map*, the Project site is located east of I-215 and Encanto Drive, south of Rouse Road, west of the future extension of Antelope Road, and generally north of Chambers Avenue. Local access to the Project site is currently available from the south by McCall Boulevard via Encanto Drive, Sherman Road, and Chatham Lane; and from the north by Ethanac Road via Encanto Drive. The Project site encompasses Assessor's Parcel Numbers (APNs) 333-020-009, 333-020-010 (partial), 333-030-012, 333-030-013, 333-030-021, and 333-030-022 (partial). The Project site is located within Section 22, Township 5 South, Range 3 West, San Bernardino Baseline and Meridian, and is located at 33° 43' 31.34" North longitude, 117° 10' 51.49" West latitude.

2.3 ON-SITE AND SURROUNDING LAND USES AND DEVELOPMENT

As shown on Figure 2-4, *Aerial Photograph*, the Project site is located in a portion of the City that is developed and developing, with existing residential, commercial, and school uses occurring north and south of the Project site. As also shown on Figure 2-4, under existing conditions the Project site is undeveloped. A majority of the Project site is routinely disturbed as part of on-going fire abatement activities, with portions of the site containing wild grass, weeds, brush, and scattered mature trees. A majority of the site exhibits relatively level topography that slopes gently downward from east to west, with a knoll occurring in the northeast portion of the site.

Land uses in the immediate vicinity of the Project site are illustrated on Figure 2-5, *Surrounding Land Uses and Development*, and are described below.

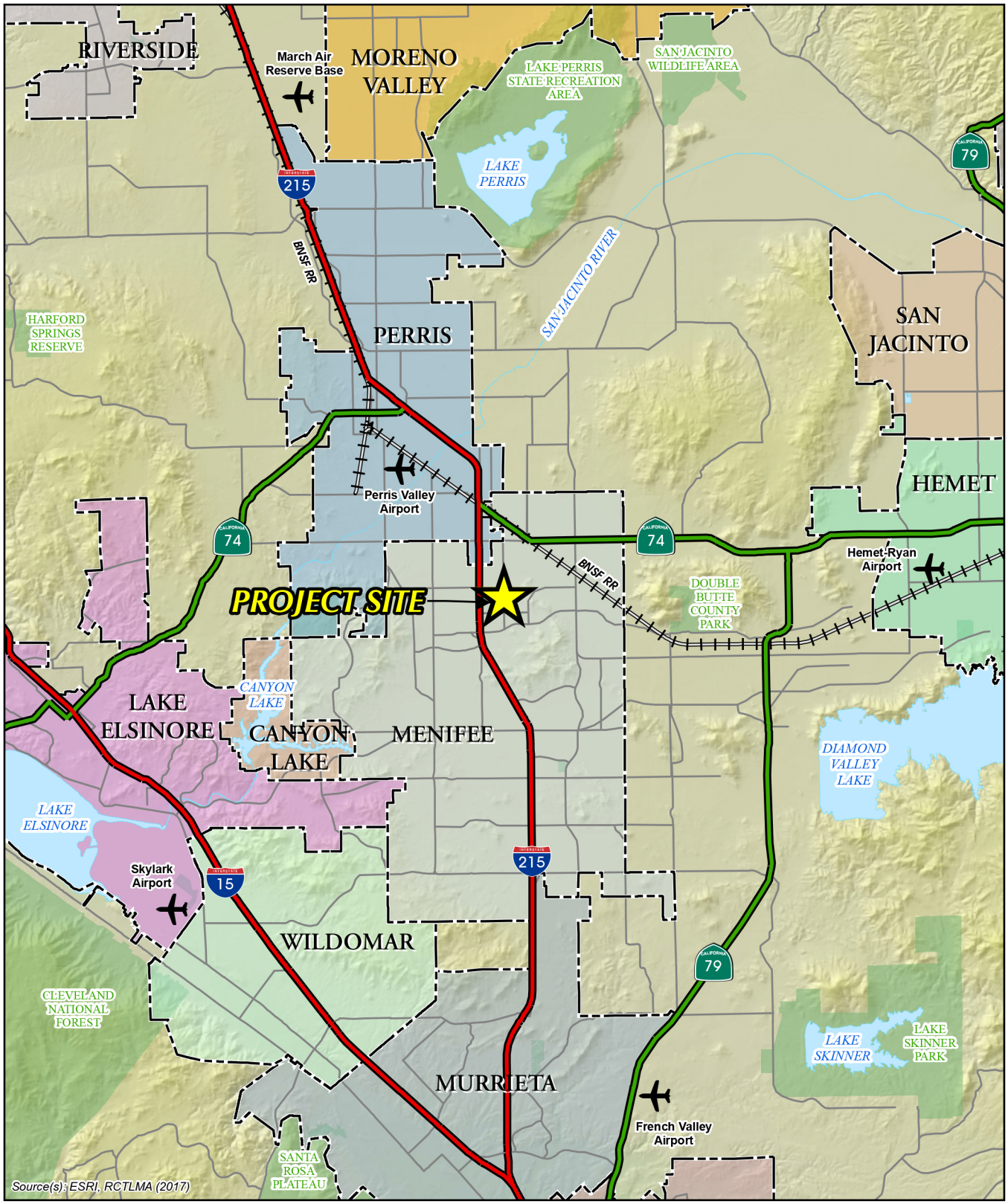


Figure 2-1

REGIONAL MAP

Figure 2-2

VICINITY MAP

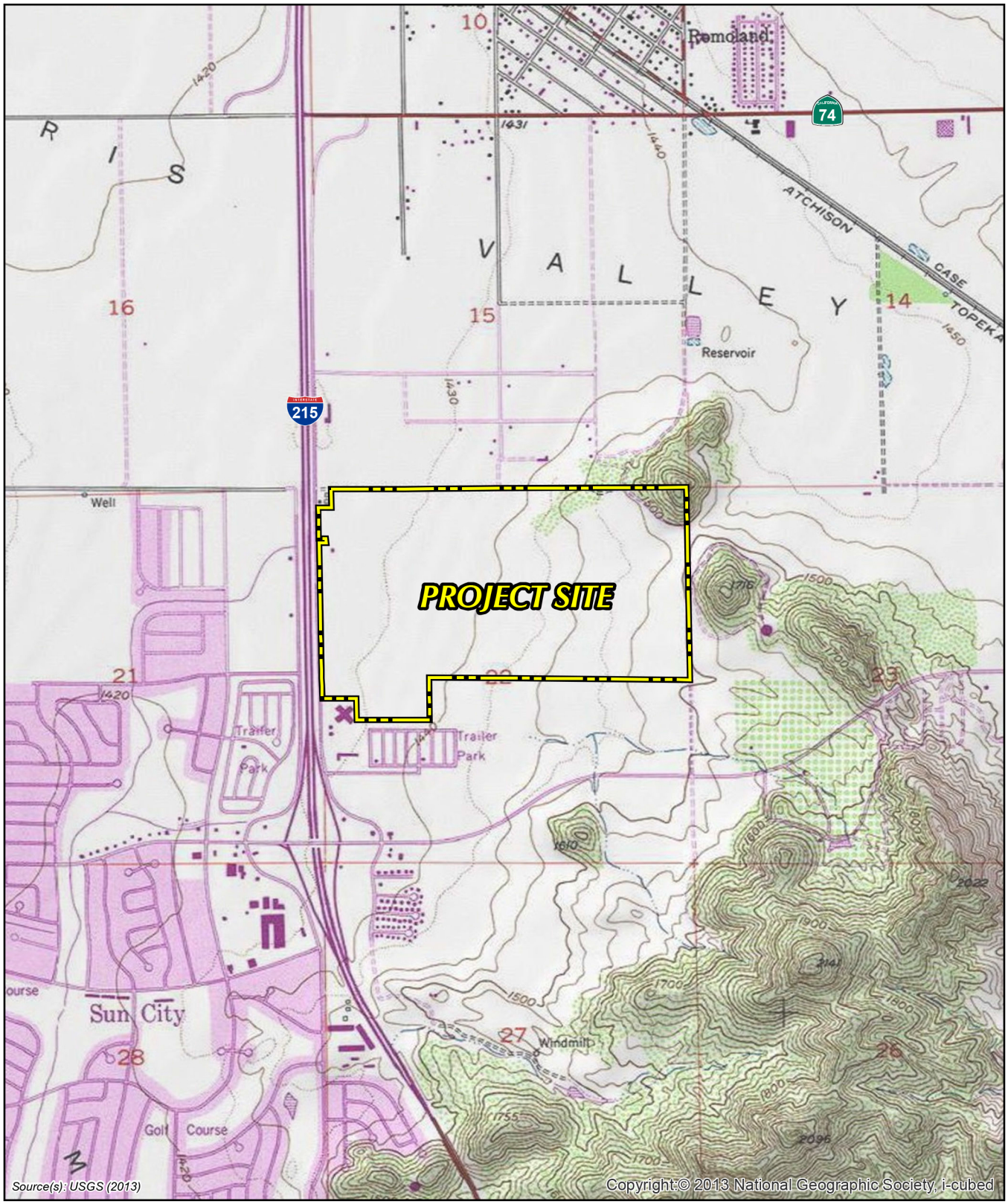


Figure 2-3

USGS TOPOGRAPHIC MAP

Figure 2-4

AERIAL PHOTOGRAPH

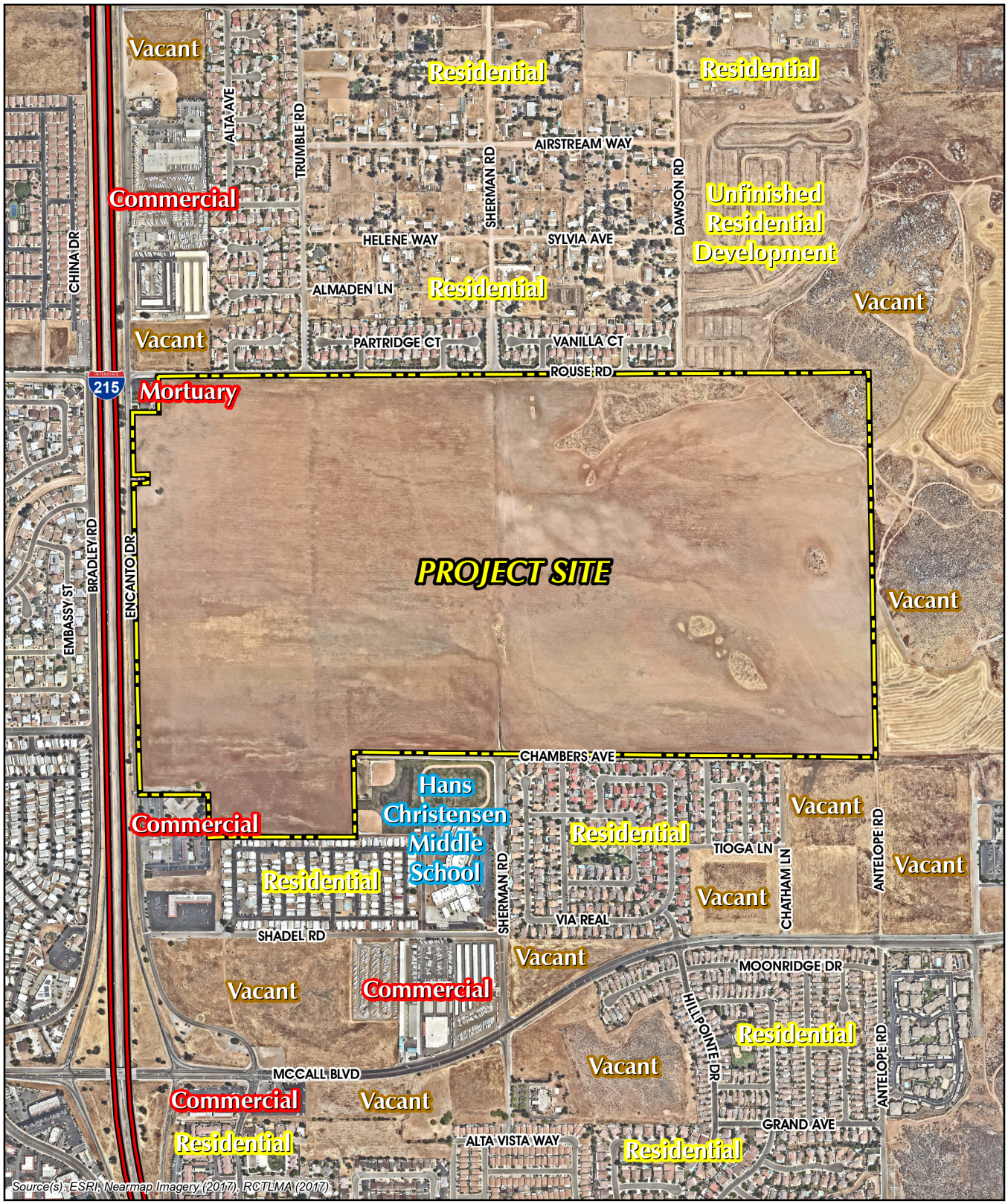


Figure 2-5

0 250 500 1,000 Feet

SURROUNDING LAND USES AND DEVELOPMENT

- North: Immediately to the north of the Project site is a mixture of small lot (±7,000 s.f.) and large lot (±one acre) residential uses, with commercial land uses along Encanto Drive (mortuary, self-storage and RV sales). A low density residential development (±7,000 s.f. lots) also is under construction to the north of the eastern portion of the Project site.

- East: Areas to the east of the Project site currently consists of vacant land, with a modest hillform that accommodates a water tank. Further to the east (approximately 0.57 mile) is the Boulder Ridge Middle School. To the southeast of the Project site is the Menifee Valley Medical Center, to the east of which is an orchard. It should be noted that the areas to the east are part of approved Tentative Tract Maps. Tentative Tract Map No. 29835 allows for the future development of up to 543 residential dwelling units, and Tentative Tract Map No. 31098 allows for the future development of up to 264 residential dwelling units.

- South: To the south of the Project site is a mixture of undeveloped land, small lot residential (+/-5,500 s.f. lot sizes), the Hans Christensen Middle School, a mobile home community, a convalescent facility (Life Care Center), commercial retail, and a motel. A Walmart also is proposed within the Menifee North Shopping Center, located south of the Project site.

- West: To the west of the Project site is I-215, beyond which is a single-family residential community (+/- 8,000 s.f. lots), a mobile home community, and a golf course (North Golf Course).

2.4 PLANNING CONTEXT

CEQA Guidelines § 15125(d) requires that EIRs identify the general plans and regional plans that are applicable to the project under evaluation, and recognize potential inconsistencies. Plans that are applicable to the Project evaluated herein are summarized below, with additional information provided in the applicable resource discussions in Section 4.0, *Environmental Analysis*.

2.4.1 CITY OF MENIFEE GENERAL PLAN

The City of Menifee's prevailing planning document is its General Plan, which was adopted by the City in 2013. The General Plan contains elements on land use, housing, economic development, community design, transportation, open space, parks and recreation, infrastructure, natural resources, safety, and noise. Figure 2-6, *Existing General Plan Land Use Designations*, shows the land use designations assigned by the City of Menifee General Plan Land Use Element to the Project site and surrounding properties that are located within the City of Menifee. As shown, the City's General Plan designates the Project site as "Fleming Ranch Specific Plan (SP)," although no Specific Plan has been adopted for the site. A project to develop the Fleming Ranch Specific Plan was previously proposed for the Project site; however, applications were withdrawn. At the time the City of Menifee updated their General Plan Land Use Plan, applications for the previous project were on file. Ultimately, the previous project was not approved, but the "Fleming Ranch Specific Plan (SP)" land use designation remained in the General Plan Land Use Element. Thus, allowable land uses per the site's existing General Plan land use designation would be established as part of the currently proposed Legado Specific Plan (SP 2017-187).

Refer to EIR Subsection 4.10, *Land Use and Planning*, for a discussion of other General Plan elements and policies that apply to the Project site.

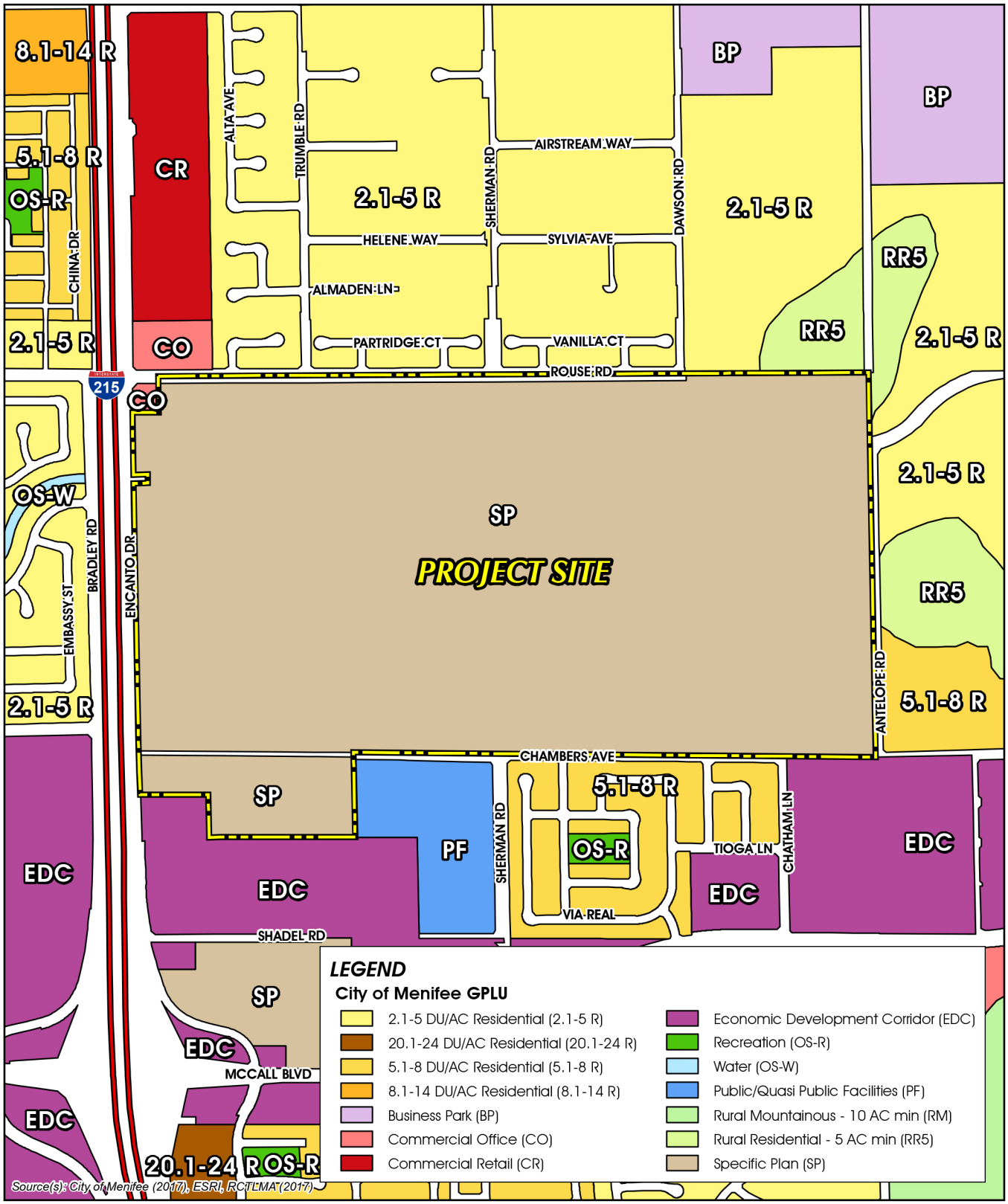


Figure 2-6

EXISTING GENERAL PLAN LAND USE DESIGNATIONS

2.4.2 City of Menifee Zoning Ordinance

The City of Menifee's Zoning Ordinance is intended to implement the City of Menifee General Plan land use plan. At the time the Project's Notice of Preparation (NOP) was distributed for public review (2017), the Project's existing zoning designations were C-P-S (Scenic Highway Commercial) and R-1 (One-Family Dwellings) The R-1 zoning designation allows for one-family dwellings and limited agricultural uses. The C-P-S zoning designation allows for a broad range of commercial retail land uses generally with an orientation to highways. However, on December 18, 2019 the City of Menifee adopted a new zoning map that will go into effect on January 18, 2020. Pursuant to the new zoning map, the Project site's zoning designation will be SP "Fleming Ranch Specific Plan Zone." The SP zoning designation allows for the policies and development standards to be established by a Specific Plan document. (Menifee, 2018; Menifee, 2008; Menifee, 2019)

2.4.3 Riverside County Airport Land Use Compatibility Plan

The Project site is located within the Airport Influence Area (AIA) for the March Air Reserve Base, which is located approximately 9.7 miles northwest of the Project site (RCIT, 2019). Thus, the Project would require review by the Riverside County Airport Land Use Commission (ALUC). The ALUCP designates the Project site as being located within Compatibility Zone E, which does not have any restrictions on residential density or number of people per acre. Prohibited land uses within Compatibility Zone E are limited to hazards to flight, and developments within Zone E are required to notify future landowners of aircraft overflights as part of future real estate transactions. Refer to EIR Subsections 4.8, *Hazards and Hazardous Materials*, 4.11, *Noise*, and 4.14, *Transportation*, for analysis of potential impacts related to the March Air Reserve Base and the Project. (ALUC, 2014. Table MA-2, and Map MA-1)

2.4.4 Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on conservation of species and their habitats in Western Riverside County. The Project site is located within the Western Riverside County MSHCP plan area. According to Riverside GIS and MSHCP Conservation Summary Report Generator, the Project site is not located within any MSHCP Criteria Cell; thus, the Project site is not targeted for conservation under the MSHCP (RCIT, 2019; RCTLMA, 2017). The nearest area subject to a MSHCP Criteria Cell (Cell No. 3467) is located 2.2-miles northwest of the Project site. (RCIT, 2019) Although habitat conservation is not required in the Project site pursuant to the MSHCP, all projects must demonstrate compliance with applicable MSHCP requirements in accordance with the following sections of the MSHCP: Section 6.1.2, "Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools;" Section 6.1.3, "Protection of Narrow Endemic Plant Species;" Section 6.1.4, "Guidelines Pertaining to the Urban/Wildland Interface;" and Section 6.3.2, "Additional Survey Needs and Procedures." According the MSHCP Conservation Summary Report Generator, the Project site is not located in a special linkage area, and is not located within the Criteria Area Species Survey Area (CASSA) for amphibian species, mammals, or other animals (pursuant to MSHCP Section 6.3.2). The Project site is located within the CASSA for the western burrowing owl. Additionally, the Project site is located within the Narrow Endemic Plant Species Survey Area (NEPSSA) for Munz's onion, San Diego ambrosia, many-stemmed dudleya, spreading navarretia, California Orcutt grass, and Wright's trichocoronis. (RCTLMA, 2017)

Refer to EIR Section 4.3, *Biological Resources*, for a discussion of potential Project-related impacts to biological resources.

2.5 EXISTING PHYSICAL SITE CONDITIONS

For purposes of establishing the setting of an EIR, and pursuant to CEQA Guidelines § 15125, the physical condition of the environment as it existed at the time the EIR's NOP was released for public review is used to establish the existing conditions on the Project site. The NOP for this EIR was released for public review on November 14, 2017. The following subsections provide a description of the Project site's physical environmental condition ("existing conditions") as of that approximate date. The site's physical conditions are shown on Figure 2-4. More detailed information regarding the Project's site's environmental setting as it relates to a specific environmental issue area is provided in the various subsections of EIR Section 4.0, *Environmental Analysis*.

2.5.1 LAND USE

Under existing conditions, as shown previously on Figure 2-4, the Project site consists of undeveloped land that was used for dryland farming until 2016. Portions of the site also contain wild grass, weeds, brush, and scattered mature trees. Multiple stockpiles of soils occur on the northeast portion of the Project site. In the northeastern portion of the site is a small knoll with natural vegetation and rock outcroppings. (Petra, 2016, p. 6) As shown on Figure 2-3, the Project site is characterized by relatively level terrain, with elevations ranging from 1,654 feet above mean sea level (amsl) along the knoll in the northeast corner of the site to 1,431 feet amsl near the western Project boundary (Google Earth, 2016). There are no Williamson Act Contract lands or Agricultural Preserves affecting the site or the immediately surrounding areas.

2.5.2 TOPOGRAPHY

The Project site is characterized by relatively level terrain, with elevations ranging from 1,654 feet amsl along the knoll in the northeast corner of the site to 1,431 feet amsl near the western Project boundary (Google Earth, 2016). Figure 2-3 depicts the Project site's topographic conditions.

2.5.3 AIR QUALITY AND CLIMATE

The Project site is located in the 6,745-square-mile South Coast Air Basin (SCAB), which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The SCAB is bound by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and San Diego County to the south. The SCAB is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD), the agency charged with bringing air quality in the SCAB into conformity with federal and State air quality standards. In 2016, the federal and State ambient air quality standards (National Ambient Air Quality Standards [NAAQS] and California Ambient Air Quality Standards [CAAQS]) were exceeded on one or more days for ozone, Particulate Matter ≤ 10 Microns (PM_{10}), and Particulate Matter ≤ 2.5 Microns ($PM_{2.5}$) at most monitoring locations. No areas of the SCAB exceeded federal or State standards for Nitrogen Dioxide (NO_2), Sulfur Dioxide (SO_2), Carbon Monoxide (CO), sulfates, or lead.

Refer to EIR Sections 4.2, *Air Quality*, and 4.6, *Greenhouse Gas Emissions*, for a more detailed discussion of the Project's existing air quality and climate setting.

2.5.4 BIOLOGICAL RESOURCES

According to the City of Menifee General Plan, the Project site comprises non-native grassland, and field croplands, which include areas occupied by dairies and livestock feed yards or areas that have been tilled for use as croplands or groves/orchards. (Menifee, 2013b, p. 5.4-2, Figure 5.4-1)

As previously discussed, the Project site is located within the Western Riverside County MSHCP. The results of biological surveys revealed the Project site consists of seven (7) vegetation types, including agriculture, cactus scrub, disturbed/developed, emergent wetland, Riversidean sage scrub, ruderal, and seasonal pools. The survey also identified two (2) special status plant species on the Project site (Parry's spineflower and paniculate tarplant), and two special-status animals on the Project site (coastal California gnatcatcher and burrowing owl). (GLA, 2019a, pp. 22-39)

A jurisdictional delineation performed for the Project site determined that U.S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) potential jurisdiction is present on the Project site and includes approximately 0.68 acre of on-site ACOE, RWQCB, and CDFW jurisdiction, of which approximately 0.11 acre consists of wetland/riparian habitat. The jurisdictional areas include four drainage features. Drainage A contains approximately 0.41 acre of ACOE/RWQCB jurisdiction, of which 0.11 acre supports jurisdictional wetlands. The drainage feature consists of a naturally ephemeral reach, as well as an artificially-created drainage ditch. The ephemeral portion originates in the southeast portion of the Project site, in part as runoff from Chambers Avenue. The drainage extends northwest for approximately 1,100 linear feet until the OHWM disappears in the western area of the Project site. Drainage B contains approximately 0.07 acre of ACOE/RWQCB jurisdiction, none of which consists of jurisdictional wetlands. Drainage B is also an ephemeral feature, and traverses from the eastern boundary in a westward direction for approximately 3,100 linear feet until an OHWM is no longer visible near the central portion of the Project site. Drainage C contains approximately 0.12 acre of ACOR/RWQCB jurisdiction, none of which consists of jurisdictional wetlands. Drainage C is an ephemeral feature that only exhibits flows during and immediately after storm events, supporting a limited OHWM for varying distances. The drainage enters the Project site at the eastern boundary and extends westward for approximately 3,900 linear feet until an OHWM is no longer visible near the northern central portion of the Project site. Drainage D contains approximately 0.08 acre of Corps/RWQCB jurisdiction, none of which consists of jurisdictional wetlands. Drainage D consists of an ephemeral feature that is three-feet wide and receives runoff from the western terminus of Chambers Avenue. The drainage only exhibits flows during and immediately after storm events, supporting a limited bed/bank for varying distances before the flows continue along another paved portion of Chambers Avenue before crossing Encanto Road offsite into a ditch that flows north along Encanto Road and I-215.

In addition to the on-site drainage features discussed above, the Project may include impacts to another 0.02 acre of non-wetland/non-riparian waters associated with potential off-site improvements. A small, unvegetated drainage feature is located off-site to the southeast of the Project boundary that currently flows to the west, crossing under an unimproved portion of Antelope Road before spreading into an off-site field east of Chatham Lane and south of Chambers Avenue. The Underwood development project proposed to the east of the Project intends to improve the portion of Antelope Road that crosses the off-site drainage feature. The Underwood project improvements would temporarily impact the drainage feature to replace the stream crossing, but post-development the flows would continue to the west. (GLA, 2019d)

Further discussion of biological resources at the Project site is included in EIR Subsection 4.3, *Biological Resources*. (GLA, 2019a, pp. 44-46)

2.5.5 Cultural Resource Setting

Of the many chronological sequences proposed for southern California, two primary regional syntheses are commonly used in archaeological literature. The two chronological sequences are discussed in EIR Subsection 4.4, *Cultural Resources*. In summary, the first chronological sequence was advanced by Wallace in 1955 and

consists of four cultural horizons based on cultural periods: Early Horizon (9000–6500 BC), Milling Stone Horizon (6500–2000 BC), Intermediate Horizon (2000 BC–AD 200), and Late Prehistoric Horizon (AD 500–historic). The second chronological sequence was advanced by Warren in 1984 and consists of four periods based on ecological principals: Pinto (4000–3000 BC), Gypsum (1000 BC–AD 1), Saratoga Springs (AD 500–1000), and Protohistoric (AD 1500–historic). (LSA, 2018, p. 5) Based on consultation with Native American tribes, the property is located in the traditional tribal use areas of two tribes, the Pechanga Band of Mission Indians and the Soboba Band of Luiseño Indians (LSA, 2018, p. 8).

An updated institutional records search, updated pedestrian survey, and additional field visit were conducted for the Project site, and the results determined that the site contains two historic sites comprising historic trash scatters, a pre-historic milling slick, and a pre-historic boulder containing numerous polished, bowl-shaped carvings, known as Cupules. The known cultural resources located on the Project site are part of the ceremonial complex and are contributing elements to the Traditional Cultural Property (TCP) and possible archeological district. The Project site is not known to have historical significance to the region and does not contain any resources recognized by the National Register of Historic Places, California Registered Historic Landmarks Architecture, California Points of Historic Interest, or Riverside County Historical Landmarks. (LSA, 2018, pp. 8-10) Refer to EIR Subsection 4.4, *Cultural Resources*, for a more detailed discussion of the Project site's existing cultural resource setting.

2.5.6 Geology and Soils

Regionally, the Project site is located in the west central portion of the broad San Bernardino Basin. The San Bernardino Basin is bound to the north by the San Gabriel Mountains and to the west by the Santa Ana Mountains. Regional topography is dominated by the presence of the northwest trending faults that define the mountains and hills of the southern California region. Structurally, the site is located on the west central portion of the Perris block of the northern Peninsular Ranges of southern California. The 'Perris block' is bound by the Elsinore Fault Zone to the west and the San Jacinto Fault Zone to the east. Despite the surrounding proximal fault systems, the low relief of the Perris block has remained near unchanged for hundreds of thousands of years. (LGC, 2017a, p. 6)

No active or inactive fault traces are known to traverse the site and no evidence of on-site faulting was observed during the investigation conducted for the Project site. This site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone or County of Riverside Fault Zone. The nearest active fault is the Elsinore Fault Zone located approximately 8.9 miles southwest from the Project site. Similar to other properties throughout Southern California, the Project site is located within a seismically active region and is subject to ground shaking during seismic events. (LGC, 2017a, pp. 8-11)

A field exploration and review of reports was conducted for the Project site, and the results determined the site consists of dense older alluvial fan deposits over crystalline bedrock at the eastern half of the site, and old and very old fan deposit at the western half of the site. Refer to EIR Section 4.5, *Geology and Soils*, for a more detailed discussion of the Project's geological setting. (LGC, 2017a, p. 11)

2.5.7 Hydrology

The Project site is located in the San Jacinto Subbasin of the Santa Ana River watershed, which drains an approximately 2,800-square-mile area and is the principal surface flow water body within the region. The Santa Ana River starts in Santa Ana Canyon in the southern San Bernardino Mountains and runs southwesterly across San Bernardino, Riverside, and Orange Counties, where it discharges into the Pacific Ocean at the City of Huntington Beach. The Project site and vicinity are within the Santa Ana Regional Water Quality Control

Board (RWQCB). The Santa Ana RWQCB's Santa Ana River Basin Water Quality Control Plan is the governing water quality plan for the region, which sets forth goals and objectives for protecting water quality within the region. (RWQCB, 2011)

The Project site is separated into four drainage areas under existing conditions. Drainage Area A is tributary to the southeasterly area of the Project site and flows towards the southern edge of Chambers Avenue into an existing drainage system where it is conveyed to an existing 6-foot by 4-foot RCB located beneath Chambers Avenue, east of Sherman Road. These flows are then conveyed northerly through a man-made drainage channel, and then sheet flow westerly into Drainage Area B. Drainage Area B is tributary direct to an existing on-site Caltrans RCB culvert measuring 10 feet in width by 5 feet in height that drains westerly from the Project site, beneath the Interstate 215 (I-215) freeway, and discharges to an existing off-site concrete flood control channel to the west of the I-215 freeway. Drainage Area C is tributary to the existing Sun City – Rouse Road storm drain. Drainage Area C encompasses the off-site area to the north of the Project site which drains to the existing Caltrans RCB culvert (an inlet for which is located west of the Project site). Drainage Area D drains directly to the existing Caltrans RCB culvert to the west of the Project site via inlets on the west side of Encanto Drive. (K&A, 2019a, pp. 5-6)

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Nos. 06065C2055H, and 06065C2060H, dated August 18, 2014, the Project site is not within a 100-year flood hazard area (FEMA, 2014a). Please refer to EIR Section 4.8, *Hydrology and Water Quality*, for additional discussion of the site's existing hydrologic conditions.

2.5.8 Noise

Primary existing sources of noise in the Project site's vicinity include vehicle noise from I-215 (0.1 mile west of the Project site), Encanto Drive (immediately adjacent to the Project's western boundary), Sherman Road (immediately adjacent to the Project's northern and southern boundaries), Antelope Road (immediately adjacent to the Project's eastern boundary), Rouse Road (immediately adjacent to the Project's northern boundary), and Chambers Avenue (immediately adjacent to the Project's southern boundary). The background ambient noise levels in the Project area are characterized by transportation-related noise associated with the surrounding arterial roadway network. Refer to EIR Subsection 4.11, *Noise*, for a more detailed discussion of the Project's site existing noise setting.

2.5.9 Paleontological Resource Setting

No fossil remains are known to underlie the Project site. According to the Project's Paleontological Resources Assessment, the majority of the Project area contains Old Alluvial Fan Deposits and Very Old Alluvial Fan Deposits, both of which have "High" paleontological sensitivity. In addition, the eastern portions of the Project area contain rocks of the Peninsular Ranges Batholith, including Granodiorite to Tonalite of the Domenigoni Valley Pluton, Gabbro, and Intermixed Mesozoic Schist and Cretaceous Granitic Rocks, which have" No" Paleontological sensitivity (LSA, 2017, pp. 10-13).

Refer to EIR Subsection 4.6, *Geology and Soils*, for a detailed discussion of the Project site's paleontological setting.

2.5.10 Transportation

Major vehicular travel routes in the Project area include I-215, located approximately 0.1-mile west of the Project site. The Project site is bordered by Rouse Road to the north, Antelope Road to the east, Chambers

Avenue to the south, and Encanto Drive to the west. Existing traffic on nearby roadways consists of both passenger vehicles and trucks accessing the existing residential, commercial, and school uses in the area. (Urban Crossroads, 2019d, p. 31)

The Project area is currently served by the Riverside Transit Agency (RTA) with bus services along Encanto Drive, south of McCall Boulevard, and along McCall Boulevard west of Encanto Drive via Route 61. Routes 27, 74, 208, and 212 also serve the area. The transit services are illustrated on Exhibit 3-8 of *Technical Appendix K*. Under existing conditions, there is no transit route that serves the Project site. (Urban Crossroads, 2019d, p. 31)

Under existing conditions, no pedestrian or bicycle facilities have been constructed on the Project site. Existing off-site pedestrian facilities in the Project vicinity occur along portions of Chambers Avenue and Rouse Road, and are depicted on Exhibit 3-11 of *Technical Appendix K*. (Urban Crossroads, 2019d, p. 31)

Refer to EIR Subsection 4.14, *Transportation*, for a more detailed discussion of the Project's site existing transportation setting.

2.5.11 Public Facilities

Fire protection services in the Project area are primarily provided by the Riverside County Fire Department. The nearest fire station to the Project site is the Sun City Fire Station (Station No. 7), located approximately 1.4 roadway miles west of the Project site. Five fire stations are located within a five-mile radius of the Project site, including fire stations located in the City of Menifee, City of Perris, and unincorporated Riverside County. (Google Earth, 2016)

Police protection services in the Project area are provided by the Riverside County Sheriff's Department via the Perris Sheriff's Station, located approximately 4.8 miles northwest of the Project site, and approximately 6.0 roadway miles from the Project site.

The Project site is located in the attendance boundary of the Menifee Union School District (MUSD) for elementary and middle schools, and the Perris Union High School District (PUHSD) for high school. Elementary school students residing the Project area would attend Freedom Crest Elementary School, which is located approximately 2.3 miles southeast of the Project site at 29282 Menifee Road in the City of Menifee. Middle school students in the Project area would attend Hans Christensen Middle School, which is located immediately south of the Project site at 27625 Sherman Road in the City of Menifee. High school students in the Project area would attend Heritage High School, which is located approximately 2.3 miles northeast of the Project site at 26001 Briggs Road in the City of Menifee.

Major public park facilities within the Project's vicinity include the following: Nova Park located 0.75 mile south of the Project site, McCall Canyon Park located 0.7 mile southeast of the Project site, and Lake Perris State Recreation Area located 7.9 miles north of the Project site.

The Project site is located within the Riverside County Public Library System service area. The nearest library to the Project site is the Sun City Library located approximately 0.75 mile southwest of the Project site.

2.5.12 UTILITIES AND SERVICE SYSTEMS

A. *Potable Water Service*

The Eastern Municipal Water District (EMWD) service area includes 555 square miles of Riverside County, which includes seven incorporated cities (including the City of Menifee) in addition to unincorporated areas in the County of Riverside. EMWD provides both water and sewer service to most of the areas it serves; however, in some places EMWD provides only sewer or water service, or provides wholesale water to a purveyor agency. EMWD also sells recycled water to the Rancho California Water District (RCWD) and Elsinore Valley Municipal Water District (EVMWD), and has an emergency connection with the City of Perris' North Perris Water System. There are four (4) sources of water supply to the EMWD: imported water from Metropolitan Water District of Southern California (MWD), local groundwater, desalinated groundwater, and recycled water. (EMWD, 2016a, pp. 3-2 - 3-3)

Water within the Project site's vicinity is delivered through two 12-inch water lines. One water line extends along Rouse Road, north of the Project site and the second water line extends along Chambers Avenue, south of the Project site. Additionally, water is delivered in the Project site's vicinity via a 16- to 18-inch water line in Encanto Drive, west of the Project site.

B. *Recycled Water Service*

Recycled water service to the Project area is provided by the EMWD. The recycled water system provides tertiary-treated recycled water to customers for agricultural, landscape irrigation, environmental, and industrial use. EMWD's recycled water system consists of four (4) regional water reclamation facilities (RWRFs) that treat municipal sewage and produce water for recycling. The four RWRFs include: The San Jacinto Valley RWRF, the Moreno Valley RWRF, the Temecula Valley RWRF, and the Perris Valley RWRF. The four RWRFs are connected via a network of pipelines and several distribution storage ponds which manage the delivery of recycled water. (EMWD, 2016a, pp. 3-2 - 3-3)

Recycled water is provided by EMWD and is separated into a series of Pressure Zones. Recycled water within the Project's vicinity is within the 1627 Pressure Zone for recycled water. EMWD operates and maintains a recycled water storage tank called the Chambers Tank just east of the Project site, and maintains a recycled water pipeline connecting the Chambers Tank to the Perris Valley RWRF.

C. *Sewer Service*

Sewer service to the Project area is provided by the EMWD. Sewer flows from the Project site would be treated by the Perris Valley Regional Water Reclamation Facility (RWRF). The Perris Valley RWRF, which has a daily capacity of 22 million gpd and typical daily flows of 13.8 million gpd (EMWD, 2016b).

Sewer service within the Project's vicinity is conveyed through an 8-inch sewer line within Rouse Road north of the Project site, and through a 15-inch sewer line located approximately 1,250 feet north of the Project site.

D. *Solid Waste Service*

Solid waste disposal services are provided by Waste Management Inc. of the Inland Empire, a private company under franchise agreement with the City of Menifee. Solid waste in the Project area is disposed of at one of three landfill facilities in Riverside County: Badlands, Lamb Canyon, and/or El Sobrante.

E. Other Services

The Project site is located in the service territories of the Southern California Gas Company (natural gas), and Southern California Edison (electricity).

2.5.13 Rare and Unique Resources

As required by CEQA Guidelines Section 15125(c), the environmental setting should identify any inconsistencies between a proposed project and applicable general, specific, or regional plans, and place special emphasis on resources that are rare or unique to that region and would be affected by the project. The Project Applicant proposes to develop an approximately 331.0-acre area with 1,061 dwelling units. The principal discretionary actions required of City of Menifee to implement the Project are described in detail in Section 3.0, *Project Description*, and are listed in Table 3-8, *Matrix of Project Approvals/Permits*.

Based on the existing conditions of the Project site and surrounding area described above and discussed in more detail in Section 4.0, *Environmental Analysis*, the Project site does not contain any resources that are rare or unique to the region. Based on field visits by T&B Planning, the northeastern corner of the Project site contains a knoll with several rock outcroppings; however, the knoll and rock outcroppings do not comprise a topographically prominent landform or visually prominent rock outcropping. Refer to EIR Subsection 4.1, *Aesthetics*, for a detailed discussion of the Project's relationship to the surrounding viewshed.

With respect to biology, two special-status plant species were identified on-site: paniculate tarplant (*Deinandra paniculata*) and Parry's spineflower (*Chorizanthe parryi* var. *parryi*). The Project biologist identified the following two special-status animals at the Project site: burrowing owl (*Athene cunicularia*), and coastal California gnatcatcher (*Polioptila californica californica*). Table 4-3 of the biological assessment (*Technical Appendix C1*) provides a list of special-status animals evaluated for the Study area through general biological surveys, habitat assessments, and focused surveys. Refer to EIR Subsection 4.3, *Biological Resources*, for more information about biological resources on the Project site.

In regards to Native American resources, three archeological and historic resources are located on-site. As part of the SB 18 and AB 52 consultation processes, the City of Menifee consulted with the Pechanga Band of Mission Indians and the Soboba Band of Luiseño Indians. The individual archeological and historic resources that are known to be located on the Project site are not significant sites under CEQA, as evidenced from a Phase II testing program; however, the resources were determined to be significant Trible Cultural Resources. Refer to EIR Subsection 4.4, *Cultural Resources*, and EIR Subsection 4.15, *Tribal Cultural Resources,* for more information about cultural resources on the Project site.

According to the Project's Paleontological Resources Assessment, the majority of the Project area contains Old Alluvial Fan Deposits and Very Old Alluvial Fan Deposits, both of which have "High" paleontological sensitivity. In addition, the eastern portions of the Project area contain rocks of the Peninsular Ranges Batholith, including Granodiorite to Tonalite of the Domenigoni Valley Pluton, Gabbro, and Intermixed Mesozoic Schist and Cretaceous Granitic Rocks, which have" No" Paleontological sensitivity (LSA, 2017, pp. 10-13). Under existing conditions, there are no known rare or unique paleontological resources on-site. Refer to EIR Subsection 4.6, *Geology and Soils*, for more information about the paleontological resources that may be present in the Project vicinity.

3.0 PROJECT DESCRIPTION

This Section provides all of the information required of an EIR Project Description by CEQA Guidelines § 15124, including a description of the Project's precise location and boundaries; a statement of the Project's objectives; a description of the Project's technical, economic, and environmental characteristics; and a description of the intended uses of this EIR including a list of the government agencies that are expected to use this EIR in their decision-making processes; a list of the permits and approvals that are required to implement the Project; and a list of related environmental review and consultation requirements.

The 331.0-acre site that is the subject of this EIR ("Project site") is located east of Interstate 215 (I-215) and Encanto Drive; south of Rouse Road; west of the future extension of Antelope Road; and generally north of Chambers Avenue. The Project evaluated herein (SP 2017-187 and related actions, the "Project") proposes to develop the Project site with up to 1,061 residential homes on approximately 216.9 acres (3.8 to 5.6 dwelling units per acre), freeway-oriented commercial land uses on 20.1 acres, a 12.9-acre community park/community center, a 1.9-acre private recreation center, paseos/neighborhood parks on 7.9 acres, conserved open space on 6.3 acres, detention/water quality basins on 26.4 acres, and roadways on 38.6 acres. This EIR analyzes the physical effects associated with all components of the Project, including planning, construction, and ongoing operation. The governmental approvals requested from the City of Menifee to implement the Project consist of the following:

1. Adoption by ordinance of Specific Plan No. 2017-187 (SP 2017-187);
2. Adoption by ordinance of a Change of Zone (CZ 2017-188);
3. Adoption by ordinance of Development Agreement (DA 2018-277);
4. Approval of a Tentative Tract Map (TTM 37391);
5. Approval of Vesting Tentative Tract Map (TTM 37408); and
6. Approval of Vesting Tentative Tract Map (TTM 37409).

The Project's applications, as submitted to the City of Menifee by the Project Applicant, are herein incorporated by reference pursuant to CEQA Guidelines § 15150 and are available for review at the City of Menifee Planning Division, 29844 Haun Road, Menifee, CA 92586. All other discretionary and administrative approvals that would be required of the City of Menifee or other government agencies are also within the scope of the Project analyzed in this EIR.

3.1 STATEMENT OF OBJECTIVES

The underlying purposes of the Project are to develop a single-family residential community with freeway oriented commercial retail areas in order to implement the City of Menifee General Plan, as well as comply to the greatest feasible extent with applicable City of Menifee standards, codes, and policies. The following is a list of specific objectives that the Project intends to achieve.

A. To efficiently develop an underutilized property with a complementary mix of land uses, including residential, commercial, recreational, and open space land uses.

B. Establish a master-planned community in a manner that is sensitive to the environment as well as visually and functionally compatible with surrounding existing and proposed land uses.

C. To develop a mixed-use community with a design that takes topographic, geologic, hydrologic, and environmental opportunities and constraints into consideration to minimize alterations to natural landforms, where practical.

D. To increase the available housing supply within the region by providing detached single-family homes in traditional subdivision layouts that will be marketable within the evolving economic profile of the City of Menifee and surrounding communities.

E. To provide a system of public and community facilities, including a public community park/community center, paseos/neighborhood parks, bike lanes, and trails to support development in an efficient and timely manner and meet the needs of project residents and residents of surrounding communities.

F. To require project design elements such as architecture, landscaping, color, paving, walls, fencing, signage, entry treatments, and other similar design features that would ensure the community is developed in a manner that is aesthetically pleasing.

G. To establish development phasing that results in logical coordinated growth.

H. To provide public benefits such as community recreation facilities, as well as long-term planning certainty for the City of Menifee and the Project Applicant.

I. To establish a land use plan that is consistent with the provisions of the March Air Reserve Base Airport Comprehensive Land Use Plan Compatibility Zone policies related to maximum building height and residential density.

3.2 PROJECT'S COMPONENT PARTS AND DISCRETIONARY APPROVALS

The Project consists of applications for a Specific Plan (SP 2017-187); Change of Zone (CZ 2017-188); Development Agreement (DA 2018-277); three Tentative Tract Maps (TTM 37391), (TTM 37408) and (TTM 37409)to establish a master-planned, medium-density residential community (3.8 to 5.6 dwelling units per acre) with freeway-oriented commercial uses on an approximately 331.0-acre site. Approval of these applications would allow for development of the subject property with up to 1,061 dwelling units on lot sizes ranging from 5,000 square feet (s.f.) to 30,000 s.f., up to 225,000 s.f. of freeway-oriented commercial uses, a 12.9-acre community park/community center, a 1.9-acre private recreation center, and 7.9 acres of recreational uses. A summary of the discretionary approvals sought by the Project Applicant is provided below. Additional discretionary and administrative actions that would be necessary to implement the Project are listed in Table 3-7, *Matrix of Project Approvals/Permits*, at the end of this EIR section.

The State Clearinghouse (SCH) issues numbers to projects for which a Notice of Preparation (NOP) has been filed with the SCH, and the City of Menifee has no control over what numbers are assigned by the SCH. A NOP was previously filed with the SCH for a project that was previously proposed on the Project site, and at that time the SCH assigned SCH No. 2009091118 to the previously-proposed project. Applications for the previous project were subsequently withdrawn. Notwithstanding, upon receiving the NOP for the Project the SCH reassigned the previous SCH No. 2009091118 to the currently Project. Although the SCH number assigned to the Project is the same as was assigned to the previously-proposed project, the current Project is not related to or associated with the previous project.

3.2.1 LEGADO SPECIFIC PLAN (SP 2017-187)

A. Proposed Land Uses

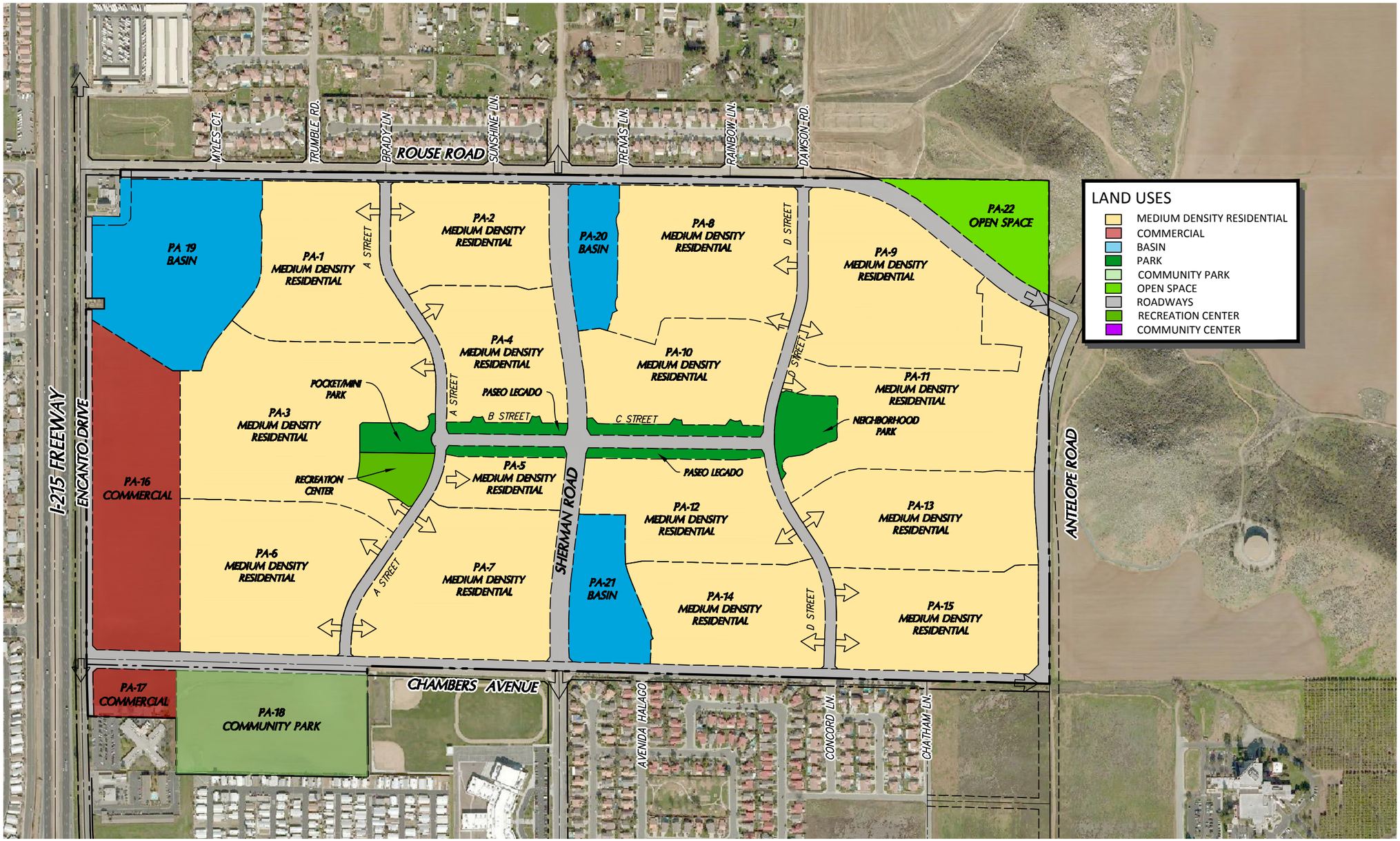
The Legado Specific Plan proposes the development of the 331.0-acre Project site with up to 1,061 residential homes on approximately 216.9 acres, freeway-oriented commercial land uses on 20.1 acres, a 12.9-acre community park/community center, a 1.9-acre private recreation center, paseos/neighborhood parks on 7.9 acres, conserved open space on 6.3 acres, detention/water quality basins on 26.4 acres, and roadways on 38.6 acres, as detailed in Table 3-1, *Specific Plan No. 2017-187 – Land Use Summary*, and depicted on Figure 3-1, *Proposed Specific Plan Land Use Plan*. Additionally, Table 3-2, *Residential Planning Area Summary*, provides a summary of the proposed residential land uses by planning area.

Table 3-1 Specific Plan No. 2017-187 – Land Use Summary

LAND USE DESIGNATION	GROSS AREA (ACRES)	DENSITY RANGE (DU/AC)[3]	TARGET DENSITY/INTENSITY	PROPOSED DWELLING UNITS
Commercial	20.1	_--	225,000[1]	--
Medium Density Residential (MDR)	216.9	3.8-5.6	4.9 du/acre	1,061
Open Space Recreation (OS-R)[2]	22.7	--	--	--
Open Space Conservation (OS-C)	6.3	--	--	--
Water Quality/Detention Basins (OS-W)	26.4	--	--	--
Roadways	38.6	--	--	--
Totals:	**331.0**	**--**	**4.9 du/ac (net); 225,000 s.f.[1]**	**1,061**

1. Retail square footage may be converted to 205,000 s.f. of office uses of some combination thereof provided the trip generation is less than the all commercial trip generation.
2. OS-R land uses include an approximately 12.9-acre community park/community center, 1.9-acre private recreation center and approximately 7.9 acres of paseos/neighborhood parks.
3. du/acre = dwelling units per acre

(WHA, 2019, Table 3.1)



Source(s): K&A Engineering (05-10-2019)

NOT TO SCALE

Figure 3-1

PROPOSED SPECIFIC PLAN LAND USE PLAN

Table 3-2 Residential Planning Area Summary

	LAND USE		ACREAGE	DENSITY	DUS
Minimum Lot Sizes - West Village					
	PA1	5,000 S.F. Lots	14.2	5.2	74
	PA2	6,000 S.F. Lots	10.6	4.7	50
	PA3	5,500 S.F. Lots	23.8	4.9	117
	PA4	7,000 S.F. Lots	10.9	3.9	43
	PA5	7,000 S.F. Lots	4.3	4.7	20
	PA6	5,000 S.F. Lots	17.9	5.5	99
	PA7	6,000 S.F. Lots	17.2	4.7	80
		Subtotal West Village	98.9	4.9	483
Minimum Lot Sizes - East Village					
	PA8	5,000 S.F. Lots	15.6	5.6	88
	PA9	7,000 S.F. Lots	18.0	3.8	68
	PA10	5,500 S.F. Lots	12.9	4.7	60
	PA11	5,500 S.F. Lots	18.7	5.1	96
	PA12	7,000 S.F. Lots	12.4	4.5	56
	PA13	5,000 S.F. Lots	14.6	5.5	81
	PA14	7,000 S.F. Lots	12.5	4.7	59
	PA15	5,500 S.F. Lots	13.3	5.3	70
		Subtotal East Village	118.0	4.9	578
		Total	216.0*	4.9	1,061
*Note: Numbers do not add up due to rounding					

(WHA, 2019, Table 3.3)

Specifically, the proposed land uses within the Legado Specific Plan are as follows:

- **Medium Density Residential:** Approximately 216.9 acres of the Project site would be designated for Medium Density Residential (MDR) uses with up to 1,061 detached dwelling units, resulting in a density of 4.9 dwelling units per acre (du/ac) within a proposed density range of 3.8 to 5.6 du/ac. Planning areas proposed with MDR land uses include Planning Areas 1 through 15. Two distinct residential villages would be established (West Village and East Village).

  The West Village would include seven residential planning areas on approximately 98.9 acres and would be developed with up to 483 single-family homes at a net density of 4.9 du/ac. The East Village would include eight residential planning areas on approximately 118.0 acres and would be developed with up to 578 single-family homes at a net density of 4.9 du/ac.

- **Commercial:** Approximately 20.1 acres of the Project site adjacent to Encanto Drive would consist of Commercial land uses, which would accommodate a total of 225,000 s.f. of freeway-oriented commercial land uses, including 200,000 s.f. of commercial uses in Planning Area 16 and 25,000 s.f. of commercial within Planning Area 17. The Commercial uses would be developed with a gross floor area ratio (FAR) of approximately 0.25.

- **Open Space Recreation:** Approximately 22.7 acres of the Project site would be designated for Open Space Recreation (OS-R). Land uses would consist of a proposed community park/community center on 12.9 acres located in the southwestern portion of the Project site, south of Chambers Avenue and adjacent to the Hans Christensen Middle School, a 1.9-acre private recreation center at the intersection of 'A' Street and 'B' Street, as well as a series of paseos/neighborhood parks on 7.9 acres along 'A', 'B', 'C' and 'D' Streets. Amenities at the community park/community center would include community fields, community center, picnic areas, play areas, walkways, on-site parking, and restrooms. Field lighting would be required to be installed on the community fields as part of the Project. All future lighting plans would be subject to review and approval by the City of Menifee and all lighting elements would be required to comply with all City of Menifee requirements. Amenities at the 1.9-acre private recreation center may include a pool, spa, restroom building with showers, and walkways. The proposed paseos/neighborhood parks would include 4.3 acres comprising Paseo Legado that would include walkways, and shade trees, as well as 3.6 acres of neighborhood parks which would include play areas, picnic areas, walkways, and shade trees.

- **Open Space Conservation:** Approximately 6.3 acres in the northeastern corner of the Project site would be designated for Open Space – Conservation (OS-C) land uses, which would preserve an existing knoll as permanently-conserved open space.

- **Open Space-Water:** Approximately 26.4 acres of the Project site (Planning Area 19, 20, and 21) would be designated for Open Space – Water (OS-W) land uses, which would serve as areas for water quality and detention basins to treat pollutants in runoff and attenuate peak runoff from the Project site.

- **Roads/Rights of Way:** A total of approximately 38.6 acres of the Project site would be dedicated to on-site infrastructure roadways. Primary vehicular access would be provided via McCall Road (an east-west oriented road located one-half a mile south of the SP) via the north/south oriented Encanto Drive, Sherman Road, and Antelope Road, which are planned to connect with various roadways north of the SP area, including Ethanac Road (located one mile north of the northerly SP boundary) Chambers Avenue and Rouse Road would provide east/west access between the West and East Villages and the proposed commercial uses. Chambers Avenue would provide primary access to the community park/community center, while Rouse Road would form the northerly boundary of the SP area and would provide access points into the West and East Villages. Access to the commercial areas would occur primarily via Encanto Drive.

B. Specific Plan Design Guidelines

The proposed Legado Specific Plan proposes numerous Design Guidelines to provide a consistent design that ensures compatibility between proposed residential, commercial, and recreational land uses. The Design Guidelines are composed of elements that define the design concept, physical character, and visual theme of the proposed community. Principal components of the Design Guidelines are the Architectural Design Guidelines and Landscape Design Guidelines, as summarized below.

The Architectural Design Guidelines address site planning and architectural elements of the residential neighborhoods and commercial areas. Specific elements and considerations of the built environment addressed within the Architectural Design Guidelines include: residential site planning and building layout; residential architectural requirements; residential architectural themes and details; and non-residential architectural requirements and details.

The Landscape Design Guidelines provide landscape principles and standards to ensure that plant materials, streetscapes, monumentation, community walls/fences, parks, trails, and other amenities are compatible with the community's design theme. Additionally, the Landscape Design Guidelines establish a water-efficient plant palette and provides principles for the design of an efficient irrigation system to conserve water resources.

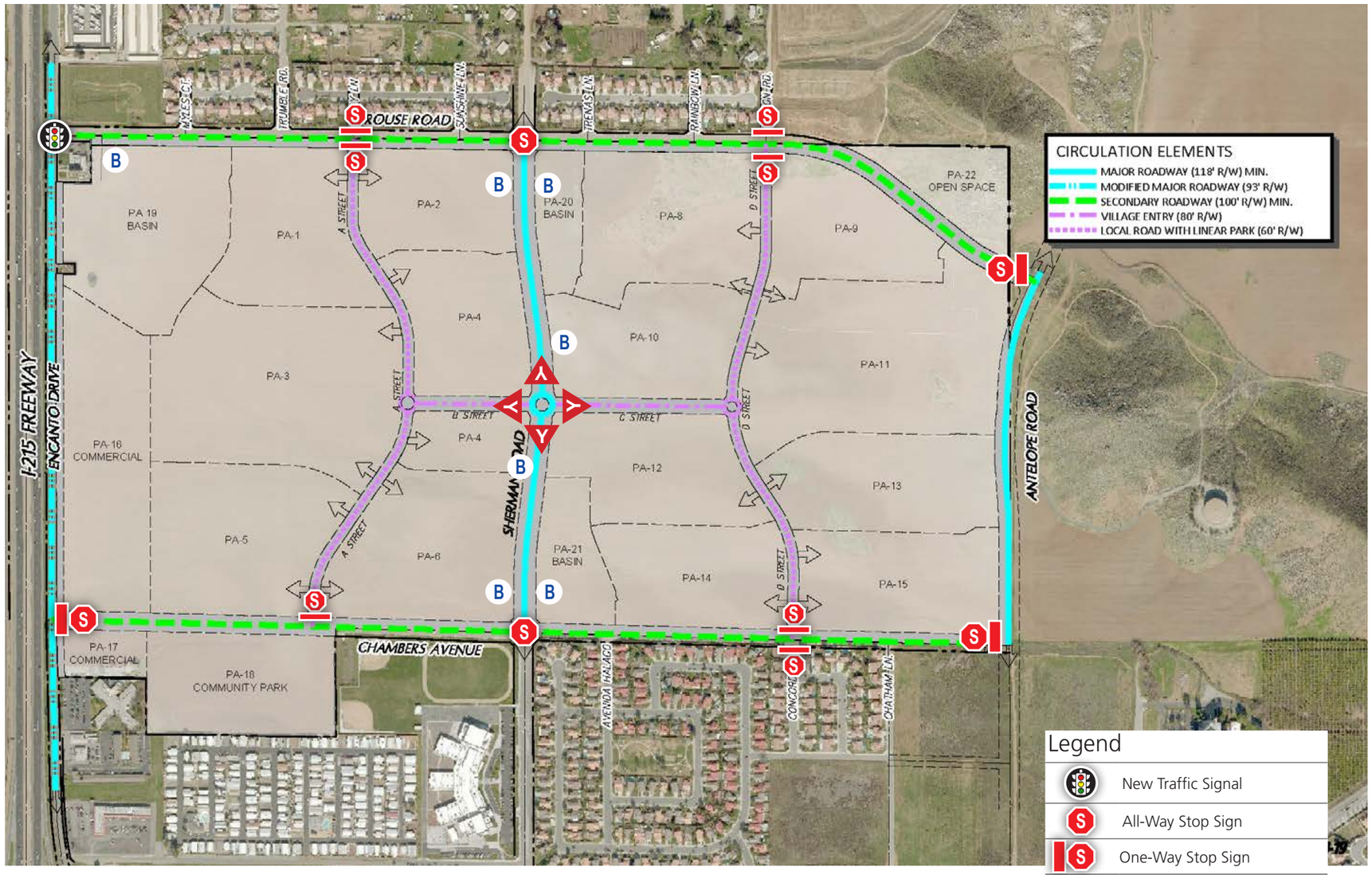
For a detailed description of the proposed design guidelines, please refer to the Design Guidelines Section (Section 5) of the Legado Specific Plan. The Draft Legado Specific Plan is herein incorporated by reference pursuant to CEQA Guidelines § 15150, and available to the public for review at the City of Menifee Planning Division, located at 29844 Haun Road, Menifee, CA 92586.

C. *Vehicular Circulation*

The Legado Specific Plan proposes the construction of approximately 38.6 acres of on-site roadways. Traffic is proposed to be conveyed by a hierarchical circulation system with roadway rights-of-way (ROW) ranging from 60 to 128 feet in width. The proposed roadway system is depicted on Figure 3-2, *Conceptual Vehicular Circulation Plan*.

The main objective of the proposed roadway system is to provide direct and convenient access to planned land uses through a safe and efficient network of roadways. Figure 3-3 through Figure 3-5, *Roadway Cross Sections*, depicts the planned improvements to each of the roadways depicted on Figure 3-2. The main objective of Figure 3-2 is to provide direct and convenient access to planned land uses through a safe and efficient network of roadways.

At buildout, access to the Project site would be provided via Sherman Road (122-foot Major Roadway with planted median), Antelope Road (118- to 128-foot Major Roadway with painted median), Encanto Drive (93-foot Modified Major Roadway), Chambers Avenue (94- to 106-foot Secondary Roadway), and Rouse Road (111-foot Secondary Roadway). The Project would be responsible for implementing frontage improvements along the Project's frontages with Encanto Drive, Antelope Road, Chambers Avenue, and Rouse Road, and would be required to improve Sherman Road through the central portion of the Project site between the existing segments of Sherman Road located north and south of the Project site. Although Project access also would be provided via Antelope Road, the Project only would improve the portions of proposed Antelope Road that occurs within the Project boundary, while the remaining improvements are expected in association with a proposed development to the east of the Project site. Internal collector and local residential streets also would be constructed at their full width to provide access to individual units within each Village.



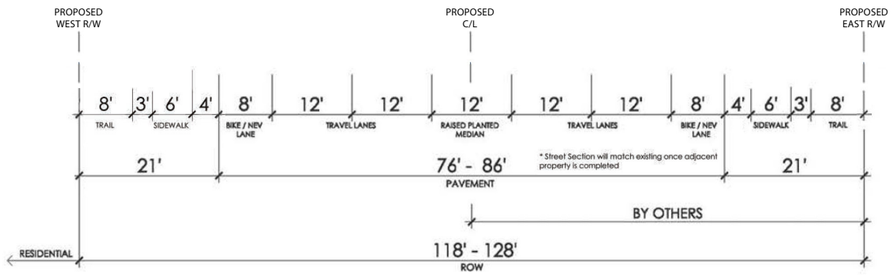
*The bus stop locations shown on this map can be moved with the approval of both the City of Menifee and RTA because of but not limited to existing utility conflicts, landscape screening feasibility and agreements with off-site owners prior to improvement plan approval for the road on which the bus stop is located. Proposed bus stops do not include turnouts

Source(s): K&A Engineering (December 2019)

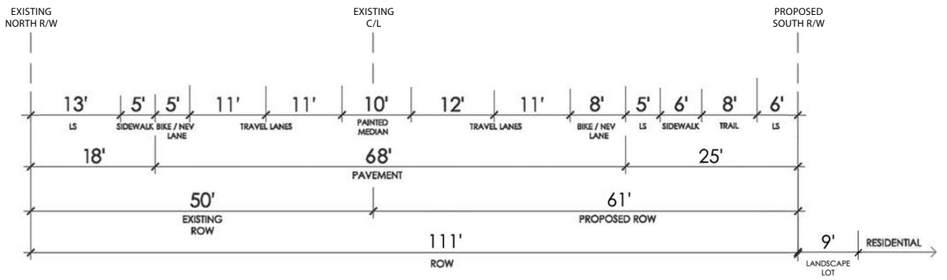
Figure 3-2

NOT TO SCALE

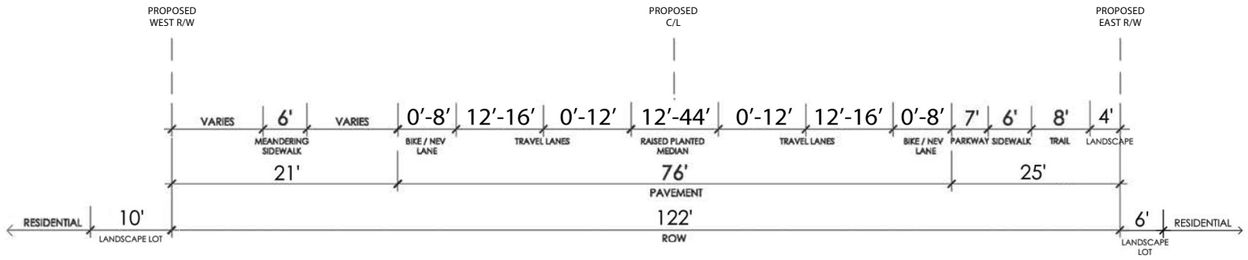
CONCEPTUAL VEHICULAR CIRCULATION PLAN



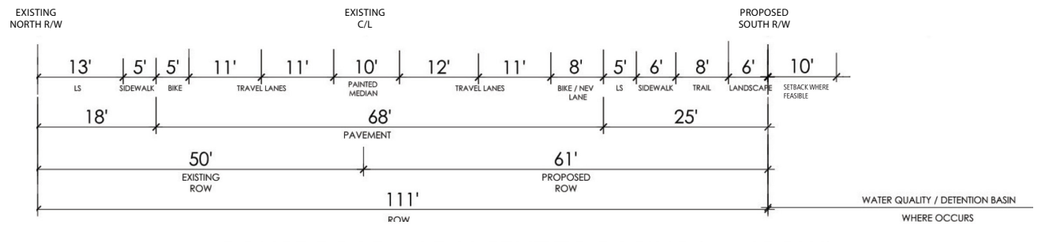
ANTELOPE ROAD (118'-128' ROW)
Major Roadway



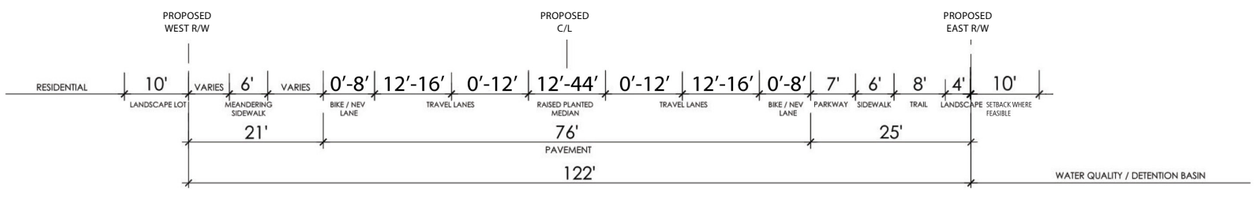
ROUSE ROAD (111' ROW)
Secondary Roadway



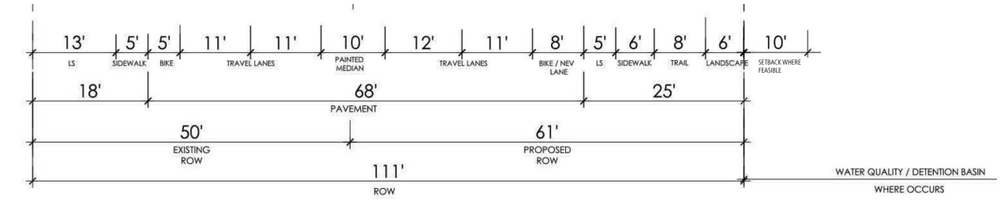
SHERMAN ROAD (122' ROW)
Major Roadway



ROUSE ROAD - ADJACENT TO BASINS (111' ROW)
Secondary Roadway



SHERMAN ROAD - ADJACENT TO BASIN (122' ROW)
Major Roadway



ROUSE ROAD - I-215 FREEWAY OVER-CROSSING LANDING SITE (111 ROW)
Secondary Roadway

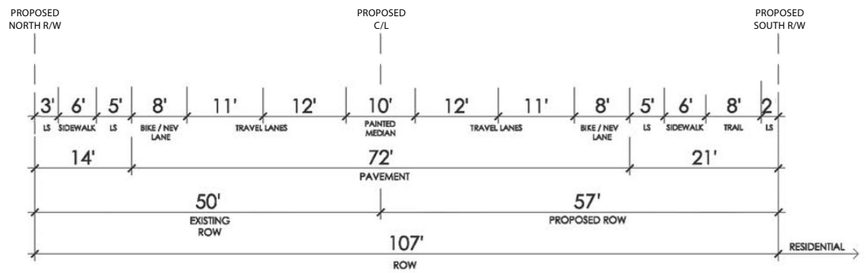
Note: *Without changing the curb to curb widths, the final widths of travel lanes, bike lanes, medians, and buffers will be determined in the final engineering to allow a better and safer flow of vehicular traffic, bike traffic, and pedestrian through and in and out of the proposed development. A striping design shall be submitted to the City Traffic Engineering department for review and approval prior to approval of any street improvement plans or traffic signal plans.*

Source(s): K&A Engineering (August 2019)

Figure 3-3

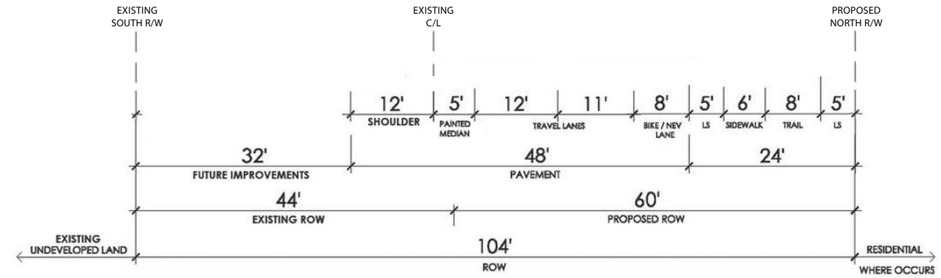
NOT TO SCALE

ROADWAY CROSS SECTIONS (1 OF 3)



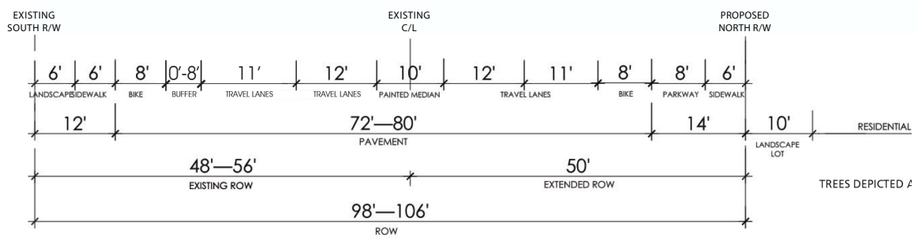
ROUSE ROAD - EASTERN PORTION (107' ROW)

Secondary Roadway



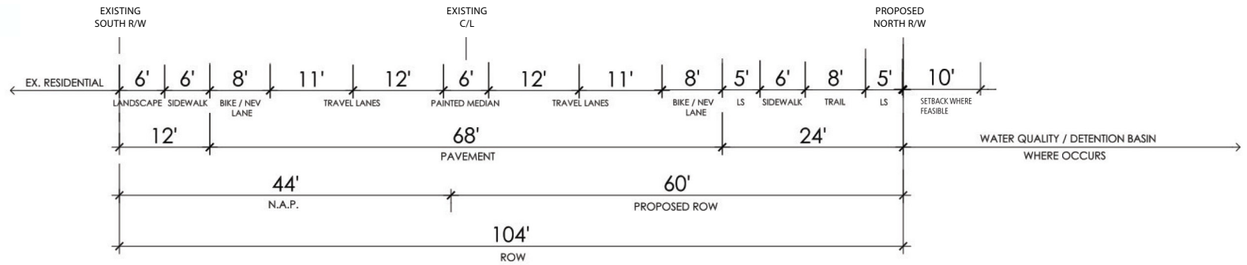
CHAMBERS AVENUE - WEST OF ANTELOPE ROAD (104' ROW)

Secondary Roadway



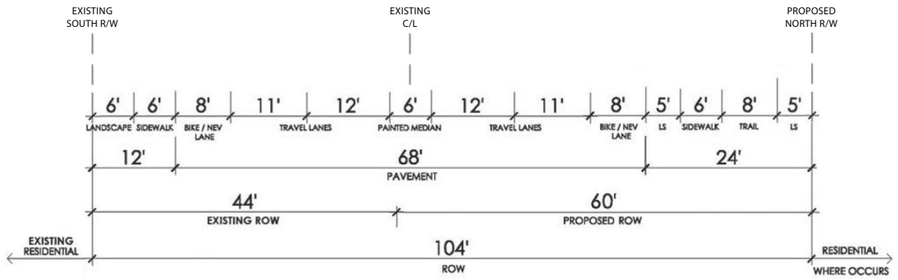
CHAMBERS AVENUE - WEST OF SHERMAN ROAD (98'-106' ROW)

Secondary Roadway



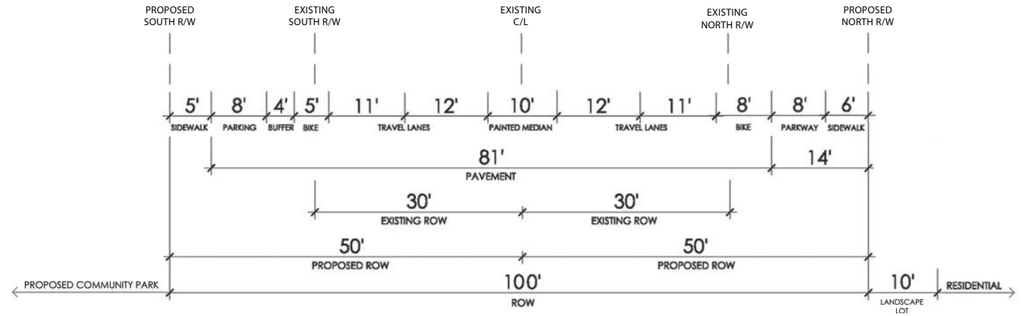
CHAMBERS AVENUE - ADJACENT TO BASIN (104' ROW)

Secondary Roadway



CHAMBERS AVENUE (104' ROW)

Secondary Roadway



CHAMBERS AVENUE - AT THE COMMUNITY PARK (100' ROW)

Secondary Roadway

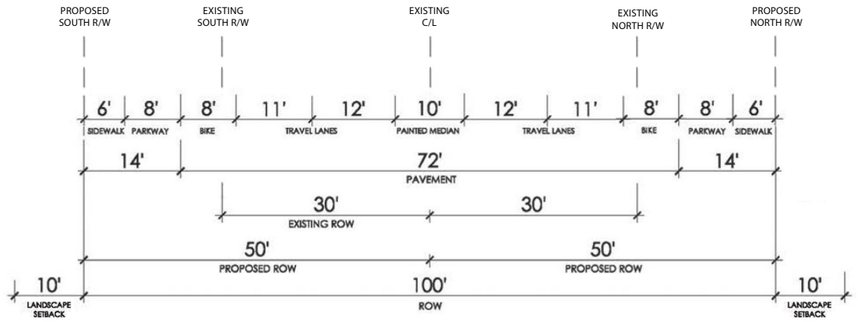
Note: *Without changing the curb to curb widths, the final widths of travel lanes, bike lanes, medians, and buffers will be determined in the final engineering to allow a better and safer flow of vehicular traffic, bike traffic, and pedestrian through and in and out of the proposed development. A striping design shall be submitted to the City Traffic Engineering department for review and approval prior to approval of any street improvement plans or traffic signal plans.*

Source(s): K&A Engineering (December 2019)

Figure 3-4

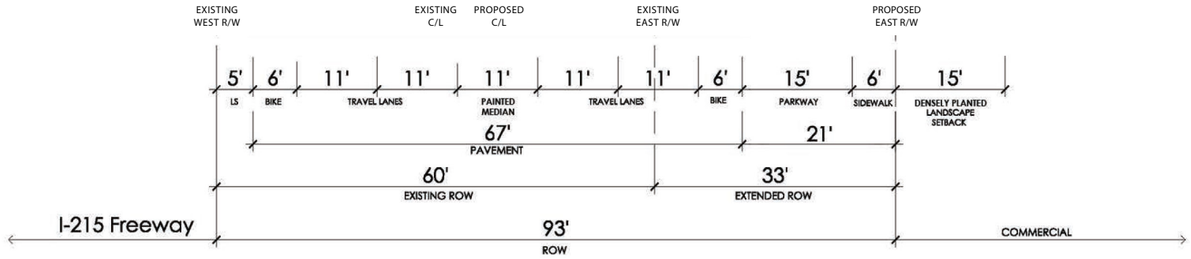
T&B PLANNING NOT TO SCALE

ROADWAY CROSS SECTIONS (2 OF 3)



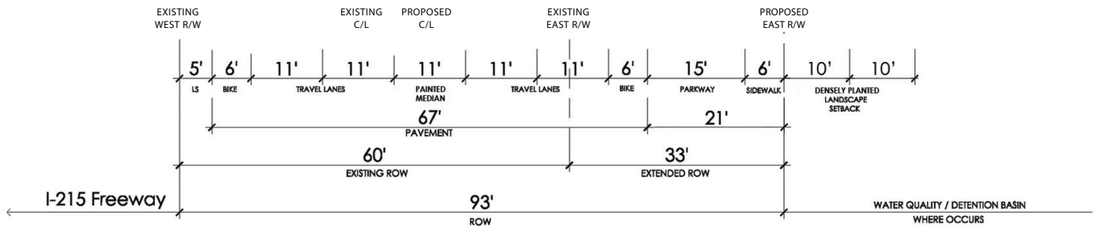
CHAMBERS AVENUE - AT PA 16 & 17 (100' ROW)

Secondary Roadway



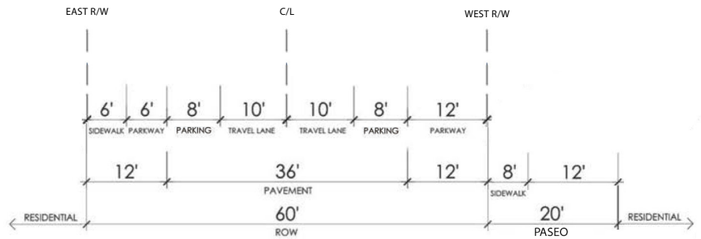
ENCANTO DRIVE (93' ROW)

Modified Major Roadway

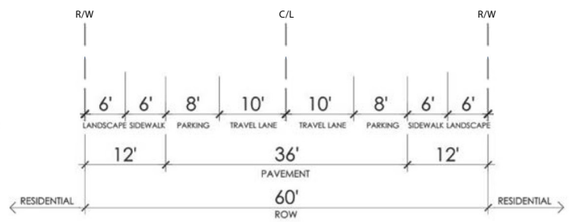


ENCANTO DRIVE - ADJACENT TO BASIN (93' ROW)

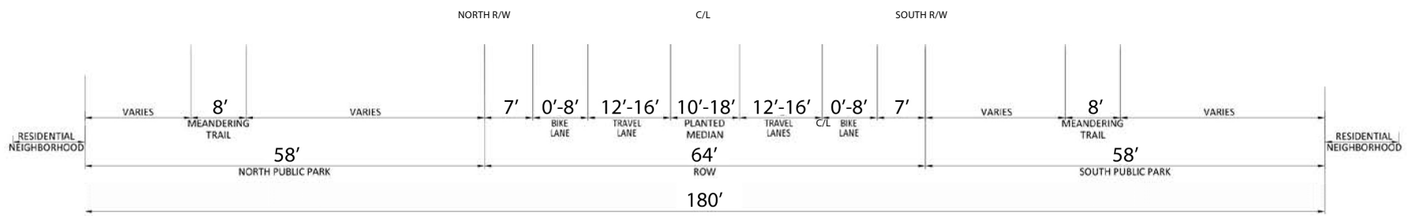
Modified Major Roadway



LOCAL ROADWAY - WITH PASEO (60' ROW)



LOCAL ROADWAY (60' ROW)



VILLAGE ENTRY ROADWAY - WITH PASEO (64' ROW)

Note: *Without changing the curb to curb widths, the final widths of travel lanes, bike lanes, medians, and buffers will be determined in the final engineering to allow a better and safer flow of vehicular traffic, bike traffic, and pedestrian through and in and out of the proposed development. A striping design shall be submitted to the City Traffic Engineering department for review and approval prior to approval of any street improvement plans or traffic signal plans.*

Source(s): K&A Engineering (August 2019)

Figure 3-5

NOT TO SCALE

ROADWAY CROSS SECTIONS (3 OF 5)

A summary of the roadway cross sections proposed in the Legado Specific Plan is provided below.

- **Sherman Road (122-foot ROW).** This road is a planned north-south roadway through the central portions of the Project site, and is classified as a Major (4 Lanes, Divided) roadway by the City of Menifee General Plan Circulation Element. As shown on Figure 3-3, the Project would construct the full width of this roadway through the Project site. These improvements include four 12- to 16-foot wide travel lanes, a 12- to 44-foot wide raised planted median, 21-foot wide landscape parkways along the west side of the road that can accommodate a six-foot wide meandering sidewalk with varying parkways and 25-foot wide landscape parkways along the east side of the road that accommodate a seven-foot parkway, six-foot sidewalk, eight-foot trail, and four-foot landscape buffer on the east side of the roadway. Additionally, where feasible, an additional 10-foot setback from residential uses would be accommodated adjacent to the water quality/detention basin. Proposed improvements would connect to existing improved segments of Sherman Road located north and south of the Project site. Bus stops in each direction are proposed on Sherman Road north of the intersection of Chambers Avenue; south of the intersection with Rouse Road; as well as a northbound bus stop north of the intersection with Street 'A' and a southbound bus stop south of the intersection with Street 'A.' Additionally, there would be a round-about at the intersection of Sherman and the Paseo Legado/Village Entry Street. Enhanced paving would be installed at the Paseo Legado/Sherman Road crosswalks.

- **Antelope Road (118- to 128-foot ROW).** Antelope Road is a planned north-south roadway located along the eastern boundary of the Project site, and is designated as a Major (4 Lanes, Divided) roadway by the City of Menifee General Plan Circulation Element. As shown on Figure 3-3, the Project proposes to improve Antelope Road along the Project's frontage to its ultimate half-width standard. These improvements include two 12-foot wide travel lanes, half of the 12-foot raised planted median, eight-foot wide Class II bike and NEV lane on the west side of the road, and a 21-foot wide landscaped parkway along the western edge of the road that would accommodate a six-foot wide sidewalk and eight-foot wide trail.

- **Rouse Road (107- to 111-foot ROW).** Rouse Road is an east-west oriented roadway located along the northern boundary of the Project site. This roadway is classified by the General Plan Circulation Element as a Secondary (4 lanes, undivided) roadway. Under existing conditions, this roadway is partially improved between Encanto Drive and Dawson Road. Existing improvements include four 11- to 12-foot wide travel lanes. The Project proposes to improve this roadway to provide a 10-foot wide painted median, one five-foot wide Class II bike lane and NEV lane on the north side of the roadway, one eight-foot wide Class II bike and NEV lane on the south side of the roadway. Currently the existing north side of Rouse Road doesn't provide for the eight-foot wide NEV lane. The north side of the roadway would include an 18-foot wide parkway with a five-foot wide sidewalk and a 13-foot landscape setback. The south side of the roadway would include a 25-foot wide landscaped parkway with a five-foot wide landscape setback, six-foot wide sidewalk, eight-foot wide trail, and six-foot landscape setback from residential uses. Additionally, where feasible, an additional 10-foot setback from residential uses would be accommodated adjacent to the water quality/detention basin. The General Plan has also identified a Class I NEV/Bike lane over-crossing of the I-215 at Rouse Road. While the over-crossing is not part of this Project, the Legado Specific accommodates a landing site for the over-crossing. Furthermore, no element of the Project precludes the over-crossing from being constructed in the future. Adjacent to the future planned I-215 freeway overcrossing, the south side of the roadway would include 25-foot wide landscaped parkway with a three-foot wide landscape setback,

six-foot wide sidewalk and 16-foot wide area for the I-215 overcrossing landing area. A Bus stop in the eastbound direction is proposed on Rouse Road east of the intersection of Rouse Road and Encanto Drive.

- **Chambers Avenue (98- to 106-foot ROW).** Chambers Avenue is an east-west oriented roadway located along the Project's southern boundary. This roadway is classified by the General Plan Circulation Element as a Secondary (4 lanes, undivided) roadway. Under existing conditions, this roadway is partly improved between the western boundary of the Hans Christensen Middle School (located west of Sherman Road) and Chatham Lane (located west of the future extension of Antelope Road). To the east of Sherman Road, this roadway is partially improved as a two-lane roadway with approximately 30 feet of drive aisles and an approximately 12-foot wide parkway along the southern edge of the roadway that accommodates a six-foot wide curb-adjacent sidewalk. To the west of Sherman Road and along the frontage of the Hans Christensen Middle School, this roadway is improved with variable-width pavement providing two travel lanes, with a 12-foot wide parkway along the southern edge of the road that accommodates a six-foot wide sidewalk.

  As shown on Figure 3-3 and Figure 3-4, improvements would be made to this roadway between Encanto Drive and Antelope Road. As shown on Figure 3-3, between Antelope Road and 'Dawson Road, half-width improvements would occur on Chambers Avenue on the north side of the ROW to provide two 11- to 12-foot travel lanes, a 12-foot shoulder, a five-foot painted median, and an eight-foot Class II bicycle and NEV lane. A five-foot landscape buffer, six-foot sidewalk, eight-foot trail, and five-foot landscaping area would be provided along the north side of the road.

  As shown on Figure 3-4, just west of Dawson Road to Sherman Road, Chambers Avenue would be improved from a 44-feet of ROW to 104-feet of ROW to provide a total of four 11- to 12-foot wide travel lanes, a six-foot wide painted median, and eight-foot wide Class II bike and NEV lanes along each side of the road. The southern edge of the roadway would retain the existing 12-foot parkway with a six-foot wide curb adjacent sidewalk and a six-foot landscape buffer. The northern edge of the roadway would be improved to include a 24-foot wide landscaped parkway with a five-foot wide landscape buffer, a six-foot wide sidewalk, an eight-foot wide rail, and a five-foot landscape buffer from the proposed residential uses.

  Between the proposed water detention basin in Project Planning Area 21 and Sherman Road and as shown in Figure 3-4, Chambers Avenue would be improved to provide for a total of four 11- to 12-foot wide travel lanes, an eight-foot Class II bicycle lane on both sides of the roadway, and a six-foot wide painted median. Under existing conditions, the south side of the roadway includes two 11- to 12-foot travel lanes, a 12-foot landscape parkway with a six-foot wide sidewalk and a six-foot wide landscape buffer which would be retained. Improvements to the north side of the ROW include a 24-foot wide landscape parkway with a five-foot landscape buffer, six-foot sidewalk, eight-foot trail, and five-foot landscape buffer to the water quality/detention basin uses to the north of the roadway. Additionally, where feasible, an additional 10-foot setback from residential uses would be accommodated adjacent to the water quality/detention basin.

  As shown in Figure 3-4, west of Sherman Road to the proposed Community Park/Community Center in Planning Area 18, Chambers Avenue would be improved to include four 11- to 12-foot travel lanes, a 10-foot wide painted median, and two eight-foot wide Class II bike lanes along each side of the road. In addition, the south side of the roadway would include a 0- to 8-foot buffer between the bicycle lane and the travel lane and a 12-foot wide parkway that would accommodate a six-foot sidewalk and a six-

foot landscape buffer, while a 14-foot wide parkway would accommodate an eight-foot parkway and a six-foot sidewalk on the north side of the roadway.

As shown on Figure 3-4, from the Community Park/Community Center to the proposed commercial areas in Planning Areas 16 and 17 south of Chambers Avenue would be improved to include four 11- to 12-foot travel lanes. The south side of the roadway would include a five-foot wide Class II bicycle lane, four-foot buffer, an eight-foot parking lane, and a five-foot sidewalk, while the north side of the roadway would include a 8-foot wide Class II bicycle lane, 14-foot parkway with an eight-foot landscape buffer and a six-foot sidewalk. To enhance vehicular awareness of pedestrians and implement traffic calming, enhanced paving would be installed at the Chambers Avenue/'A' Street intersection.

From the boundary of the proposed commercial uses in Planning Area 17 to Encanto Drive as shown in Figure 3-4, Chambers Avenue would be improved to include four 11- to 12-foot travel lanes and a 10-foot wide painted median. Both sides of the roadway would be improved to accommodate eight-foot Class II bike and NEV lanes, and two 14-foot landscaped parkways that would include an eight-foot landscape buffer and six-foot sidewalk.

- **Encanto Drive (93-foot ROW).** Encanto Drive is a north-south oriented roadway located along the Project's western boundary and is classified by the General Plan Circulation Element as a Major (4 Lanes, Divided) roadway. Under existing conditions, this roadway is improved with two travel lanes within an existing ROW of 60 feet. Due to existing development and constraints, a modification to the ultimate right-of-way is proposed to be 93 feet. As shown on Figure 3-4 and Figure 3-5, the Project would improve this roadway between the northern and southern boundaries of the Project site to include a total of four 11-foot wide travel lanes, an 11-foot wide striped median/turn lane, and six-foot wide Class II bike lanes along each side of the road. A five-foot wide landscaped parkway would be provided along the western edge of the roadway adjacent to Caltrans ROW, while the eastern side of the roadway would accommodate a 15-foot wide enhanced landscaped parkway, and a six-foot wide sidewalk within a 21-foot parkway.

- **Village Entry with Paseo Legado (64-foot ROW).** As shown on Figure 3-2, the Village Entry with Paseo Legado is proposed to serve as the main entrance point from Sherman Road to the Planning Areas to the east and west. As shown in Figure 3-5, this roadway is planned to include two 12-foot wide travel lanes, a ten-foot wide planted median, an 8-foot wide Class II bicycle lane on both sides of the roadway, and two seven-foot parkways. Both sides of the Paseo Legado would accommodate an eight-foot wide meandering multi-purpose trail and a landscaped parkway with varying widths. Activity nodes would be located on both sides of the roadway and would provide rolling turf and amenities such as adult exercise stations interactive music pieces, and interactive art pieces. The Village Entry with Paseo Legado classification is unique to the proposed Specific Plan.

- **Local Road with Paseos (Paseo Pacifica and Paseo Vida) (60-foot ROW).** As shown on Figure 3-2, two Local Roads with Paseos (Paseo Pacifica and Paseo Vida) are planned to provide north-south access between Chambers Avenue and Rouse Road. The road that runs through TTM 37408 is identified as 'A' Street and contains Paseo Vida, while the road that runs through TTM 37409 is identified as 'A' Street and contains Paseo Pacifica. Final street names would be determined as part of the Final Map. The road that runs through the West Village includes Paseo Vida and the road that runs through the East Village includes Paseo Pacifica. As shown in Figure 3-5, these roads are planned

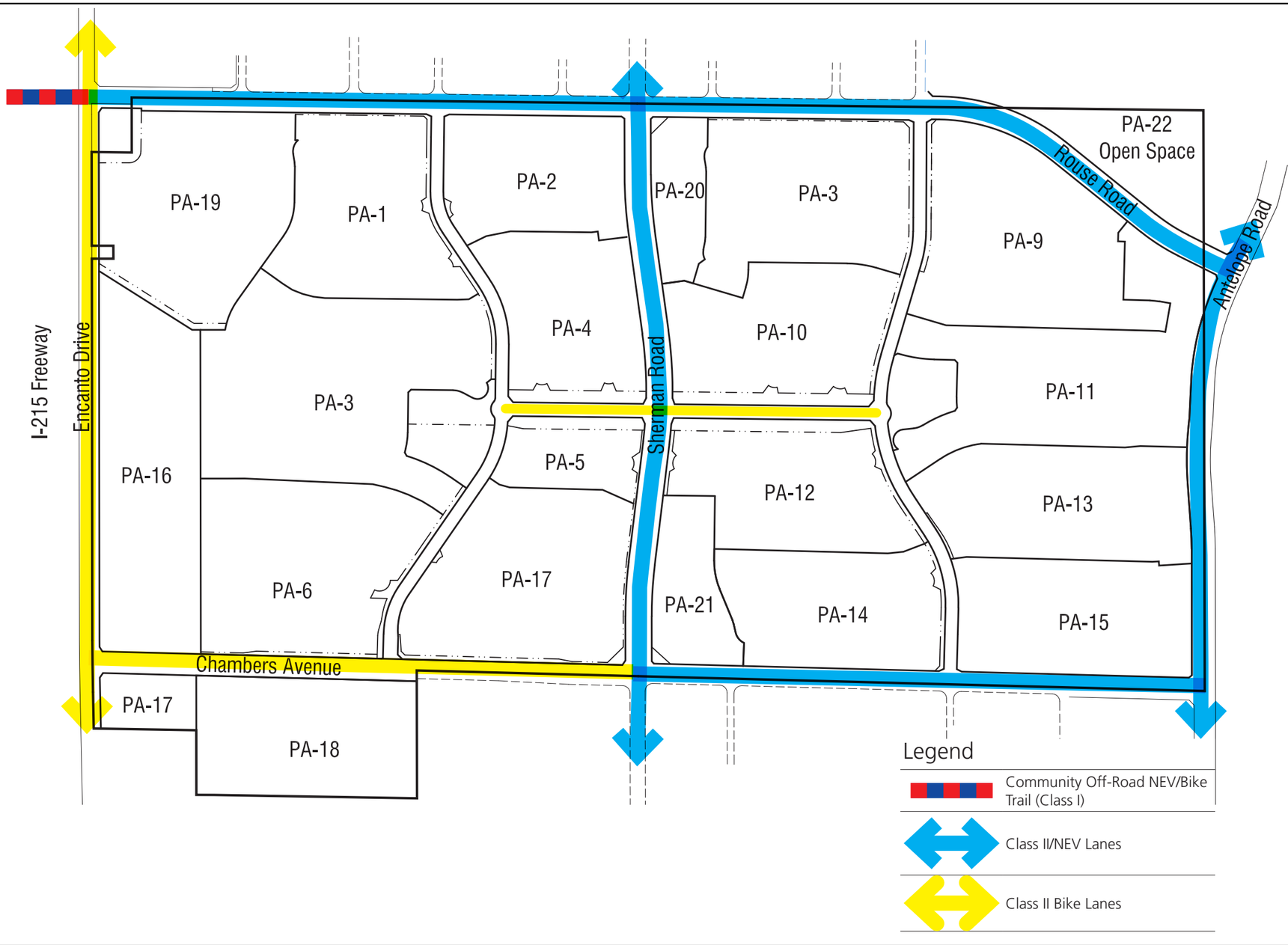
to include two ten-foot wide travel lanes, two eight-foot wide parking areas along each side, and two 12-foot wide landscaped parkways. The eastern edge of the road would accommodate a six-foot wide curb-separated sidewalk and a six-foot wide landscaped parkway. Along the west side of the road the landscaping would occupy all 12 feet of the parkway. Outside of the Local Road ROW, along the west side of the roadway, improvements would include a 20-foot wide paseo that would accommodate an eight-foot wide meandering multipurpose sidewalk and 12-foot wide landscape setback. The Local Road with Paseos classification is unique to the proposed Specific Plan. Traffic calming measures would be implemented with bulb-outs at Planning Area intersections from 'A' and 'D' Streets as well as a round-about at the intersection of 'A' and 'D' Streets and the Paseo Legado/Village Entry Street. Additionally, enhanced paving would be installed at the round-about crosswalks.

- **Local Roads (60-foot ROW).** As shown on Figure 3-5, Local Roads are proposed to provide access to individual lots throughout the Project site. These roadways would include two ten-foot wide travel lanes, eight-foot parking areas along each side, and 12-foot wide parkways along each side of the road that accommodate six-foot wide curb-adjacent sidewalks, and six-foot wide landscape. Traffic calming measures would be implemented with bulb-outs at the intersections of these roads and 'A' and 'D' Streets.

D. Neighborhood Electric Vehicle (NEV), Bikeway, and Pedestrian Network

The Legado Specific Plan incorporates non-motorized circulation as well as a pedestrian circulation network, as depicted on Figure 3-6, *NEV and Bikeway Network*, and Figure 3-7, *Pedestrian Network*. As shown on Figure 3-6, the Specific Plan would provide for Class II bike lanes along Encanto Drive and the segment of Chambers Avenue west of Sherman Road, while Rouse Road, Sherman Road, Antelope Road, and the segment of Chambers Avenue located east of Sherman Road all would include bicycle/neighborhood electric vehicle (NEV) facilities. Additional Class II bike lanes would be provided on the Village Entry Street. In addition, the General Plan has identified a Class I NEV/bike lane over-crossing of the I-215 at Rouse Road. Based on conceptual sketches and information from the General Plan, the landing site for the over-crossing on Rouse Road would be located approximately 300 feet east of the intersection of Rouse Road and Encanto Drive. The landing site is anticipated to be a 16 feet wide and 40 feet long pad that would be located within the Rouse Road ROW immediately adjacent to the Project site. The Project would not construct the Class I NEV/bike lane over-crossing; however, the Project would accommodate a landing site along Rouse Road at the Project's northwestern boundary. Although the over-crossing is not proposed as part of this Project, none of the Project elements would preclude construction of the over-crossing in the future.

As shown on Figure 3-7, a series of pedestrian connections are planned throughout the Project site. Community trails would be accommodated along Sherman Road, Rouse Road, Antelope Road, and the segment of Chambers Avenue east of Sherman Road. The Project also accommodates walkways within paseos along the two north-south oriented local roads and east-west oriented local road, with east-west oriented meandering multipurpose trails extending between both local roads and along Chambers Avenue, Antelope Road, and Rouse Road. Sidewalks also would be accommodated along all surrounding roadways, as well as along roadways internal to the Project. In the paseos there would be eight-foot sidewalks that connect to activity nodes and Neighborhood Parks.

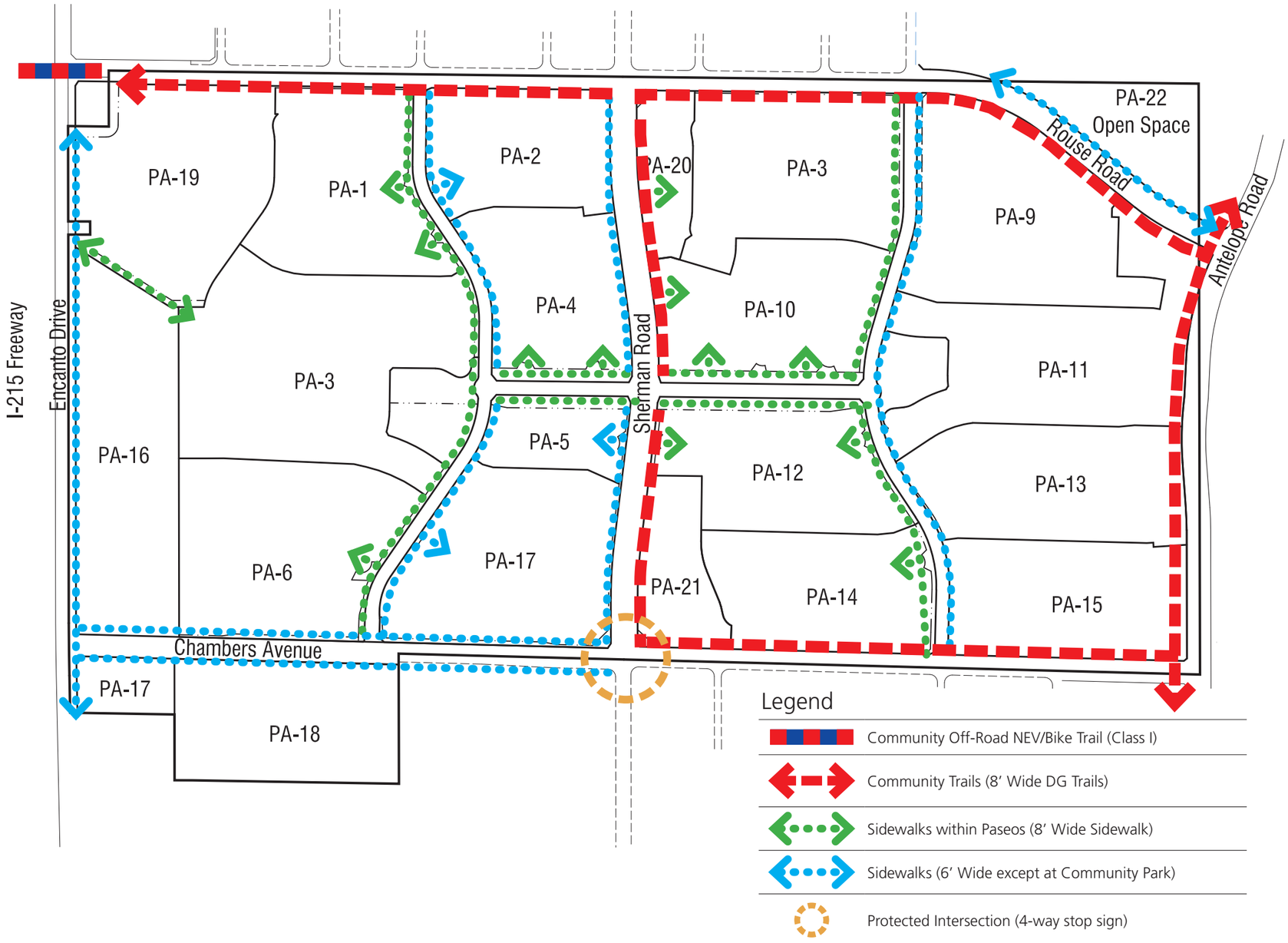


Source(s): WHA (August 2019)

Figure 3-6

NOT TO SCALE

NEV AND BIKEWAY NETWORK



Source(s): K&A Engineering (05-10-2019)

NOT TO SCALE

Figure 3-7

PEDESTRIAN NETWORK

E. Drainage Plan

The Project site is tributary to a total of 816.1 acres of on- and off-site drainage areas to the north, east, and southeast. The total flow rate of the existing undeveloped 100-year 1-hour peak storm flows equal 1,667 cubic feet per second (cfs) at the most downstream outlet of the Project site, consisting of a Caltrans 10'x5' reinforced concrete box culvert (RCB) adjacent to Encanto Drive that conveys flows beneath I-215. The capacity of this outlet is exceeded during heavy rainfall events. Additionally, Encanto Drive has an extremely flat grade, with less than 0.4% grade in some sections from south to north, which conveys off-site storm flows along Encanto Drive from parcels (both developed and vacant) located south of the Project site (between the southern boundary of the Project site and McCall Boulevard). A majority of Encanto Drive is not improved with curbs and gutter and instead utilizes graded swales west of the road to convey storm water drainage. This existing condition is inadequate and creates seasonal flooding during large storm events along the segment of Encanto Drive that forms the western Project boundary.

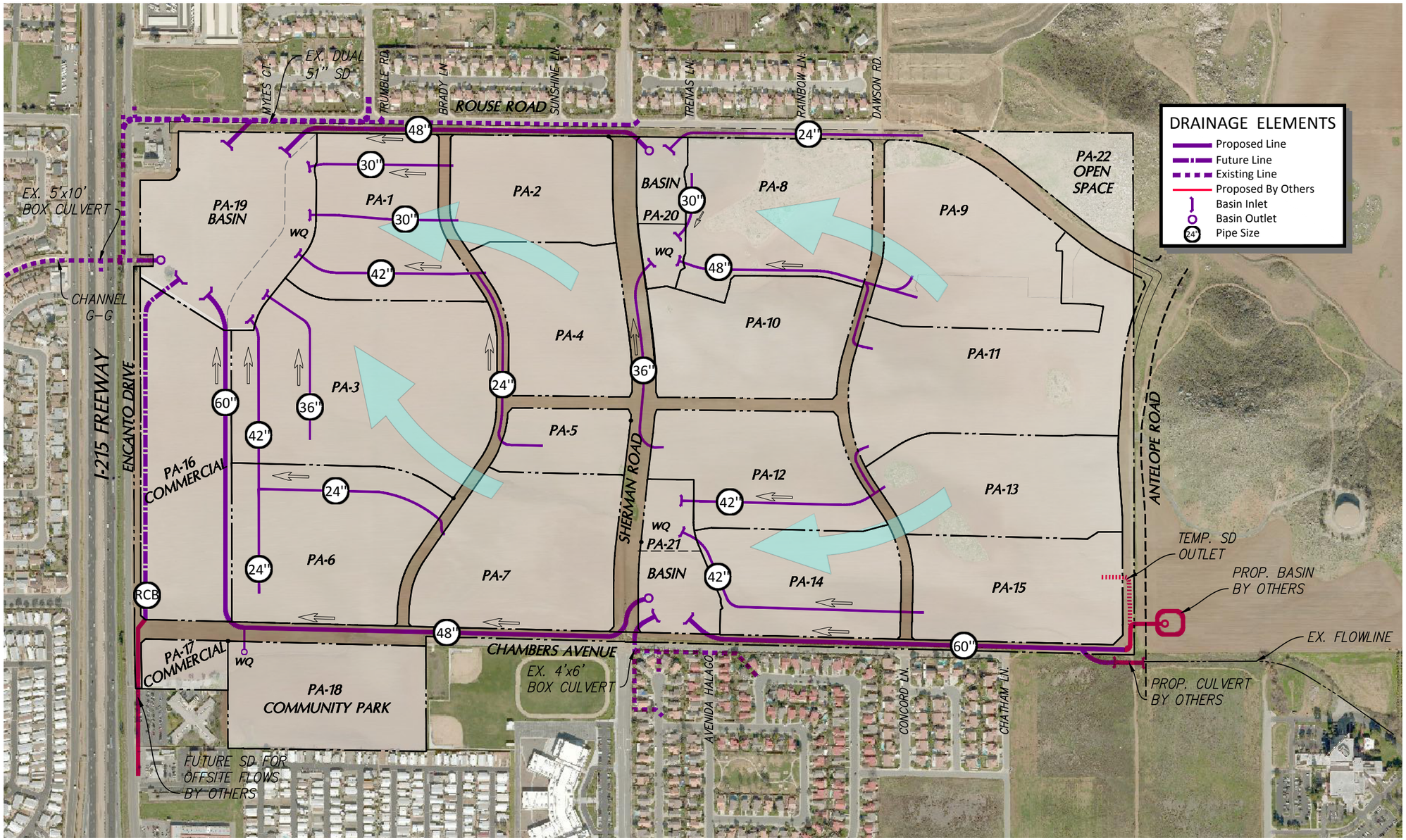
The proposed Specific Plan Drainage Plan is depicted on Figure 3-8, *Drainage Plan*. For the 212.4-acre off-site tributary area southeast of the SP area, the developed condition flow rate cfs would be intercepted at the perimeter of the Project site at two locations (near the intersections of Chambers Avenue/Antelope Road and Chambers Avenue/Sherman Road) and piped to the southerly detention basin. In addition, the outlet pipe from the detention basin for the development to the east of the SP area will also be conveyed to the basin.

Under developed conditions, the drainage area would encompass 305.5 acres, including 43.4 off-site acres to the east, 64.9 on-site acres from the southeastern portion of the Project, and 197.2 off-site acres tributary to the southeasterly side of the Project site. The outlet pipe from the detention basin for the 43.4 -acre proposed development area east of the Project site would also be conveyed to the southerly basin. The remaining 197.2 acres of off-site tributary area to the south and along Encanto Road would be conveyed to the Project site and intercepted by a new storm drain system along Encanto Drive. This underground piped system within the Encanto Road right-of-way would flow at the low point and convey flows northerly to the proposed detention basin.

Within the Project site and the area east of the Project site, 381.6 acres of runoff is tributary directly to the existing Caltrans 10'x5' RCB that drains westerly from the Project site. Under developed conditions, the drainage area would encompass 246.9 acres and would be conveyed to multiple basins that serve as both a water quality and flood detention facilities. The northeast quarter of the Project site would utilize an underground storm drain system to collect storm water flows and convey them to the northerly detention basin in Planning Area 20. The southeast quarter of the Project site also would include an underground storm drain system to collect storm water flows and convey them to the southerly detention basin in Planning Area 21. The westerly half of the Project site would utilize an underground storm drain system to collect storm water flows and convey them to the westerly detention basin in Planning Area 19.

These multiple systems are intended to safely convey and contain 100% of the 100-year storm event flows in within the storm drain pipe once collected from the street via curb opening catch basins.

For the 103.2 acres of off-site tributary area north of the Project site, the existing storm drain conveyance system would be rerouted to drain into the westerly detention basin instead of inletting directly to the existing Caltrans RCB culvert via a rectangular channel. Due to the widening of Encanto Drive, the existing rectangular channel to the west of the road would remain in place.



Source(s): K&A Engineering (05-10-2019)

Figure 3-8

NOT TO SCALE

DRAINAGE PLAN

For the 118.9 acres of off-site tributary area to the southwest of the Project site, the existing storm drain conveyance system would be rerouted to drain into the westerly detention basin instead of inletting directly to the existing Caltrans RCB culvert via a rectangular channel. Under developed conditions, the off-site tributary area would consist of approximately 141.6 acres. A proposed storm drain would be put in place adjacent to or within the Project's commercial areas along Encanto Drive.

The storm drain network also would include mainline pipes that intercept and convey off-site flows. All of the pipes would intercept water at the perimeter of the Project site. Off-site areas that would be intercepted include: the Encanto Drive storm drain, which would intercept off-site flows at the southwest Project boundary corner and convey the flows to the westerly detention basin in Planning Area 19; the Chambers Avenue storm drain which would intercept flows from the proposed adjacent development to the east of the Project site and the existing flows from the southeast and the developments to the south of Chambers Avenue and east of Sherman Road and convey the flows to the southerly detention basin in Planning Area 21; the Rouse Road storm drain, which would intercept flows from the north and would be reconfigured to discharge into the westerly detention basin within Planning Area 19.

The multiple detention basins proposed on the Project site would serve many purposes including: water quality treatment, detaining increased runoff due to development, detention of off-site runoff coming to the SP area, mitigating flooding in Encanto Drive, and reducing the peak runoff flow rate to a level that can be conveyed by the undersized Caltrans RCB culvert that runs under I-215. Each of the detention basins would be constructed prior to the construction of any residential planning area(s) that would be served by the detention basin(s).

The detention basins would be oriented in series with the northerly and southerly detention basins (Planning Areas 20 and 21, respectively) upstream of the westerly detention basin (Planning Area 19). Both the northerly and southerly basins would serve to treat the water the easterly half of the Project site and would contain both the on-site and off-site 100-year flood volume while reducing the peak flowrates to more manageable levels. The outlets for the northerly and southerly basins would discharge directly into the westerly basin detention area in Planning Area 19.

The westerly detention basin site is located in the lowest elevations of the Project site in the northwest corner near the intersection of Encanto Drive and Rouse Road. The primary purpose of this basin is to mitigate the increased runoff from the development, mitigate the off-site runoff that comes into the SP area, and detain the peak storm water flows so they do not exceed the capacity of the RCB under I-215. The westerly basin would be divided into two distinctive areas that are separated by a berm. The first area would consist of a water quality treatment zone located in the eastern portion of the basin. This area, which would not be accessible to the public, would be sized to retain and treat 100% of the Project site's tributary water quality volume need, while also keeping the remaining basin area mostly dry. It is designed to temporarily retain water (otherwise known as "first flush") and slowly release it over a 48- to 72-hour period while allowing time for particles and associated pollutants to settle out. The remaining basin area would consist of a sloping bottom and 4:1 side slopes and is designed to temporarily detain or mitigate the increased runoff from the Project site as well as unacceptable capacity volumes to the downstream system. Only during larger storm events would the water quality basin spill over the berm and utilize the capacity of the detention basin. Maximum basin depths would be approximately 7.7 to 10.5 feet furthest downstream and three to four feet upstream.

F. Potable and Recycled Water Plan

1. Potable Water Plan

The Project site is located within the service area of the Eastern Municipal Water District (EMWD). EMWD indicated in a Will Serve Letter (included in EIR *Technical Appendix M*) for the Project that adequate water service can be provided for the Project using existing facilities and extending master-planned facilities through and along the perimeter of the Project site (EMWD, 2017c). Existing pipelines surround the Project site on the west, south, and north. An 18-inch pipeline runs within the right-of-way of Encanto Drive and connects to two 12-inch pipelines located within the rights-of-way of Chambers Avenue and Rouse Road.

As shown on Figure 3-9, *Potable Water Plan*, the Project proposes a potable water system consisting of 8-, 12-, and 18-inch diameter pipelines. Pipelines located within the right-of-way for Encanto Drive would be sized at 18-inches. Proposed 12-inch potable water pipelines would be located within the rights-of-way of Sherman Road, Antelope Road, and Streets A, B, C, and D. Three connection points are planned to the existing 12-inch pipeline in the Chambers Avenue right-of-way and three connection points are planned to the existing 12-inch pipeline in the Rouse Road right-of-way. Lateral connections to the existing 18-inch pipeline within Encanto Road would be constructed to serve the proposed commercial areas. 8- and 12-inch water lines would be constructed on-site to serve individual Planning Areas.

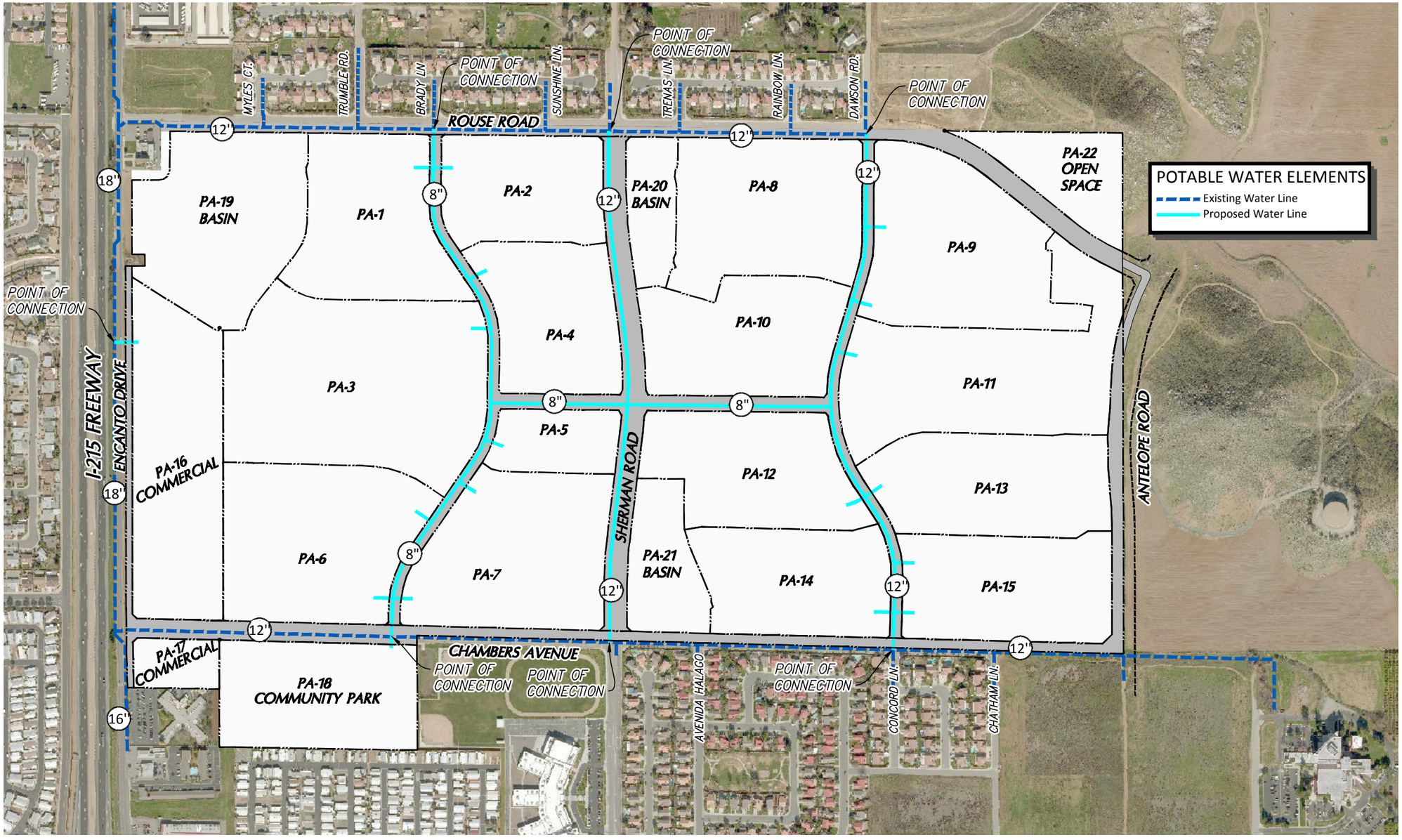
2. Recycled Water Plan

The Project site is located within the EMWD service area for recycled water. Recycled water would be used to irrigate common landscaped areas, paseos/neighborhood park system, the community park/community center, and private recreation centers throughout the Project area. Recycled water also would be used to irrigate landscaped monument areas at major intersections, as well as landscaped parkways along a majority of the proposed primary roadways on-site. The nearest existing recycled water supply source pipeline (and recycled water storage tank) is located east of the SP area, running north-south approximately 700 feet off-site. As shown on Figure 3-10, *Recycled Water Plan*, the Project proposes to construct an extension of the eight-inch recycled water pipeline system, that would connect to the existing off-site 12-inch line at the intersection of Antelope Road and Chambers Avenue. A 12-inch recycled water line also would be constructed within Sherman Road, between Rouse Road and Chambers Avenue. Eight-inch recycled water lines also would be constructed within B Street and C Street, with an eight-inch line connecting to the 12-inch line in Chambers Avenue and extending from A Street to the eastern edge of Planning Area 17. The proposed recycled water lines would feed a network of pipes within the Project site.

G. Sewer Plan

The Project site is located within the EMWD service area for sewer service. Figure 3-11, *Sewer Plan*, depicts the sewer facilities proposed by the Project. Wastewater generated by the Project would be collected by 8- to 15-inch pipelines, with pipe sizes generally increasing from east to west. The proposed sewer system would convey flows from east to west through 8- to 12-inch sewer pipelines proposed within internal roadways.

All flows would be conveyed to a proposed 15-inch sewer line within Rouse Road that would convey wastewater to an existing 15-inch sewer line located within Encanto Drive approximately 1,250 feet north of Rouse Road. Flows from the commercial areas of the Project site would be conveyed to a proposed 12-inch sewer line in Encanto Drive and would connect to the 15-inch sewer line located within Encanto Drive approximately 1,250 feet north of Rouse Road.

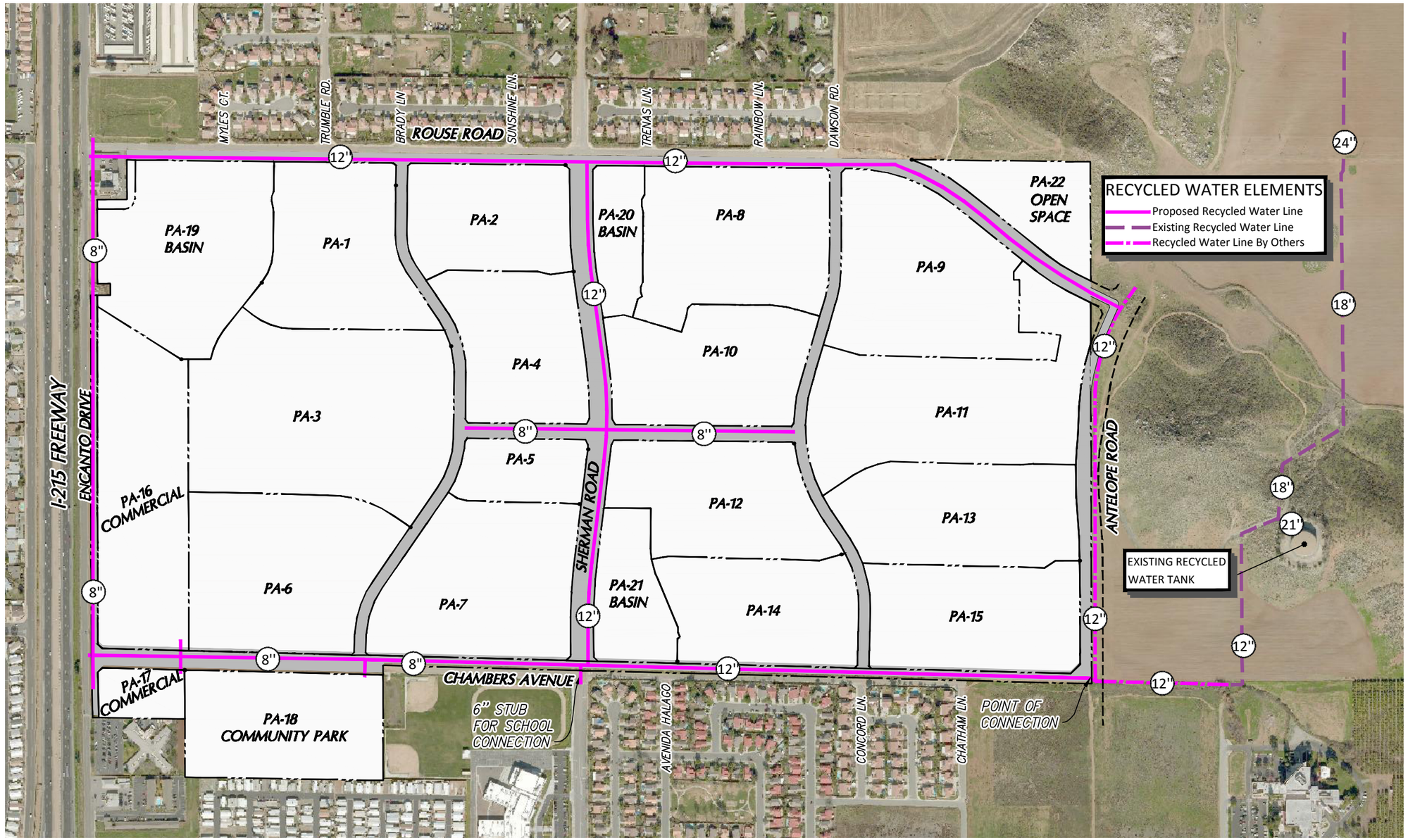


Source(s): K&A Engineering (05-10-2019)

Figure 3-9

NOT TO SCALE

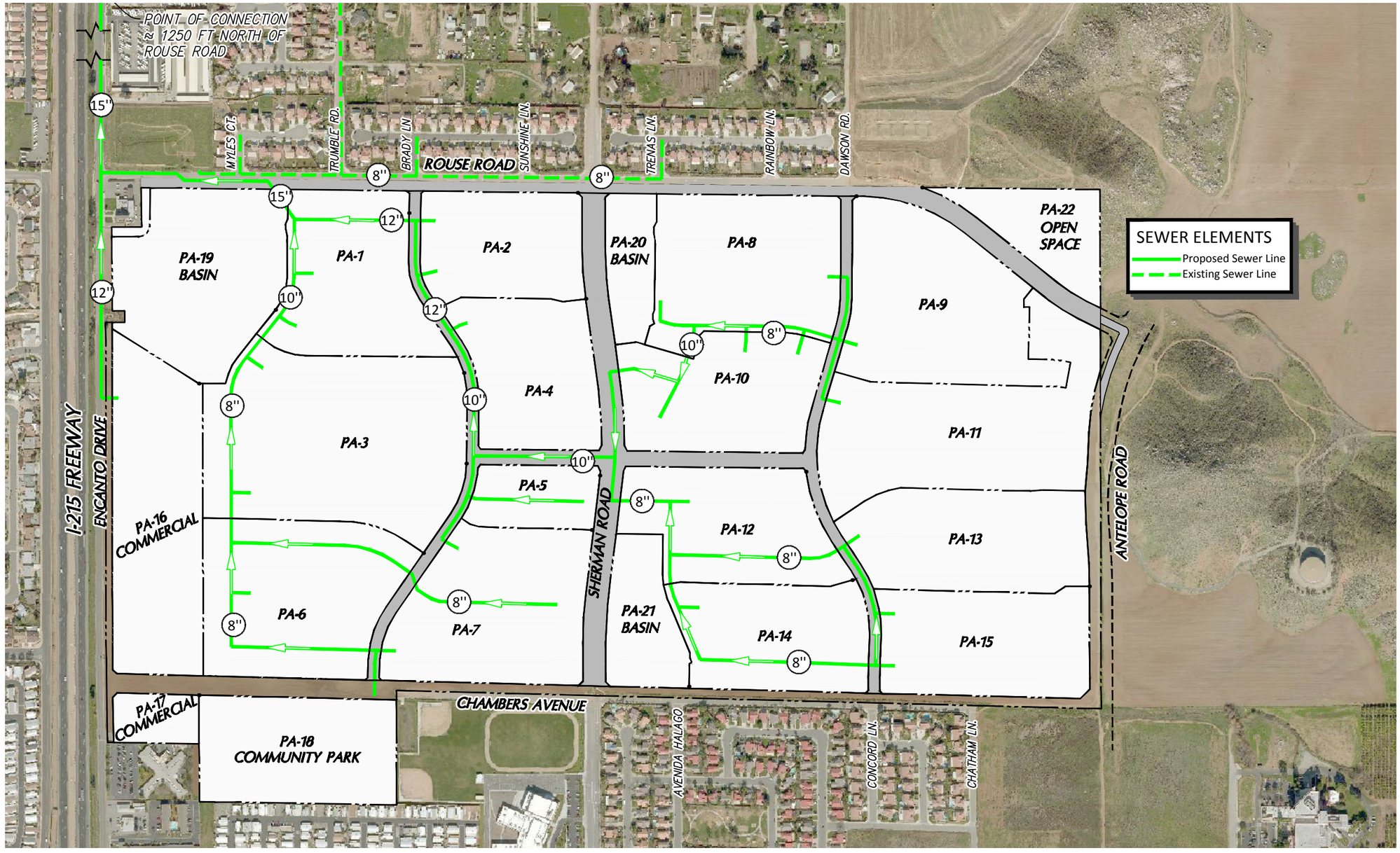
POTABLE WATER PLAN



Source(s): K&A Engineering (05-10-2019)

Figure 3-10

RECYCLED WATER PLAN



Source(s): K&A Engineering (05-10-2019)

NOT TO SCALE

Figure 3-11

SEWER PLAN

Wastewater generated by the Project ultimately would be conveyed to the Perris Valley Regional Water Reclamation Facility (PVRWRF). The PVRWRF receives sewage from a 120-square-mile area and treats wastewater from the Perris, Menifee, Romoland, Homeland Winchester, and other communities. The PVRWRF treats a typical daily flow of 13.8 million gallons per day (mgd), and has a current capacity of 22 mgd. Planned improvements to the PVRWRF would provide for an ultimate capacity of 100 mgd. (EMWD, 2016b)

H. Open Space and Recreation Plan

As shown on Figure 3-12, *Park and Open Space Plan*, the recreational demands of future Project residents are planned to be met by a proposed 12.9-acre community park/community center, which would be located south of Chambers Avenue and east of Encanto Drive, a 1.9-acre private recreation center which would be located in the West Village at the confluence of the west north/south linear park and the east/west linear park west of A street and south of B Street, as well as a series of paseos/neighborhood parks totaling 7.9 acres which would be located along A Street, B Street, C Street, and D Street, which combined would encompass 22.7 acres. The proposed community park/community center would include community fields, as well as picnic areas, play areas, walkways, on-site parking, shade tree plantings, rolling turf areas, and restrooms. Field lighting elements would be required to be installed on the community fields as part of the Project. All future lighting plans would be subject to review and approval by the City of Menifee and all lighting elements would be required to comply with all City of Menifee requirements.

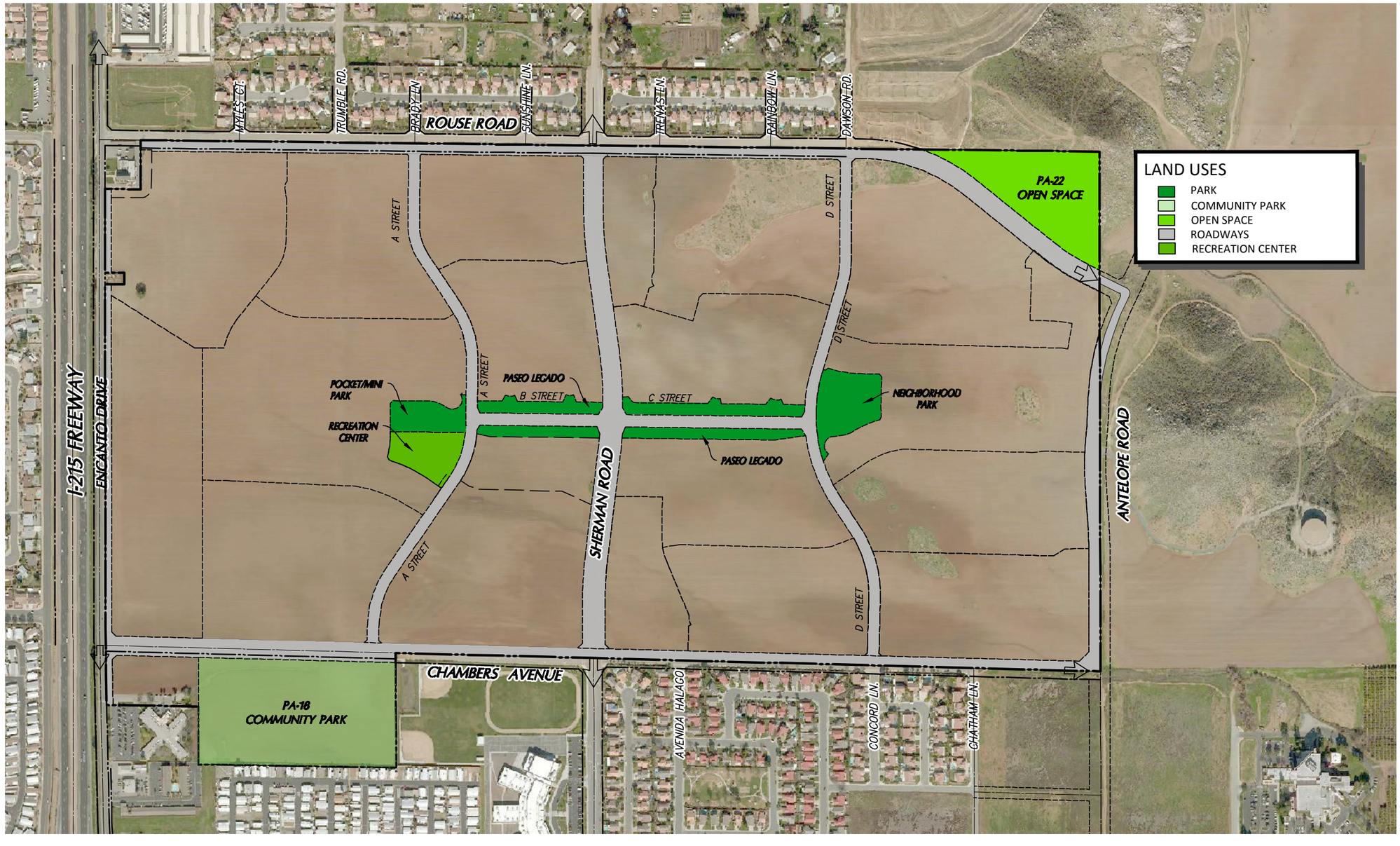
Amenities at the 1.9-acre private recreation center may include a pool, spa, restroom building with showers, and walkways. The proposed paseos/neighborhood parks would include 4.3 acres comprising Paseo Legado that would include, walkways, and shade trees, as well as 3.6 acres of neighborhood parks which would include play areas, picnic areas, walkways, and shade trees. An existing knoll located in the northeastern corner of the Project site would be conserved within a proposed 6.3-acre open space conservation area.

I. Grading Plan

Figure 3-13, *Conceptual Grading Plan*, depicts the Specific Plan's proposed grading concept. As shown, the grading concept generally maintains the site's existing topography, which slopes from east to west and from south to north. As described above in Subsection 3.2.1.E, the grading plan conforms to a drainage concept that directs stormwater runoff to various basins within the Project site that would have a dual purpose of water quality treatment and flood water detention.

In addition, the basin Planning Area 21 would serve to intercept and detain off-site storm water runoff coming from the southeast while the basin in Planning Area 19 would also intercept additional storm water runoff from the south.

Development of the Project would generate approximately 1.0 million cubic yards of earthwork volume. Additionally, there will be roughly 1.5 million yards of remedial earthwork volume consisting primarily of over-excavation. In total, development and over-excavation (with adjustment factors such as shrinkage, bulking and subsidence) would generate approximately 2.5 million yards of earthwork volume. The fill earthwork quantities are expected to match the cut earthwork quantities resulting in an overall balanced earthwork operation requiring no importing or exporting of earthwork materials. In general, the grading plan generates mostly cut earthwork operations on the east side of the SP area which provides the needed fill materials on the west side.

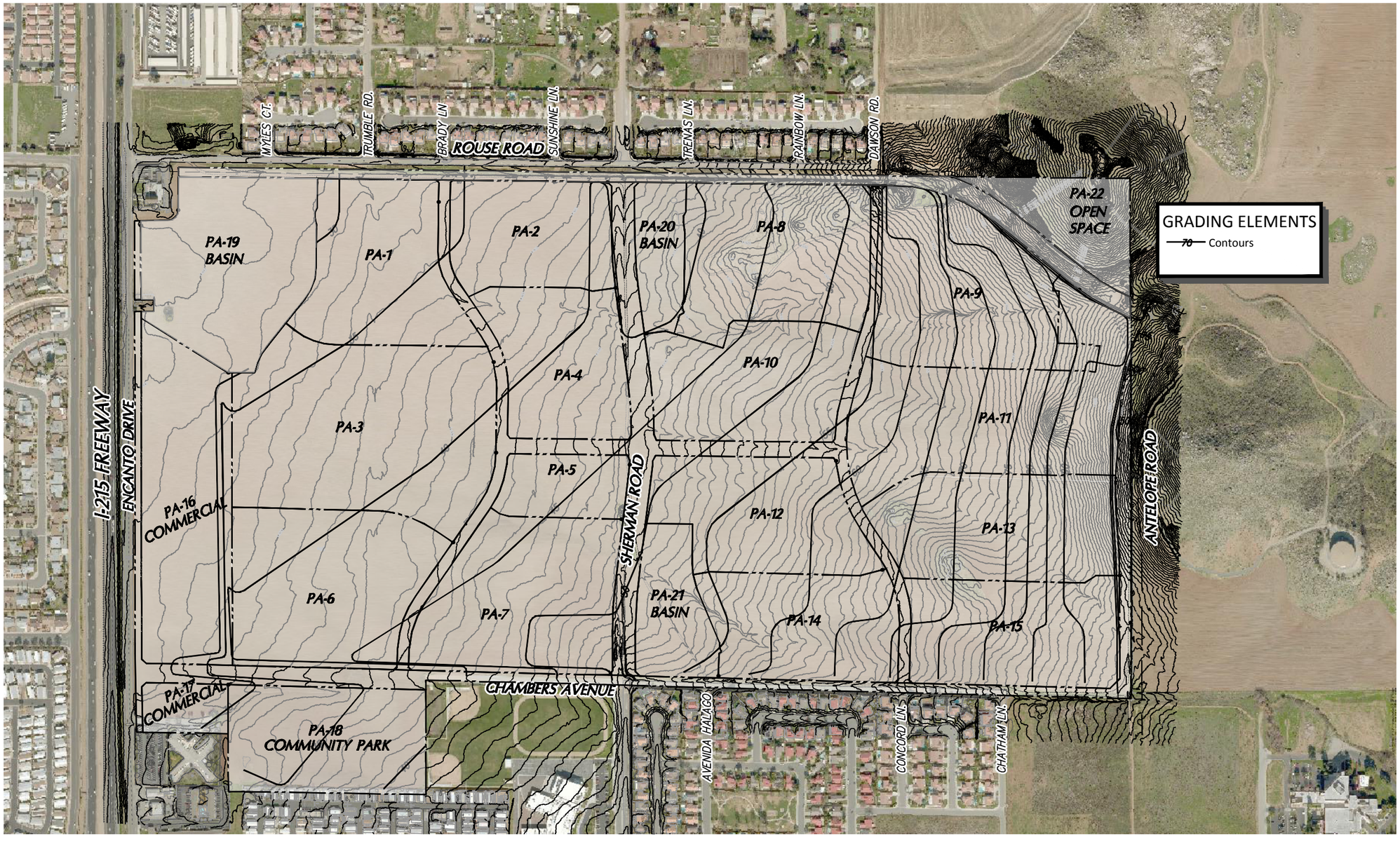


Source(s): K&A Engineering (05-10-2019)

Figure 3-12

NOT TO SCALE

PARK AND OPEN SPACE PLAN



Source(s): K&A Engineering (05-10-2019)

NOT TO SCALE

Figure 3-13

CONCEPTUAL GRADING PLAN

J. Finance and Maintenance Plan

The Legado Specific Plan includes a proposed Finance and Maintenance Plan, as shown on Table 3-3, *Financing and Maintenance Plan*. As shown, the Specific Plan identifies responsible parties for construction of planned improvements, responsible parties for financing construction, and entities that would be responsible for long-term maintenance of common areas within the Specific Plan area.

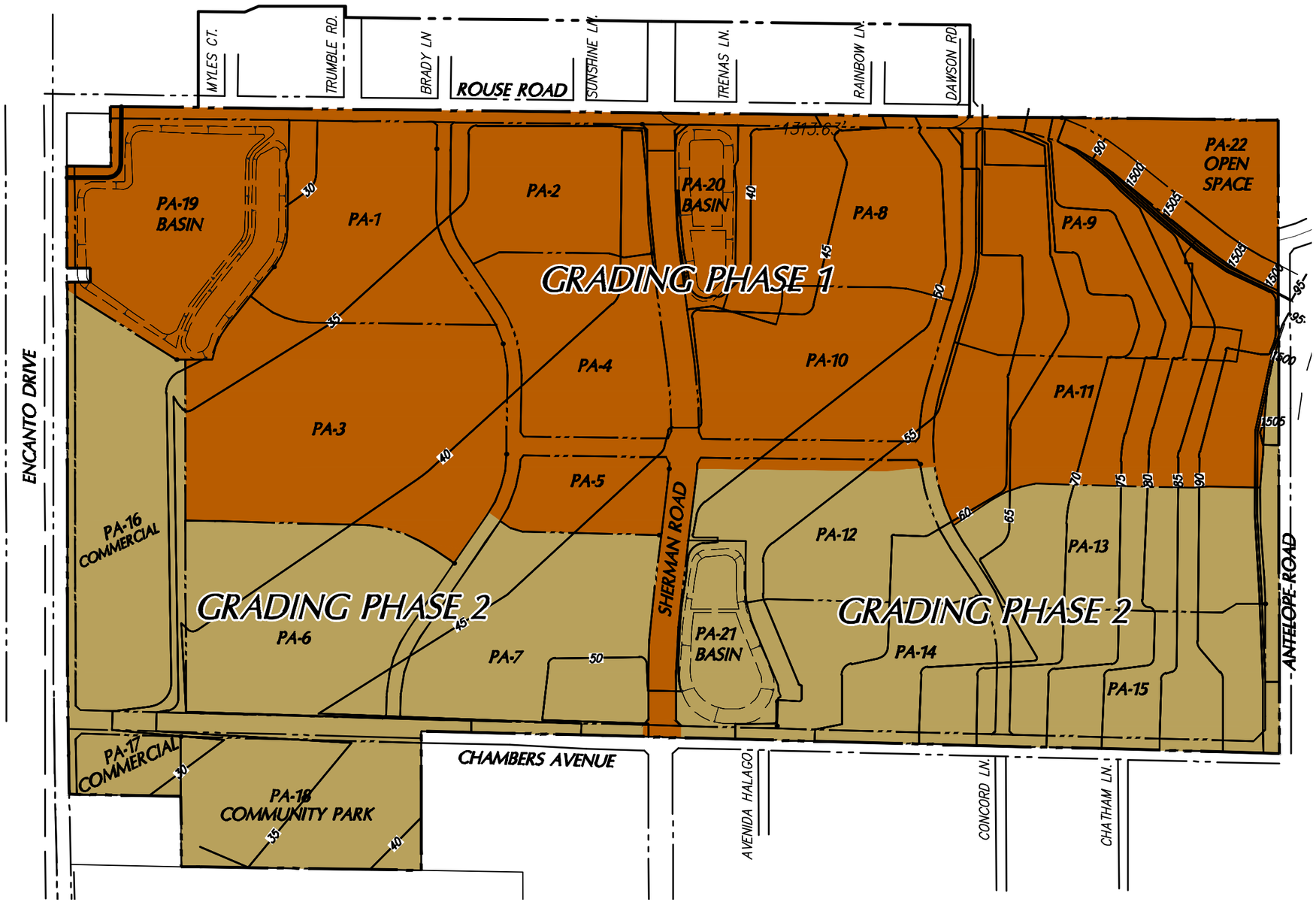
Table 3-3 Financing and Maintenance Plan

SERVICE OR FACILITY	PARTY(IES) EXECUTING CONSTRUCTION	PARTY(IES) FINANCING CONSTRUCTION	PARTY(IES) RESPONSIBLE FOR OPERATION & MAINTENANCE
ROADWAY ELEMENTS			
Public Streets (including Parkways)	Master Developer	Master Developer or City CFD	City CFD and/or HOA
Public Street Medians	Master Developer	Master Developer or City CFD	City CFD and/or HOA
Private Streets and Sidewalks (if applicable)	Master Developer	Master Developer	HOA
PUBLIC FACILITIES			
Storm Drainage Facilities	Master Developer	Master Developer or City CFD	City CFD/RCFC & WCD/HOA
Detention/Water Quality Basin	Master Developer	Master Developer or City CFD	City CFD and/or HOA
Detention Basin Floor	Master Developer	Master Developer or City CFD	RCFC & WCD
Sewer Facilities	Master Developer	Master Developer or City CFD	EMWD
On-Site Water Facilities	Master Developer	Master Developer or City CFD	EMWD
Off-Site Water Facilities	Master Developer	Master Developer or City CFD	EMWD
Natural Open Space	Master Developer	Master Developer or City CFD	Conservation agency or HOA
Paseo Legado, North-South Paseos, Neighborhood Parks	Master Developer	Master Developer or City CFD	City CFD or HOA
Community Park and Community Center	Master Developer	Master Developer or City CFD	City or City CFD
Menifee Gateway	City	City	City
SHARED FACILITIES			
Common Area Landscape & Improvements	Master Developer	Master Developer	City CFD and/or HOA
Private Recreation Centers	Master Developer	Master Developer	HOA
Community Walls/Fences/Entry Gates	Master Developer	Master Developer	City CFD and/or HOA
Privacy Fences	Master Developer	Builder	Homeowner
Master Plan Signage	Master Developer	Master Developer	City CFD and/or HOA
Neighborhood Signage (Monument/Entry Signs)	Builder	Builder	HOA
PRIVATE FACILITIES			
Front Yard Landscape	Builder	Builder	Homeowner/Property Owner
Rear Yard Landscape	Homeowner/Property Owner	Homeowner/Property Owner	Homeowner /Property Owner
Commercial Signs/Landscape	Property Owner	Property Owner	Property Owner

(WHA, 2019, Table 6.1)

K. Conceptual Phasing Plan

Figure 3-14 and Figure 3-15, depict the proposed phasing for the Project's grading and infrastructure and occupancy, respectively. As shown on Figure 3-14, grading would occur over two separate phases with the northern portions of the Project site (Planning Areas 1, 2, 3, 4, 5, 8, 9, 10, 11, 19, 20, and 22 and Sherman Road) being graded first, with the remaining portions of the Project site (Planning Areas 6, 7, 12, 13, 14, 15, 16, 17, 18, and 21) would be graded as part of a subsequent phase. For the first phase of grading, the basins located in Planning Areas 19 and 20 would act as temporary desilting basins during the course of grading until final site stabilization.

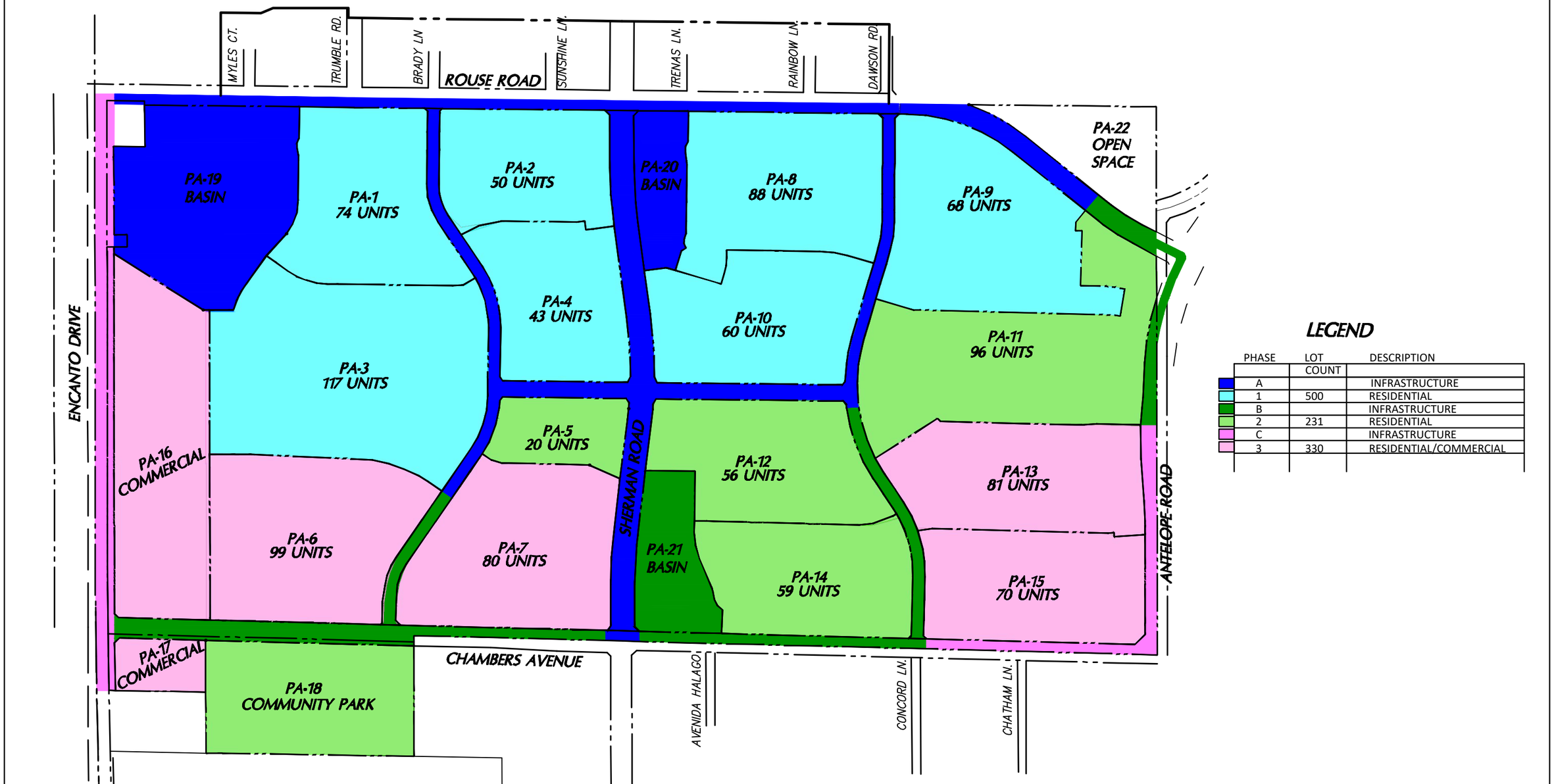


Source(s): K&A Engineering (05-10-2019)

Figure 3-14

NOT TO SCALE

CONCEPTUAL PHASING PLAN - GRADING



Source(s): K&A Engineering (07-29-2019)

Figure 3-15

NOT TO SCALE

CONCEPTUAL PHASING PLAN - INFRASTRUCTURE AND OCCUPANCY

For the second phase of grading the basin in Planning Area 21 would serve a temporary desilting basin during the course of grading until final site stabilization. Additionally, temporary desilting basins would be constructed at the community park/community center and the commercial planning areas for erosion control purposes. As shown on Figure 3-15, infrastructure improvements would occur over three separate phases as necessary to provide connections to the proposed residential and commercial structures. For more information regarding the Phasing of occupancy of the Project, refer to Subsection3.3.7.B, below.

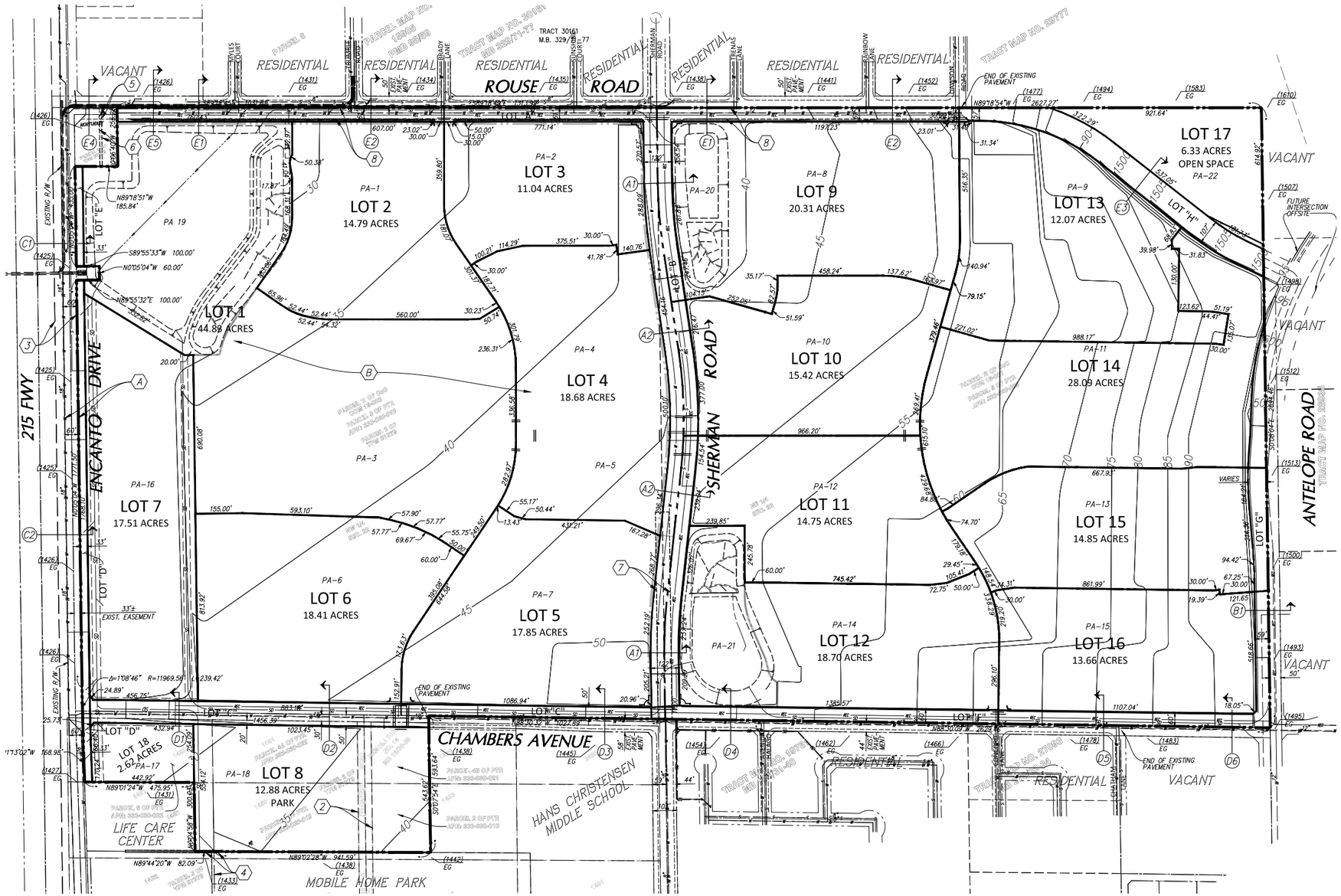
Home construction would include multiple phases within each neighborhood based on market conditions. Occupancy of an individual home would occur approximately six to 12 months after the start of home construction. The Recreation Center and Pocket/Mini Parks would be constructed in the same phase as the Planning Area they are located in. Construction of the Community Park/Community Center in Planning Area 18 would be completed when 50% of the building permits for the Project have been issued. It should be noted that phasing and build-out of the Project would occur in response to market conditions and may vary from what is described above and shown on Figure 3-14 and Figure 3-15.

3.2.2 Change of Zone No. 2017-188 (CZ 2017-188)

The City of Menifee Zoning Ordinance assigns a zoning classification to all properties inside the City's boundaries. Development is required by law to comply with the provisions of the City's Zoning Ordinance. Change of Zone No. 2017-188 (CZ No. 2017-188) proposes to modify the zoning boundaries on the Project site to reflect the Legado Specific Plan land use plan for the approximately 331.0-acre Project site. At the time the Project's Notice of Preparation (NOP) was distributed for public review (2017), the Project's existing zoning designations were C-P-S (Scenic Highway Commercial) and R-1 (One-Family Dwellings) and CZ No. 2017-188 proposed to change the site's existing zoning designations from C-P-S (Scenic Highway Commercial) and R-1 (One-Family Dwellings) to Specific Plan Zone (SP). However, on December 18, 2019 the City of Menifee adopted a new zoning map that will go into effect on January 18, 2020. Pursuant to the new zoning map, the Project site's zoning designation will be SP "Fleming Ranch Specific Plan Zone." Thus, CZ No. 2017-188 would change the site's updated existing zoning designation from "Fleming Ranch Specific Plan Zone" to "Legado Specific Plan Zone" as well as establish permitted uses and development standards as proposed by the Specific Plan. Upon approval of CZ No. 2017-188, the specific zoning standards would be as provided for by Specific Plan No. 2017-187.

3.2.3 Tentative Tract Map No. 37391 (TTM 37391)

The Project proposes a large-lot subdivision map for conveyance purposes and would establish lots corresponding to the Planning Area boundaries as proposed by SP 2017-187, as shown on Figure 3-16, *Tentative Tract Map No. 37391*. A majority of backbone roadway dedications would occur as part of the large-lot subdivision. TTM 37391 would establish a subdivision of 26 lots proposed for 263.2 acres of residential, recreation center, paseos/neighborhood parks, and water quality basin uses, 20.4 acres of commercial uses, 12.9 acres of park uses dedicated to the City of Menifee, 6.3 acres of open space uses, while the remaining 28.2 acres are proposed for internal public roadways.



EASEMENT DISPOSITION:

EASEMENT NUMBER	PROPOSED DISPOSITION
1	ABANDON
2	ABANDON
3	REMAIN IN PLACE
4	REMAIN IN PLACE
5	REMAIN IN PLACE
6	REMAIN IN PLACE
7	ABANDON
8	REMAIN IN PLACE
A	REMAIN IN PLACE
B	ABANDON

LOT SUMMARY:

LOT	GROSS SQ FT	GROSS ACRES	DESC.
1	1,952,795	44.83	RESIDENTIAL/BASIN/ O.S. REC
2	644,295	14.79	RESIDENTIAL/ O.S. REC
3	480,920	11.04	RESIDENTIAL
4	813,568	18.68	RESIDENTIAL/ O.S. REC
5	777,541	17.85	RESIDENTIAL
6	801,741	18.41	RESIDENTIAL/ O.S. REC
7	762,735	17.51	COMMERCIAL
8	561,649	12.88	PARK DEDICATED TO CITY
9	884,609	20.31	RESIDENTIAL/ O.S. REC
10	671,545	15.42	RESIDENTIAL/ O.S. REC
11	642,645	14.75	RESIDENTIAL/ O.S. REC
12	814,553	18.70	RESIDENTIAL/ O.S. REC
13	525,948	12.07	RESIDENTIAL
14	1,223,538	28.09	RESIDENTIAL
15	646,708	14.85	RESIDENTIAL
16	594,901	13.66	RESIDENTIAL
17	275,725	6.33	OPEN SPACE DEDICATED TO HOA
18	114,127	2.62	COMMERCIAL
A	223,261	5.12	PUBLIC ROAD
B	318,170	7.30	PUBLIC ROAD
C	196,410	4.52	PUBLIC ROAD
D	72,028	1.65	PUBLIC ROAD
E	14,350	0.33	PUBLIC ROAD
F	149,169	3.42	PUBLIC ROAD
G	106,944	2.46	PUBLIC ROAD
H	148,338	3.40	PUBLIC ROAD

Source(s): K&A Engineering (120-05-2019)

NOT TO SCALE

Figure 3-16

TENTATIVE TRACT MAP NO. 37391

3.2.4 VESTING TENTATIVE TRACT MAP NO. 37408 (TTM 37408)

The Project proposes a Vesting Tentative Tract Map for the area west of Sherman Road (excluding the proposed commercial area west of Sherman Road) in order to subdivide individual planning areas along with dedication of internal public roadways as shown on Figure 3-17, *Vesting Tentative Tract Map No. 37408*. TTM 37408 would establish a subdivision of 475 residential lots (totaling 72.3 acres of residential uses) while the remaining lots (totaling 79.5 acres) are proposed for community park/community center uses, open space/recreation/landscape uses, water quality/detention basins, internal public roadways, park uses, and recreation center uses.

3.2.5 VESTING TENTATIVE TRACT MAP NO. 37409 (TTM 37409)

The Project proposes a Vesting Tentative Tract Map for the area east of Sherman Road in order to subdivide individual planning areas along with dedication of internal public roadways as shown on Figure 3-18, *Vesting Tentative Tract Map No. 37409.* TTM 37409 would establish a subdivision of 547 residential lots (totaling 85.4 acres of residential uses) while the remaining lots (totaling 73.7 acres) are proposed for open space/recreation/landscape uses, open space/conservation uses, water quality/detention basins, park uses, and internal public roadways.

3.2.6 DEVELOPMENT AGREEMENT NO. 2018-277 (DA 2018-277)

Development Agreement No. 2018-277 proposes the establishment of provisions for development of the Project such as, but not limited to, infrastructure improvements, park benefits, vesting of development rights, and timing of public improvements.

3.3 PROJECT CONSTRUCTION AND OPERATIONAL CHARACTERISTICS

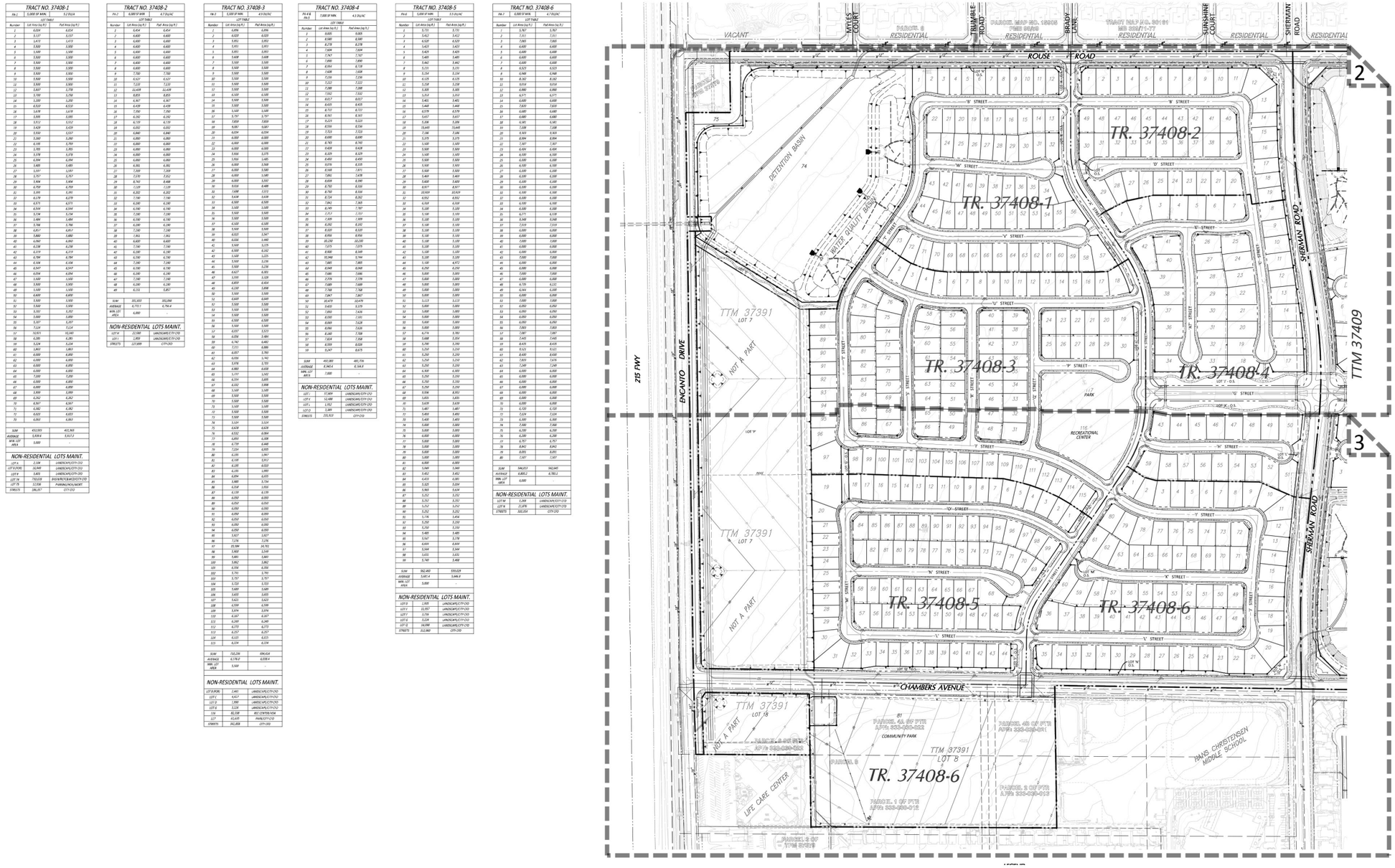
3.3.7 CONSTRUCTION DETAILS

A. Proposed Physical Disturbances

Physical disturbances needed to implement the Project are depicted on Figure 3-19, *Proposed Physical Disturbances*. As shown, grading proposed by the Project would result in disturbances to 324.7 acres of the Project site. In addition, the Project would result in off-site disturbances associated with surrounding roadways (Encanto Drive, Rouse Road, Chambers Avenue, and Antelope Road). Off-site improvements also are proposed as needed to connect proposed sewer lines to an existing sewer line located approximately 1,250 feet north of the Project site. Proposed off-site sewer lines would be constructed within existing roadways.

B. Timing and Phasing of Construction

The proposed phasing for the Project's grading and infrastructure and occupancy phases is depicted in Figure 3-14 and Figure 3-15. As described previously in Subsection 3.2.1K, grading would occur over two phases and infrastructure and occupancy improvements would occur over three phases. Construction of the residential and commercial structures for the Project would commence in 2020. The Project's occupancy would be phased in three separate phases. Phase 1 (2020) of the Project is anticipated to include the development of 500 residential units. Phase 2 (2023) is anticipated to include an additional 231 residential units. Phase 3 - Project Buildout (2025) of the Project is anticipated to include the development of 330 residential units and up to 225,000 s.f. of commercial retail uses. Construction of the commercial areas would develop as the market allows.



TRACT NO. 37408-1		
PA 2	5,000 SF MIN.	4.7 DU/AC
LOT TABLE		
Number	Lot Area (sq ft.)	Pad Area (sq ft.)
1	6,654	6,654
2	5,537	5,537
3	5,413	5,413
4	5,500	5,500
5	5,500	5,500
6	5,500	5,500
7	5,500	5,500
8	5,500	5,500
9	5,500	5,500
10	5,500	5,500
11	5,500	5,500
12	5,957	5,778
13	5,700	5,700
14	5,200	5,200
15	6,522	6,522
16	5,678	5,678
17	5,335	5,335
18	5,512	5,512
19	5,428	5,428
20	5,550	5,537
21	5,260	5,260
22	6,108	5,700
23	5,701	5,701
24	5,578	5,578
25	6,394	6,394
26	5,500	5,685
27	5,557	5,557
28	5,757	5,757
29	5,464	5,464
30	6,759	6,759
31	5,191	5,191
32	6,679	6,679
33	6,573	6,573
34	6,504	6,504
35	5,734	5,734
36	5,484	5,484
37	5,700	5,784
38	6,857	6,857
39	5,883	5,883
40	6,060	6,060
41	6,238	6,238
42	6,219	6,219
43	6,794	6,794
44	6,104	6,104
45	6,567	6,567
46	6,054	6,054
47	5,500	5,500
48	5,500	5,500
49	5,500	5,500
50	6,400	6,400
51	5,500	5,500
52	5,302	5,302
53	5,000	5,000
54	5,207	5,207
55	7,124	7,124
56	10,921	10,340
57	6,285	6,285
58	5,224	5,224
59	5,863	5,863
60	6,000	6,000
61	6,900	6,900
62	6,900	6,900
63	6,900	6,899
64	6,900	6,900
65	7,100	7,100
66	6,900	6,900
67	6,900	6,899
68	5,300	5,300
69	5,500	5,500
70	5,500	5,500
71	5,500	5,500
72	5,500	5,500
73	5,500	5,500
74	5,514	5,514
75	6,628	6,628
76	6,522	6,064
77	6,892	6,308
78	6,720	6,460
79	6,524	6,524
SUM	431,503	431,163
AVERAGE	5,934.4	5,917.1
MIN LOT AREA	5,300	-

NON-RESIDENTIAL LOTS MAINT.		
LOT B (POR)	2,441	LANDSCAPE/CITY/CFD
LOT C	4,417	LANDSCAPE/CITY/CFD
LOT D	1,900	LANDSCAPE/CITY/CFD
LOT E	5,126	LANDSCAPE/CITY/CFD
116	81,538	REC CENTER/ROW
117	43,645	PARK/CITY/CFD
STREETS	342,858	CITY/CFD

TRACT NO. 37408-2		
PA 2	5,000 SF MIN.	4.7 DU/AC
LOT TABLE		
Number	Lot Area (sq ft.)	Pad Area (sq ft.)
1	6,454	6,454
2	6,600	6,600
3	6,600	6,600
4	6,600	6,600
5	6,600	6,600
6	6,600	6,600
7	6,600	6,600
8	6,600	6,600
9	7,150	7,150
10	6,527	6,527
11	7,133	7,133
12	11,439	11,439
13	8,855	8,855
14	6,367	6,367
15	6,439	6,439
16	7,090	7,090
17	6,192	6,192
18	6,719	6,719
19	6,692	6,692
20	6,860	6,860
21	6,880	6,880
22	6,600	6,600
23	6,980	6,980
24	6,600	6,600
25	6,980	6,980
26	6,981	6,981
27	7,350	7,350
28	7,570	7,052
29	6,741	6,468
30	7,119	7,119
31	6,202	6,202
32	7,190	7,190
33	6,200	6,200
34	6,190	6,190
35	7,190	7,190
36	6,190	6,190
37	6,200	6,200
38	7,190	7,190
39	7,961	7,961
40	6,600	6,600
41	5,500	5,225
42	6,500	6,192
43	5,500	5,226
44	5,500	5,226
45	5,500	5,226
46	6,627	6,302
47	5,550	5,328
48	6,450	6,454
49	6,530	5,898
50	5,500	5,500
51	6,660	6,660
52	5,500	5,500
53	5,500	5,500
54	5,500	5,500
55	6,500	6,500
56	5,500	5,500
57	6,057	5,923
58	6,056	5,484
59	6,000	6,000
60	7,111	6,886
61	6,857	5,760
62	6,930	5,742
63	6,978	5,722
64	6,880	6,658
65	5,557	5,200
66	6,554	5,895
67	6,552	5,868
68	5,500	5,500
69	5,500	5,500
70	5,500	5,500
71	5,500	5,500
72	5,500	5,500
73	5,500	5,500
74	5,514	5,514
75	6,628	6,628
76	6,522	6,064
77	6,892	6,308
78	6,720	6,460
79	6,524	6,524
SUM	431,503	431,163
AVERAGE	5,934.4	5,917.1
MIN LOT AREA	5,300	-

NON-RESIDENTIAL LOTS MAINT.		
LOT A	7,134	LANDSCAPE/CITY/CFD
LOT B (POR)	16,949	LANDSCAPE/CITY/CFD
LOT F	5,403	LANDSCAPE/CITY/CFD
LOT 14	750,018	(P/O) RETCH/LANDSCP/CITY/CFD
LOT 75	12,536	PARKING/MDL/MORT
STREETS	286,261	CITY/CFD

TRACT NO. 37408-3		
PA 3	5,000 SF MIN.	4.7 DU/AC
LOT TABLE		
Number	Lot Area (sq ft.)	Pad Area (sq ft.)
1	6,496	6,496
2	6,025	6,025
3	5,951	5,951
4	5,953	5,953
5	5,951	5,951
6	5,938	5,938
7	5,500	5,500
8	5,500	5,500
9	5,500	5,500
10	5,500	5,500
11	5,500	5,500
12	5,500	5,500
13	5,500	5,500
14	5,500	5,500
15	5,500	5,500
16	5,500	5,500
17	5,797	5,797
18	7,850	7,850
19	9,067	9,067
20	6,654	6,654
21	6,000	6,000
22	6,000	6,000
23	6,000	6,000
24	6,000	6,000
25	5,916	5,485
26	6,000	5,568
27	6,000	5,580
28	6,000	5,580
29	6,000	5,501
30	9,026	6,685
31	7,688	7,553
32	5,638	5,638
33	6,000	6,000
34	5,500	5,500
35	5,500	5,500
36	5,500	5,500
37	6,500	6,500
38	5,500	5,500
39	6,023	5,997
40	6,038	5,940
41	5,500	5,225
42	6,500	6,192
43	5,500	5,226
44	5,500	5,226
45	5,500	5,226
46	6,627	6,302
47	5,550	5,328
48	6,450	6,454
49	6,530	5,898
50	5,500	5,500
51	6,660	6,660
52	5,500	5,500
53	5,500	5,500
54	5,500	5,500
55	6,500	6,500
56	5,500	5,500
57	6,057	5,923
58	6,056	5,484
59	6,000	6,000
60	7,111	6,886
61	6,857	5,760
62	6,930	5,742
63	6,978	5,722
64	6,880	6,658
65	5,557	5,200
66	6,554	5,895
67	6,552	5,868
68	5,500	5,500
69	5,500	5,500
70	5,500	5,500
71	5,500	5,500
72	5,500	5,500
73	5,500	5,500
74	5,514	5,514
75	6,628	6,628
76	6,522	6,064
77	6,892	6,308
78	6,720	6,460
79	6,524	6,524
SUM	720,239	694,424
AVERAGE	6,176.9	6,038.4
MIN LOT AREA	5,500	-

NON-RESIDENTIAL LOTS MAINT.		
LOT B (POR)	2,441	LANDSCAPE/CITY/CFD
LOT C	4,417	LANDSCAPE/CITY/CFD
LOT D	1,900	LANDSCAPE/CITY/CFD
LOT E	5,126	LANDSCAPE/CITY/CFD
116	81,538	REC CENTER/ROW
117	43,645	PARK/CITY/CFD
STREETS	342,858	CITY/CFD

TRACT NO. 37408-4		
PA 4 & PA 5	7,000 SF MIN.	4.3 DU/AC
LOT TABLE		
Number	Lot Area (sq ft.)	Pad Area (sq ft.)
1	8,005	8,005
2	8,580	8,580
3	8,278	8,278
4	7,804	7,804
5	7,767	7,767
6	7,840	7,840
7	8,094	8,728
8	7,608	7,608
9	7,236	7,236
10	7,222	7,222
11	7,288	7,288
12	7,565	7,565
13	8,017	8,017
14	8,435	8,435
15	8,722	8,722
16	8,561	8,561
17	9,425	9,425
18	8,556	8,556
19	7,723	7,723
20	8,686	8,686
21	8,745	8,745
22	8,428	8,428
23	8,329	8,329
24	8,450	8,450
25	8,078	8,535
26	8,568	7,851
27	7,892	7,478
28	8,838	8,398
29	8,782	8,335
30	8,977	8,977
31	10,959	10,959
32	8,932	8,932
33	8,942	8,942
34	9,948	9,948
35	10,200	10,200
36	8,182	8,182
37	8,920	8,920
38	8,956	8,956
39	10,230	10,230
40	7,075	7,075
41	8,988	8,988
42	10,948	9,744
43	7,985	7,985
44	8,948	8,948
45	7,686	7,686
46	7,770	7,770
47	7,689	7,689
48	7,768	7,768
49	7,867	7,867
50	10,479	10,479
51	9,400	9,139
52	5,900	5,900
53	8,100	7,709
54	8,069	7,628
55	8,086	7,628
56	8,100	7,709
57	7,824	7,358
58	8,559	8,028
59	9,247	8,675
SUM	452,085	445,706
AVERAGE	8,340.4	8,164.9
MIN. LOT AREA	7,000	-

NON-RESIDENTIAL LOTS MAINT.		
LOT I	17,309	LANDSCAPE/CITY/CFD
LOT K	53,488	LANDSCAPE/CITY/CFD
LOT L	1,552	LANDSCAPE/CITY/CFD
LOT O	5,389	LANDSCAPE/CITY/CFD
STREETS	233,913	CITY/CFD

TRACT NO. 37408-5		
PA 6	5,000 SF MIN.	5.5 DU/AC
LOT TABLE		
Number	Lot Area (sq ft.)	Pad Area (sq ft.)
1	5,733	5,733
2	5,423	5,423
3	6,520	6,520
4	5,423	5,423
5	5,423	5,423
6	5,489	5,489
7	5,442	5,442
8	5,531	5,531
9	5,554	5,554
10	6,525	6,525
11	5,554	5,554
12	5,500	5,500
13	5,554	5,554
14	5,401	5,401
15	5,448	5,448
16	6,570	6,570
17	5,657	5,657
18	5,508	5,508
19	15,645	15,645
20	7,236	7,236
21	5,575	5,575
22	5,500	5,500
23	5,500	5,500
24	5,500	5,500
25	5,500	5,500
26	5,500	5,500
27	5,500	5,500
28	5,469	5,469
29	5,460	5,460
30	8,977	8,977
31	10,959	10,959
32	8,932	8,932
33	8,942	8,942
34	9,948	9,948
35	5,100	5,100
36	5,100	5,100
37	5,100	5,100
38	5,100	5,100
39	5,100	5,100
40	5,100	5,100
41	5,100	5,100
42	5,100	5,100
43	5,100	5,100
44	5,100	4,972
45	6,250	6,250
46	5,800	5,800
47	5,800	5,800
48	5,800	5,800
49	5,800	5,800
50	5,800	5,800
51	5,113	5,113
52	5,000	5,000
53	5,000	5,000
54	5,000	5,000
55	5,000	5,000
56	5,000	5,000
57	5,000	5,000
58	5,048	5,104
59	5,250	5,250
60	5,250	5,250
61	5,250	5,250
62	5,250	5,250
63	5,250	5,250
64	6,900	6,900
65	5,250	5,250
66	5,250	5,250
67	5,250	5,250
68	5,250	5,250
69	5,835	5,835
70	5,835	5,835
71	5,487	5,487
72	5,402	5,402
73	5,440	5,440
74	5,500	5,500
75	5,500	5,500
76	5,500	5,500
77	5,500	5,500
78	5,500	5,500
79	5,500	5,500
SUM	562,483	559,028
AVERAGE	5,481.4	5,446.9
MIN LOT AREA	5,000	-

NON-RESIDENTIAL LOTS MAINT.		
LOT A	1,500	LANDSCAPE/CITY/CFD
LOT F	22,957	LANDSCAPE/CITY/CFD
LOT J	3,726	LANDSCAPE/CITY/CFD
LOT Q	5,124	LANDSCAPE/CITY/CFD
LOT Q	34,098	LANDSCAPE/CITY/CFD
STREETS	312,983	CITY/CFD

TRACT NO. 37408-6		
PA 7	5,000 SF MIN.	4.7 DU/AC
LOT TABLE		
Number	Lot Area (sq ft.)	Pad Area (sq ft.)
1	5,767	5,767
2	7,351	7,351
3	7,065	7,065
4	6,600	6,600
5	6,600	6,600
6	6,600	6,600
7	6,600	6,600
8	6,523	6,523
9	6,948	6,948
10	8,102	8,102
11	9,016	9,016
12	8,990	8,990
13	6,577	6,577
14	6,600	6,600
15	7,870	7,870
16	6,600	6,600
17	6,600	6,600
18	6,545	6,545
19	7,208	7,208
20	8,503	8,503
21	8,994	8,994
22	7,307	7,307
23	6,439	6,439
24	6,100	6,100
25	6,600	6,600
26	6,100	6,100
27	6,100	6,100
28	6,100	6,100
29	6,100	6,100
30	6,100	6,100
31	6,100	6,100
32	6,100	6,100
33	6,100	6,100
34	6,100	6,100
35	8,275	8,275
36	9,368	9,368
37	7,519	7,519
38	6,000	6,000
39	6,000	6,000
40	7,000	7,000
41	6,000	6,000
42	6,000	6,000
43	7,000	7,000
44	6,000	6,000
45	6,000	6,000
46	7,000	7,000
47	6,000	6,000
48	6,729	6,115
49	6,344	6,100
50	6,000	6,000
51	7,000	7,000
52	6,000	6,000
53	6,000	6,060
54	6,050	6,050
55	6,050	6,050
56	7,003	7,003
57	7,047	7,047
58	7,445	7,445
59	8,435	8,435
60	8,521	8,521
61	8,600	8,600
62	7,835	7,676
63	7,200	7,200
64	6,000	6,000
65	6,000	6,000
66	6,000	6,000
67	6,000	6,000
68	6,050	6,050
69	6,000	6,000
70	6,000	6,000
71	6,100	6,100
72	7,224	7,224
73	6,300	6,300
74	7,300	7,300
75	6,200	6,200
76	6,200	6,200
77	6,757	6,757
78	8,842	8,842
79	8,842	8,842
80	7,347	7,347
SUM	544,053	542,945
AVERAGE	6,885.2	6,783.1
MIN LOT AREA	6,000	-

NON-RESIDENTIAL LOTS MAINT.		
LOT M	5,295	LANDSCAPE/CITY/CFD
LOT N	21,876	LANDSCAPE/CITY/CFD
STREETS	302,554	CITY/CFD

Source(s): K&A Engineering (12-060-2019)

Figure 3-17

VESTING TENTATIVE TRACT MAP NO. 37408

NOT TO SCALE

TRACT NO. 37409-1

PA 8	5,000 SF MIN.	5.5 DU/AC
	LOT TABLE	
Number	Lot Area (sq.ft.)	Pad Area (sq.ft.)
1	5,402	5,442
2	5,400	5,440
3	5,400	5,440
4	5,400	5,440
5	5,408	5,448
6	5,400	5,440
7	5,407	5,447
8	5,407	5,447
9	5,407	5,447
10	5,407	5,447
11	5,407	5,447
12	5,406	5,446
13	5,406	5,446
14	5,406	5,446
15	5,207	5,138
16	6,758	6,093
17	12,034	9,305
18	7,828	7,509
19	5,300	5,300
20	5,302	5,302
21	5,307	5,307
22	6,892	6,786
23	6,588	6,588
24	5,300	5,300
25	5,300	5,300
26	5,300	5,300
27	5,300	5,300
28	5,300	5,300
29	5,300	5,300
30	5,300	5,300
31	5,300	5,300
32	5,300	5,300
33	5,300	5,300
34	5,300	5,300
35	6,187	5,734
36	5,425	5,807
37	5,800	5,800
38	5,800	5,800
39	5,800	5,800
40	5,800	5,800
41	5,800	5,800
42	5,800	5,800
43	5,800	5,800
44	5,800	5,800
45	5,800	5,800
46	5,800	5,800
47	5,800	5,800
48	5,800	5,800
49	6,598	5,424
50	6,202	6,202
51	5,851	5,851
52	5,551	5,551
53	5,139	5,139
54	5,800	5,800
55	5,800	5,800
56	5,800	5,800
57	5,800	5,800
58	5,800	5,800
59	5,800	5,800
60	5,800	5,800
61	5,800	5,800
62	5,800	5,800
63	6,000	6,000
64	6,286	6,286
65	6,837	5,837
66	7,200	7,194
67	7,565	7,292
68	5,500	4,932
69	5,500	5,500
70	5,500	5,500
71	5,500	5,500
72	5,500	5,500
73	5,500	5,500
74	5,500	5,500
75	5,500	5,500
76	5,500	5,500
77	5,500	5,500
78	5,502	5,502
79	5,407	5,424
80	5,526	5,480
81	5,863	5,858
82	6,007	5,825
83	7,007	7,007
84	5,577	5,577
85	5,378	5,378
86	5,407	5,407
SUM	470,202	469,403
AVERAGE	5,524.6	5,458.8
MIN. LOT AREA	5,300	-

NON-RESIDENTIAL LOTS MAINT.

LOT A	7,383	LANDSCAPE/CITY LOT
LOT B	4,378	LANDSCAPE/CITY LOT
LOT H	674,027	BASIN/INTEGRATED/CITY LOT
LOT I	5,207	LANDSCAPE/CITY LOT
LOT F	8,884	LANDSCAPE/CITY LOT

TRACT NO. 37409-2

PA 10	7,000 SF MIN.	4.7 DU/AC
	LOT TABLE	
Number	Lot Area (sq.ft.)	Pad Area (sq.ft.)
1	8,107	7,421
2	8,294	8,194
3	7,268	7,268
4	7,130	7,130
5	7,218	7,169
6	7,189	7,242
7	7,364	7,364
8	7,467	7,467
9	7,169	7,169
10	12,323	11,668
11	20,013	10,696
12	8,559	8,479
13	7,700	6,723
14	7,700	6,702
15	18,774	10,684
16	30,499	13,533
17	8,602	7,872
18	7,000	6,925
19	7,000	6,189
20	7,000	6,082
21	7,000	6,085
22	6,968	6,425
23	6,968	5,406
24	7,000	5,547
25	7,000	5,536
26	7,000	5,564
27	7,000	5,565
28	7,000	6,054
29	7,000	6,073
30	7,000	6,058
31	39,415	11,134
32	7,189	6,949
33	7,000	6,701
34	7,000	6,059
35	7,000	6,078
36	7,000	6,058
37	7,000	6,054
38	7,000	6,062
39	7,000	6,076
40	6,978	6,059
41	6,424	5,963
42	7,000	6,055
43	7,000	6,068
44	7,000	6,060
45	7,498	5,996
46	7,248	5,830
47	7,498	5,667
48	7,248	5,548
49	7,498	5,592
50	7,248	5,505
51	8,166	6,285
52	8,640	7,004
53	7,920	6,741
54	7,920	6,530
55	7,920	6,508
56	7,920	6,504
57	7,920	6,729
58	7,920	6,949
59	7,920	6,950
60	7,920	6,940
61	7,920	6,636
62	7,933	6,696
63	8,340	7,332
64	10,394	8,526
65	9,698	9,484
66	8,388	8,228
SUM	574,883	469,690
AVERAGE	8,580.3	6,967.0
MIN. LOT AREA	7,000	-

NON-RESIDENTIAL LOTS MAINT.

LOT M	270,705	OPEN SPACE/HOA
LOT Q	15,765	LANDSCAPE/CITY LOT
LOT I POND	620	LANDSCAPE/CITY LOT
LOT W	558	LANDSCAPE/CITY LOT
LOT X	693	LANDSCAPE/CITY LOT
LOT Y	855	LANDSCAPE/CITY LOT
LOT Z	56,745	LANDSCAPE/CITY LOT
STREETS	168,103	CITY LOT

TRACT NO. 37409-3

PA 10	7,000 SF MIN.	4.7 DU/AC
	LOT TABLE	
Number	Lot Area (sq.ft.)	Pad Area (sq.ft.)
1	7,446	7,446
2	6,602	6,602
3	6,090	6,090
4	6,340	6,340
5	9,256	9,256
6	8,157	7,521
7	6,538	6,538
8	6,113	5,760
9	7,322	7,235
10	9,467	9,467
11	13,638	12,638
12	7,123	7,123
13	7,042	7,029
14	6,967	6,929
15	7,741	6,394
16	6,290	5,721
17	6,945	6,909
18	6,962	6,914
19	6,940	6,940
20	6,683	6,683
21	8,326	7,202
22	6,878	5,304
23	6,845	6,845
24	5,510	5,510
25	5,566	5,566
26	6,167	6,167
27	5,609	5,609
28	5,679	5,679
29	6,213	6,213
30	7,037	7,037
31	10,710	10,710
32	8,214	7,982
33	7,948	7,438
34	7,680	6,461
35	7,766	7,126
36	7,339	6,997
37	6,992	6,958
38	6,944	5,864
39	7,051	6,477
40	6,111	7,204
41	6,845	5,963
42	5,765	5,765
43	5,500	5,500
44	5,500	5,500
45	5,500	5,500
46	5,500	5,500
47	5,598	5,598
48	6,758	6,758
49	6,893	6,893
50	8,163	8,163
51	8,223	8,223
52	6,217	6,217
53	6,151	6,151
54	6,500	6,500
55	5,500	5,500
56	5,500	5,500
57	5,500	5,500
58	5,500	5,500
59	5,973	5,722
SUM	406,715	391,439
AVERAGE	6,695.6	6,429.2
MIN. LOT AREA	5,500	-

NON-RESIDENTIAL LOTS MAINT.

LOT C	10,152	LANDSCAPE/CITY LOT
LOT J	3,762	LANDSCAPE/CITY LOT
LOT L	4,215	LANDSCAPE/CITY LOT
STREETS	168,781	CITY LOT

TRACT NO. 37409-4

PA 11	5,500 SF MIN.	5.1 DU/AC
	LOT TABLE	
Number	Lot Area (sq.ft.)	Pad Area (sq.ft.)
1	10,504	9,914
2	7,476	6,576
3	7,961	7,012
4	7,156	6,321
5	7,150	6,400
6	7,189	6,519
7	7,556	6,907
8	8,094	6,869
9	6,995	6,435
10	6,955	6,301
11	6,955	6,301
12	6,955	6,368
13	6,955	6,781
14	6,954	5,940
15	8,554	7,490
16	8,514	6,302
17	8,514	7,227
18	8,086	7,476
19	7,662	7,130
20	12,236	10,693
21	11,094	8,996
22	7,416	6,878
23	7,990	5,990
24	7,096	5,664
25	6,764	5,393
26	6,955	5,260
27	6,955	5,259
28	6,578	5,356
29	6,789	5,656
30	7,279	5,970
31	7,720	6,117
32	6,648	5,301
33	10,070	6,559
34	16,218	9,414
35	5,982	5,982
36	7,945	7,740
37	6,679	6,398
38	6,350	5,771
39	6,350	5,351
40	6,350	5,405
41	6,350	5,459
42	5,500	4,600
43	5,500	4,874
44	5,500	4,950
45	5,500	4,950
46	5,500	4,950
47	5,500	4,950
48	5,500	4,950
49	5,500	4,950
50	5,500	4,950
51	5,500	4,950
52	5,500	4,954
53	5,904	5,314
54	6,585	5,925
55	6,560	6,362
56	6,097	5,432
57	5,775	4,709
58	5,775	4,882
59	6,174	5,160
60	6,174	5,159
61	6,174	5,157
62	6,174	5,207
63	6,174	5,253
64	6,174	5,254
65	6,468	5,511
66	6,468	5,704
67	6,667	5,407
68	6,667	5,651
69	6,288	5,408
70	6,436	5,658
71	5,865	5,681
72	6,292	5,220
73	6,292	5,259
74	6,292	5,259
75	5,792	5,000
76	5,792	5,004
77	5,792	5,134
78	5,792	5,004
79	5,792	5,004
80	5,792	5,301
81	5,792	5,332
82	5,585	5,427
83	5,582	5,342
84	6,085	4,975
SUM	479,445	418,516
AVERAGE	6,993.9	5,559.3
MIN. LOT AREA	5,500	-

NON-RESIDENTIAL LOTS MAINT.

LOT L	4,212	LANDSCAPE/CITY LOT
LOT O	707	LANDSCAPE/CITY LOT
LOT AA	966	LANDSCAPE/CITY LOT
STREETS	208,360	CITY LOT

TRACT NO. 37409-5

PA 12	7,000 SF MIN.	5.5 DU/AC
	LOT TABLE	
Number	Lot Area (sq.ft.)	Pad Area (sq.ft.)
1	10,018	10,018
2	7,015	7,015
3	7,962	7,962
4	7,794	7,794
5	7,235	7,235
6	7,350	7,350
7	7,382	7,382
8	7,382	7,382
9	7,381	7,381
10	7,381	7,381
11	7,382	7,382
12	7,382	7,382
13	7,382	7,382
14	7,382	7,382
15	7,559	7,559
16	8,278	8,278
17	10,884	8,932
18	7,986	6,996
19	8,985	7,764
20	8,930	7,745
21	8,263	7,263
22	8,194	7,534
23	8,635	7,550
24	8,930	7,550
25	7,980	7,550
26	8,633	7,964
27	7,899	7,103
28	7,382	7,382
29	7,350	7,350
30	7,350	7,350
31	7,350	7,350
32	7,350	7,350
33	7,350	7,350
34	7,350	7,350
35	7,350	6,994
36	7,347	7,347
37	9,170	9,170
38	10,993	10,993
39	8,908	8,908
40	7,724	7,724
41	7,350	7,350
42	7,350	7,350
43	7,350	7,350
44	7,350	7,350
45	7,350	6,950
46	7,350	7,350
47	7,350	7,350
48	8,400	8,400
49	7,980	7,980
SUM	380,527	377,029
AVERAGE	7,807.9	7,694.3
MIN. LOT AREA	7,000	-

NON-RESIDENTIAL LOTS MAINT.

LOT G	52,966	LANDSCAPE/CITY LOT
LOT K	2,304	LANDSCAPE/CITY LOT
LOT N	145,367	BASIN/INTEGRATED/CITY LOT
LOT P	6,185	LANDSCAPE/CITY LOT
LOT V	6,369	LANDSCAPE/CITY LOT
STREETS	186,160	CITY LOT

TRACT NO. 37409-6

PA 13	5,000 SF MIN.	5.1 DU/AC
	LOT TABLE	
Number	Lot Area (sq.ft.)	Pad Area (sq.ft.)
1	6,000	6,037
2	5,500	5,500
3	5,500	5,500
4	6,599	6,599
5	7,898	7,898
6	6,594	6,594
7	6,594	6,594
8	6,594	5,107
9	5,500	5,500
10	5,500	5,427
11	5,500	5,427
12	5,500	5,427
13	5,500	5,427
14	5,500	5,427
15	5,500	5,427
16	5,500	5,427
17	5,500	5,427
18	5,500	5,427
19	5,500	5,427
20	5,500	5,427
21	5,500	5,427
22	5,500	5,427
23	5,500	5,427
24	5,500	5,427
25	5,500	5,427
26	5,500	5,427
27	5,500	5,427
28	5,500	5,427
29	5,500	5,427
30	5,500	5,427
31	5,500	5,427
32	5,500	5,427
33	5,500	5,427
34	5,500	5,427
35	5,500	5,427
36	5,500	5,427
37	5,500	5,427
38	5,500	5,427
39	5,500	5,427
40	5,500	5,427
41	5,500	5,427
42	5,500	5,427
43	5,500	5,427
44	5,500	5,427
45	5,500	5,427
46	5,500	5,427
47	5,500	5,427
48	5,500	5,427
49	5,500	5,427
50	5,500	5,427
51	5,500	5,427
52	5,500	5,427
53	5,500	5,427
54	5,500	5,427
55	5,500	5,427
56	5,500	5,427
57	5,500	5,427
58	5,500	5,427
59	5,500	5,427
60	5,500	5,427
61	5,500	5,427
62	5,500	5,427
63	5,500	5,427
64	5,500	5,427
65	5,500	5,427
66	5,500	5,427
67	5,500	5,427
68	5,500	5,427
69	5,500	5,427
70	5,500	5,427
71	5,500	5,427
72	5,500	5,427
73	5,500	5,427
74	5,500	5,427
75	5,500	5,427
76	5,500	5,427
77	5,500	5,427
78	5,500	5,427
79	5,500	5,427
80	5,500	5,427
81	5,500	5,427
SUM	476,462	474,057
AVERAGE	5,906.8	5,858.7
MIN. LOT AREA	5,500	-

NON-RESIDENTIAL LOTS MAINT.

LOT M	7,845	LANDSCAPE/CITY LOT
LOT T	845	LANDSCAPE/CITY LOT
LOT U	513	LANDSCAPE/CITY LOT
STREETS	168,938	CITY LOT

TRACT NO. 37409-7

PA 14	7,000 SF MIN.	4.7 DU/AC
	LOT TABLE	
Number	Lot Area (sq.ft.)	Pad Area (sq.ft.)
1	10,839	10,101
2	8,448	6,448
3	5,950	5,950
4	5,950	5,950
5	5,950	5,950
6	5,950	5,950
7	5,950	5,950
8	5,950	5,950
9	5,950	5,950
10	5,950	5,950
11	5,499	5,499
12	8,078	8,078
13	10,140	10,140
14	20,615	8,828
15	5,802	6,467
16	7,001	7,089
17	7,844	7,050
18	7,785	7,279
19	5,756	7,113
20	5,651	5,760
21	5,540	5,576
22	7,674	7,292
23	5,418	5,978
24	5,295	5,295
25	5,954	5,954
26	6,348	5,954
27	6,645	6,194
28	5,400	6,642
29	5,400	6,754
30	5,400	6,754
31	5,400	6,754
32	5,400	6,754
33	5,400	6,754
34	5,400	6,754
35	5,400	6,754
36	5,400	6,754
37	5,400	6,676
38	6,077	5,807
39	5,400	6,484
40	5,005	6,446
41	5,533	6,442
42	5,005	6,508
43	5,040	6,442
44	7,554	6,490
45	7,378	6,410
46	7,378	6,410
47	7,606	6,553
48	7,570	6,685
49	7,650	7,206
50	7,650	6,225
51	5,259	6,816
SUM	392,709	368,227
AVERAGE	7,697.2	7,219.1
MIN. LOT AREA	5,000	-

NON-RESIDENTIAL LOTS MAINT.

LOT I	60,892	LANDSCAPE/CITY LOT
LOT N	3,502	LANDSCAPE/CITY LOT
STREETS	160,127	CITY LOT

TRACT NO. 37409-8

PA 15	5,500 SF MIN.	5.1 DU/AC
	LOT TABLE	
Number	Lot Area (sq.ft.)	Pad Area (sq.ft.)
1	5,651	5,242
2	5,594	5,138
3	5,760	4,987
4	5,760	5,081
5	5,759	5,159
6	5,750	5,078
7	5,750	5,246
8	5,750	5,236
9	5,750	5,092
10	6,450	5,918
11	6,450	5,918
12	6,450	5,255
13	6,450	5,218
14	6,450	5,487
15	7,248	6,522
16	6,012	5,842
17	6,861	6,162
18	6,513	5,494
19	6,599	5,603
20	6,664	5,589
21	6,388	5,266
22	6,916	6,222
23	7,559	6,720
24	5,962	5,891
25	5,906	5,858
26	5,850	5,850
27	5,850	5,850
28	5,850	5,850
29	5,850	5,850
30	5,850	5,850
31	5,850	5,924
32	5,850	5,923
33	5,850	5,855
34	5,850	5,853
35	5,850	5,859
36	5,850	5,832
37	5,850	5,834
38	5,850	5,840
39	5,962	5,840
40	5,503	5,840
41	5,500	5,840
42	5,500	4,982
43	5,500	4,982
44	5,500	4,899
45	5,500	4,982
46	5,500	4,982
47	5,500	5,013
48	5,500	5,002
49	5,500	5,433
50	5,500	5,500
51	5,500	5,500
52	5,500	5,500
53	5,500	5,400
54	5,929	5,676
55	6,603	6,134
56	7,493	7,209
57	6,092	6,233
58	7,119	6,573
59	7,119	5,653
60	7,119	5,408
61	6,498	4,860
62	6,498	4,992
63	6,497	5,073
64	6,497	5,088
65	6,498	5,303
66	6,249	4,868
67	6,497	5,219
68	6,498	5,216
69	6,497	5,061
70	6,707	5,236
SUM	406,760	386,090
AVERAGE	6,359.9	5,313.3
MIN. LOT AREA	5,500	-

NON-RESIDENTIAL LOTS MAINT.

LOT I	5,482	LANDSCAPE/CITY LOT
LOT R	2,020	LANDSCAPE/CITY LOT
LOT S	928	LANDSCAPE/CITY LOT
STREETS	150,640	CITY LOT

Source(s): K&A Engineering (12-06-2019)

NOT TO SCALE

Figure 3-18

VESTING TENTATIVE TRACT MAP NO. 37409

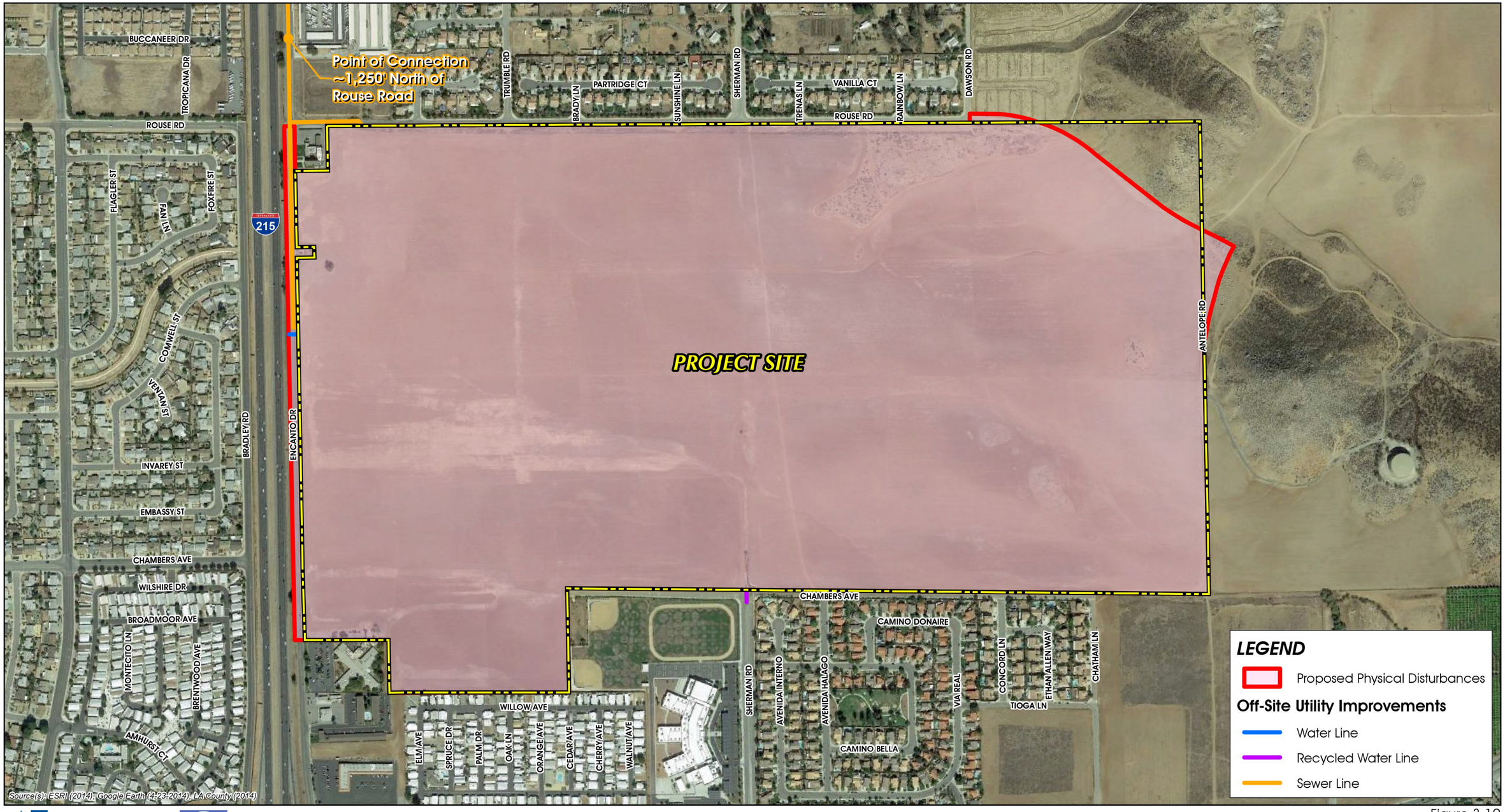


Figure 3-19

PROPOSED PHYSICAL DISTURBANCES

The Private Recreation Center and Paseos/Neighborhood Parks would be constructed in the same phase as the Planning Area they are located in. Construction of the Community Park/Community Center in Planning Area 18 would be completed when 50% of the residential building permits for the Project have been issued. Table 3-4, *Construction Equipment Assumptions*, presents the construction equipment assumptions utilized in this EIR, and Table 3-5, *Project Construction Schedule*, shows the construction schedule and durations assumed in this EIR. The modeled Project buildout plan would have a worst-case development completion in late 2025 although full build out in all reality could take much longer because that Project would be constructed per market demands.

If construction takes longer than presented in Table 3-5, the daily quantity of air quality pollutants and greenhouse gas emissions associated with Project construction activities would be less than disclosed in this EIR because construction-related emissions would be spread over a longer period of time, and older pieces of construction equipment would be replaced over time with newer and less polluting pieces of equipment as regulatory requirements for construction equipment become more stringent.

Table 3-4 Construction Equipment Assumptions

Activity	Equipment	Number	Hours Per Day
Grading (Phase 1)	Crawler Tractors	2	8
	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
Building Construction	Cranes	1	8
	Crawler Tractors	3	8
	Forklifts	3	8
	Generator Sets	1	8
	Welders	1	8
Grading (Phase 2)	Crawler Tractors	2	8
	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
Paving	Paving Equipment	2	8
	Rollers	2	8
	Pavers	2	8
Architectural Coating	Air Compressors	1	8

(Urban Crossroads, 2019a, Table 3-3)

Table 3-5 Project Construction Schedule

Phase Name	Start Date	End Date	Days
Grading (Phase 1)	04/01/2019	12/06/2019	180
Building Construction	12/07/2019	11/14/2025	1,550
Grading (Phase 2)	03/08/2024	11/14/2024	180
Architectural Coating	09/01/2024	12/05/2025	330
Paving	09/01/2024	12/05/2025	330

Note: The construction schedule above represents a "worst case" analysis of the Project's construction-related impacts because construction-related emissions would be spread over a longer period of time, and older pieces of construction equipment would be replaced over time with newer and less polluting pieces of equipment as regulatory requirements for construction equipment become more stringent.
(Urban Crossroads, 2019a, Table 3-2)

3.3.8 Operational Characteristics

The Project would operate as a residential community that includes freeway-oriented commercial uses. As such, typical operational characteristics would include resident, employee, and visitor travel to and from the Project site; delivery trucks servicing the commercial areas; recreational activities associated with the community park/community center and paseos/neighborhood parks; and general maintenance within residential neighborhoods, the commercial areas, and the parks. Low levels of noise and a moderate level of exterior lighting typical of residential uses are expected. Slightly higher levels of noise would occur in association with the proposed commercial land uses and the community park/community center. Additionally, the proposed community park/community center would be required to include field lighting elements (however, the Project does not propose any lighting plans), while the commercial site would feature lighting typical of freeway-oriented commercial land uses. All future lighting plans would be subject to review and approval by the City of Menifee and all lighting elements would be required to comply with all City of Menifee requirements.

A. Future Population

According to the Southern California Association of Governments (SCAG) as part of its "2016-2040 Regional Transportation Plan /Sustainable Communities Strategy (RTP/SCS) Final Growth Forecast by Jurisdiction," the City of Menifee is projected to have a total population of 93,800 persons by year 2020, with an estimated 35,200 households (SCAG, 2016). According to the City of Menifee General Plan Housing Element, the average number of persons per household (pph) in the City of Menifee is approximately 2.8 pph (Menifee, 2014). The Project proposes a maximum of 1,061 single-family homes, which would yield a future population of 2,971 persons (1,061 household x 2.8 persons/household = 2,971 persons). For purposes of analysis within this EIR, the Menifee General Plan Housing Element pph rate of 2.8 is utilized in all sections to disclose Project population-related impacts, except in Section 4.13, *Recreation*. The Project site is subject to the provisions of City of Menifee Municipal Code Chapter 9.55 and City Council Resolution No. 15-143, which utilizes a separate population generation rate to calculate parkland demand, which is separate from the City's average number of pph. According to City Council Resolution No. 15-143, the average number of pph for single-family homes is 3.164 pph (Menifee, 2015b). For purposes of analysis of the Project's population demand for

parkland in Section 4.13, *Recreation*, the Project would yield a future population of 3,357 persons (1,061 homes x 3.164 persons/household = 3,357 persons).

B. Future Employment

Based on Table II-B of the Employment Density Study Summary Report prepared for SCAG, Riverside County averages approximately 629 s.f. of retail space per employee. The Project proposes up to 225,000 s.f. of freeway-oriented commercial; thus, the Project would result in approximately 358 employees (225,000 s.f. ÷ 629 s.f./employee = 358 employees). (SCAG, 2001)

C. Future Traffic

Based on a Project-specific Traffic Impact Analysis conducted by Urban Crossroads, Inc. (*Technical Appendix K*), and as discussed in Subsection 4.14, *Transportation*, to this EIR, the Project (at buildout) is expected to generate a total of 15,357 daily trips, with 1,075 trips in the AM peak hour and 1,500 trips in the PM peak hour. (Urban Crossroads, 2019d, p. 63)

D. Water Demand

Because the Project involves a proposal for residential development comprising more than 500 dwelling units, a water supply assessment (WSA) was required pursuant to Section 10910 of the California Water Code. Based on the flow factors contained in the EMWD WSA, the estimated demand for potable water for the Project is equal to 628.4 acre-feet/year (561,000 US gallons/day [gpd]) in total water demand for the Project site, based on a 440 gpd/unit for residential uses, and 2,200 gpd/acre for commercial office/retail uses and recreation uses. Peak hour demands for water demand for the Project site would be approximately 943 gallons per minute (gpm) (EMWD, 2007, p. 5). (EMWD, 2017a, p. 19; EMWD, 2019)

On September 20, 2017, the EMWD Board of Directors approved a WSA for the Project, which is provided as *Technical Appendix L1* to this EIR. The WSA determined that the Project would result in the demand for approximately 628 acre-feet per year (EMWD, 2017a, p. 19). As concluded by the EMWD:

> *"Based on present information and the assurance that MWD is engaged in identifying solutions that, when combined with the rest of its supply portfolio, will ensure a reliable long-term water supply for its member agencies, EMWD has determined that it will be able to provide adequate water supplies to meet the potable water demand for this project as part of its existing and future demands."* (EMWD, 2017a, p. 23)

Following EMWD's 2017 WSA for the Project, revisions to the Project occurred that slightly increased the water usage estimate assumed by the 2017 WSA. EMWD issued a subsequent WSA update letter dated July 9, 2019 acknowledging the revisions to the Project plans. EMWD determined that the revised water demand would be negligible from a water supply perspective and that the updated Project would continue to be consistent with the land use and demands considered in the 2015 UWMP. (EMWD, 2019)

E. Wastewater Demand

The Project's wastewater generation was estimated using the sewer generation factors provided by the Water Agencies' Standards, *Design Guidelines for Water, Recycled Water, and Sewer Facilities.* As shown in Table 3-6, *Project Wastewater Generation*, the Project is expected to generate approximately 405,520 gpd of wastewater requiring treatment by EMWD with peak hour demands at approximately 831,316 gpd. (EMWD, 2006, Table 1, Table 2)

Table 3-6 Project Wastewater Generation

LAND USE	UNITS/ACREAGE	POPULATION	WASTEWATER GENERATION RATE[1]	TOTAL WASTEWATER GENERATED
Medium Density Residential	1,061 du	3.5 persons per household	100 gpd per capita	371,350 gpd
Commercial	20.1 acres	--	1,700 gpd	34,170 gpd
			Total:	**405,520 gpd**

1. Based on the sewer generation factors provided by EMWD, *Sanitary Sewer System Planning & Design*, Table 1, *EMWD – System Design and Loading Criteria*. (EMWD, 2006, Table 1)

3.4 SUMMARY OF REQUESTED ACTIONS

The City of Menifee has primary approval responsibility for the Project. As such, the City serves as the Lead Agency for this EIR pursuant to CEQA Guidelines § 15050. Accordingly, the City's Planning Commission will hold a public hearing to consider the Final EIR, the Project's Specific Plan, Change of Zone, three Tentative Tract Maps, and Development Agreement applications. The Planning Commission will make advisory recommendations to the City Council on whether to approve, approve with changes, or deny the proposed Specific Plan, Change of Zone, three Tentative Tract Maps, and Development Agreement applications. The City Council will consider the information contained in the Final EIR and this EIR's Administrative Record in its decision-making processes and will approve or deny the Specific Plan, Change of Zone, three Tentative Tract Maps, and Development Agreement applications. Upon approval or conditional approval of the above-described Project actions and upon certification of the Final EIR by the City Council, the City would conduct administrative reviews and grant subsequent permits and approvals to implement Project requirements and conditions of approval. A list of the primary actions under City jurisdiction is provided in Table 3-7, *Matrix of Project Approvals/Permits*.

3.5 RELATED ENVIRONMENTAL REVIEW AND CONSULTATION REQUIREMENTS

Subsequent to approval of Specific Plan No. 2017-187, Change of Zone No. 2017-188, Tentative Tract Map 37391, Vesting Tentative Tract Map 37408, Vesting Tentative Tract Map 37409, and Development Agreement No. 2018-277, additional discretionary and ministerial actions may be necessary to implement the Project. These include, but are not limited to, individual plot plans and/or conditional use permits, grading permits, encroachment permits/road improvements, drainage infrastructure improvements, water and sewer infrastructure improvements, storm water permit(s) (National Pollutant Discharge Elimination System [NPDES]), a Section 401 Permit pursuant to the Clean Water Act, a Section 404 Permit pursuant to the Clean Water Act, and a Section 1602 Streambed Alteration Agreement. Table 3-7 provides a summary of the agencies responsible for subsequent discretionary approvals associated with the Project. The required EIR will cover all federal, State, and local government approvals which may be needed to construct or implement the Project, whether explicitly noted in Table 3-7 or not (CEQA Guidelines § 15124[d]).

Table 3-7 Matrix of Project Approvals/Permits

PUBLIC AGENCY	APPROVALS AND DECISIONS
CITY OF MENIFEE	
PROPOSED PROJECT – CITY OF MENIFEE DISCRETIONARY APPROVALS	
City of Menifee Planning Commission	• Provide recommendations to the City of Menifee City Council regarding certification of the Project's EIR. • Provide recommendations to the City of Menifee City Council whether to approve the Legado Specific Plan No. 2017-187, Change of Zone No. 2017-188, Tentative Tract Map 37391, Vesting Tentative Tract Map 37408, Vesting Tentative Tract Map 37409, and Development Agreement No. 2018-277.
City of Menifee City Council	• Reject or certify the Project's EIR along with appropriate CEQA Findings of Fact. • Approve, conditionally approve, or deny the Tentative Tract Map 37391, Vesting Tentative Tract Map 37408, and Vesting Tentative Tract Map 37409. • Approve by Ordinance or deny Legado Specific Plan No. 2017-187, Change of Zone No. 2017-188, and Development Agreement No. 2018-277.
Subsequent City of Menifee Discretionary and Ministerial Approvals	
City of Menifee Subsequent Implementing Approvals: Community Development, Engineering, Public Works, and/or Building & Safety	• Approve additional Tract Maps, as well as Final Maps, Plot Plans, and/or Site Plans as may be appropriate. • Issue Grading Permits. • Issue Building Permits. • Approve Road Improvement Plans. • Issue Encroachment Permits. • Issue Conditional Use Permits, if required.
OTHER AGENCIES – SUBSEQUENT APPROVALS AND PERMITS	
Santa Ana Regional Water Quality Control Board (RWQCB)	• Issuance of a Construction Activity General Construction Permit. • Issuance of a National Pollution Discharge Elimination System (NPDES) Permit. • Issuance of a Section 401 Permit pursuant to the Clean Water Act (CWA).
Army Corps of Engineers (ACOE)	• Issuance of a Section 404 Permit pursuant to the CWA.
California Department of Fish and Wildlife (CDFW)	• Issuance of a Section 1602 Streambed Alteration Agreement pursuant to the Fish and Game Code.

4.0 ENVIRONMENTAL ANALYSIS

4.0.1 SUMMARY OF EIR SCOPE

In accordance with CEQA Guidelines §§ 15126-15126.4, this EIR Section 4.0, *Environmental Analysis*, provides analyses of potential direct, indirect, and cumulatively-considerable impacts that could result from planning, constructing, and operating the proposed Project.

In compliance with the procedural requirements of CEQA, an Initial Study was prepared to determine the scope of environmental analysis for this EIR. Public comment on the scope consisted of oral comments received at a public scoping meeting and written comments received by the City of Menifee in response to the Notice of Preparation (NOP) issued for this EIR. Oral comments were provided by members of the public at the EIR scoping meeting held on November 30, 2017 at the Hans Christenson Middle School located at 27625 Sherman Road, Menifee, CA 92585. Taking all known information and public comments into consideration, 16 primary environmental subject areas are evaluated in this Section 4.0, as listed below. It should be noted that the list of environmental subject areas is based on Appendix G to the CEQA Guidelines, as most recently updated in December 2018. Each subsection evaluates several specific subject matters related to the general topic of the subsection. The title of each subsection is not limiting; therefore, refer to each subsection for a full account of the subject matters addressed therein.

4.1	Aesthetics
4.2	Air Quality
4.3	Biological Resources
4.4	Cultural Resources
4.5	Energy
4.6	Geology and Soils
4.7	Greenhouse Gas Emissions
4.8	Hazards and Hazardous Materials
4.9	Hydrology and Water Quality
4.10	Land Use and Planning
4.11	Noise
4.12	Public Services
4.13	Recreation
4.14	Transportation and Traffic
4.15	Tribal Cultural Resources
4.16	Utilities and Service Systems
4.17	Wildfire

Three (3) environmental subjects, Agriculture and Forest Resources; Mineral Resources; and Population and Housing, were determined by the City of Menifee to have no potential to be significantly impacted by the Project, as concluded by the Project's Initial Study (included in *Technical Appendix A* to this EIR), as modified by the December 2018 updates to Appendix G to the CEQA Guidelines. After consideration of all comment received by the City of Menifee on the scope of this EIR and documented in the City's administrative record. The subjects of Agriculture and Forest Resources; Mineral Resources; and Population and Housing are discussed briefly in Section 5.0, *Other CEQA Considerations*.

4.0.2 SCOPE OF CUMULATIVE EFFECTS ANALYSIS

CEQA requires that an EIR contain an assessment of the cumulative impacts that may be associated with a proposed project. As noted in CEQA Guidelines § 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "A cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects creating related impacts" (CEQA Guidelines § 15130(a)(1)). As defined in CEQA Guidelines § 15355:

'Cumulative Impacts' refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

(a) The individual effects may be changes resulting from a single project or a number of separate projects.

(b) The cumulative impact from several projects is 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 probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

CEQA Guidelines § 15130(b) describes two acceptable methods for identifying a study area for purposes of conducting a cumulative impact analysis. These two approaches include: "1) 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 ['the list of projects approach'], or 2) 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 ['the summary of projections approach']."

The summary of projections approach is used in this EIR, except for the evaluation of near-term traffic and vehicular-related air quality, greenhouse gas, and noise impacts. Under this approach, the cumulative analysis under most sections considers impacts to each issue area based on the presumed buildout of the City's General Plan as well as the General Plans of any counties or incorporated cities that occur within the cumulative study area for each subject area. For most issue areas, this would encompass portions of unincorporated Riverside County and the City of Perris. This approach was determined to be appropriate by the City of Menifee because long-range planning documents contain a sufficient amount of information to enable an analysis of cumulative effects for all subject areas, with expectation of traffic and vehicular-related air quality, greenhouse gas, and noise effects, which require a greater level of detailed study.

The analysis of cumulatively-considerable traffic impacts uses a combined approach, utilizing the list of projects approach for the near-term analysis of cumulatively-considerable traffic impacts, and the summary of projections approach for the evaluation of long-term cumulatively-considerable traffic impacts. For near-term conditions, the analysis of cumulatively-considerable traffic impacts is based on existing traffic conditions plus ambient growth and the manual addition of traffic from past, present, and reasonably foreseeable projects and includes approved and pending development projects in proximity to the Project site that would contribute traffic to the same transportation facilities as the Project, as well as large, traffic-intensive projects farther from the Project site that have the potential to affect regional transportation facilities. The analysis of long-term cumulatively-considerable traffic impacts considers full buildout of the City of Menifee, nearby portions of unincorporated Riverside County, and the City of Perris, based on the General Plan land use plans for each jurisdiction. The cumulative impact analyses of vehicular-related air quality, greenhouse gas, and noise impacts, which rely on data from the Project's traffic study, inherently also utilize the combined approach. With the combined approach, the cumulative impact analyses for the air quality, greenhouse gas, noise, and traffic issue areas overstate the Project's (and Project-related components') potential cumulatively-considerable impacts as compared to an analysis that would rely solely on the list of projects approach or solely the summary of projections approach; therefore, the combined approach provides a conservative, "worst-case" analysis for cumulative air quality, greenhouse gas, noise, and traffic impacts. As such, the cumulative impact analysis of traffic and vehicular-related air quality, greenhouse gas, and noise impacts includes 87 other past, present, and reasonably foreseeable projects within this study area in addition to the summary of projections

(Urban Crossroads, 2019d, Table 4-2). This methodology recognizes development projects that have the potential to contribute measurable traffic to the same intersections, roadway segments, and/or state highway system facilities as the proposed Project and have the potential to be made fully operational in the foreseeable future. Specific development projects included in the traffic and vehicular-related air quality, greenhouse gas, and noise cumulative impact analyses shown in Figure 4.0-1, *Cumulative Development Projects Location Map*, and are listed in Table 4.0-1, *Cumulative Project List*.

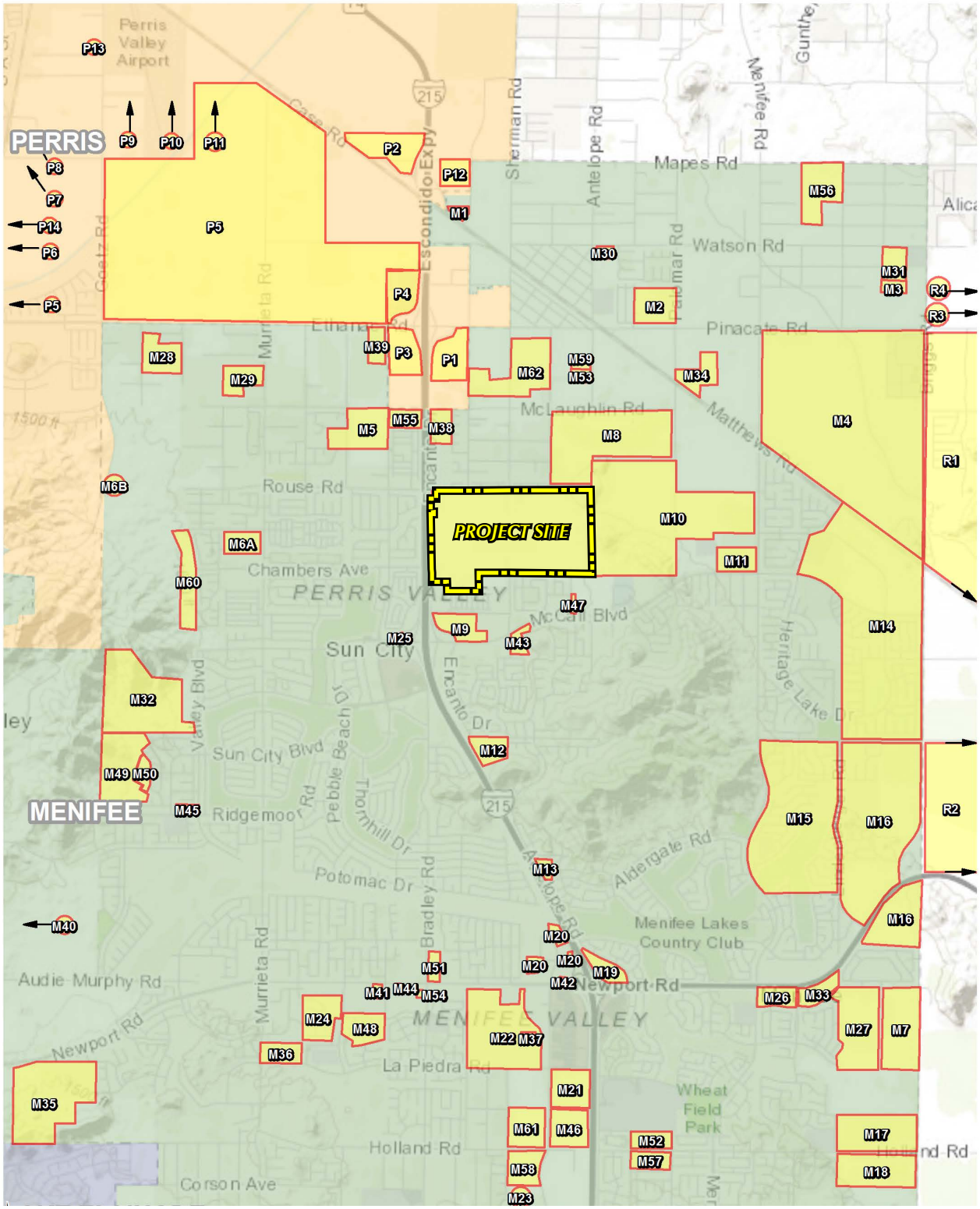
For the cumulative impact analyses that rely on the summary projections approach (i.e., all issue areas with the exception of traffic and vehicular-related air quality, greenhouse gas, and noise, as described in the preceding paragraphs), the cumulative study area includes City of Menifee, City of Perris, and nearby portions of unincorporated western Riverside County. These jurisdictions encompass a large area surrounding the Project site and have similar environmental characteristics as the Project area. This area has historically been used for rural uses, but has in recent decades been developed for residential and non-residential developments ranging from rural to higher densities. This study area exhibits similar characteristics in terms of climate, geology, and hydrology, and therefore is also likely to have similar biological and archaeological characteristics as well. This study area also encompasses the service areas of the Project site's primary public service and utility providers. Areas outside of this study area either exhibit topographic, climatological, or other environmental circumstances that differ from those of the Project area, or are simply too far from the proposed Project site to produce environmental effects that could be cumulatively considerable. Exceptions include cumulative air quality analysis, which considers the entire South Coast Air Basin (SCAB) and greenhouse gas emissions and associated global climate change, which potentially affect all areas of Earth. Additionally, the analysis of potential cumulative hydrology and water quality effects considers other development projects located within the boundary of the Santa Ana River watershed.

Environmental impacts associated with buildout of the cumulative study area were evaluated in CEQA compliance documents prepared for the respective General Plans of each of the above-named jurisdictions. The location where each of these CEQA compliance documents is available for review is provided below. All of the CEQA compliance documents listed below are herein incorporated by reference pursuant to CEQA Guidelines § 15150.

- City of Menifee General Plan Draft EIR (SCH No. 2012071033), available for review at the City of Menifee, Planning Division, 29844 Haun Road, Menifee, CA 92586;

- City of Perris General Plan 2030 EIR (SCH No. 2004031135), available for review at the City of Perris, Department of Community Development, 101 North D Street, Perris, CA 92570; and

- County of Riverside General Plan EIR No. 521 (SCH No. SCH 2009041065), available for public review at the Riverside County Planning Department, 4080 Lemon Street, 12th Floor, Riverside, CA 92501.



Source(s): Urban Crossroads (May 2019)

Figure 4.0-1

NOT TO SCALE

CUMULATIVE DEVELOPMENT PROJECTS LOCATION MAP

Table 4.0-1 Cumulative Project List

No.	Project Name	Land Use	Quantity[1]	
CITY OF MENIFEE				
M1	CUP 2016-289	Fast-food w/ Drive-Thru	3.039	TSF
		Retail	14.95	TSF
M2	TR 34118	Single Family Residential	169	DU
M3	TR34600	Single Family Residential	153	DU
M4	TR 31811	Single Family Residential	559	DU
	TR 31812	Senior Adult Detached Housing	742	DU
M5	TR 30182	Single Family Residential	84	DU
	TR 33419	Single Family Residential	140	DU
	TR 33648	Single Family Residential	56	DU
	TR 35143	Single Family Residential	15	DU
M6A	TR 32314	Single Family Residential	33	DU
M6B	Cimarron Ridge	Single Family Residential	756	DU
M7	TR 2016-285, SP 2016-286, GPA 2016-287, CZ 2016-288	Single Family Residential	305	DU
M8	TR 29777	Single Family Residential	177	DU
M9	Menifee North Shopping Center	Free-Standing Discount Superstore	200.000	TSF
		Bank with Drive-through Window	5.500	TSF
		Fast-food w/ Drive-Thru	6.700	TSF
		Shopping Center	10.000	TSF
		Gas Station & Market / Car Wash	16	VFP
M10	TR 29835	Single Family Residential	543	DU
	TR 31098	Single Family Residential	264	DU
M11	CUP 03549	Self-Storage Facility	152.893	TSF
		Grocery Store	45.000	TSF
		Pharmacy	14.600	TSF
		Shopping Center	11.500	TSF
		Restaurants	6.100	TSF
		Fast-food w/ Drive-Thru	3.500	TSF
		Gas Station & Market / Car Wash	16	VFP
M12	PP 19469R1	Senior Apartments	221	DU
M13	CUP 2017-042	Assisted Living	118	Rooms
M14	TR 34180	Single Family Residential (80% Built)	97	DU
	TR 34406	Single Family Residential (25% Built)	693	DU
M15	TR 31582	Single Family Residential (50% Built)	140	DU

Table 4.0-1 Cumulative Project List (Cont'd)

No.	Project Name	Land Use	Quantity[1]	
M16	TR 32100	Single Family Residential	170	DU
	TR 32101	Single Family Residential	197	DU
	TR 32102	Single Family Residential	272	DU
M17	Nautical Cove Residential	Single Family Residential	235	DU
M18	Menifee Heights - TR32277	Single Family Residential	359	DU
		Active Parks	10.2	AC
M19	Menifee Lakes Shopping Center (PP 2009-052)	Shopping Center	120.848	TSF
		Gas Station & Market / Car Wash	12	VFP
		Hotel	71	ROOM
M20	SP 248 Newport Hub	Shopping Center (50% occupied)	229.70	TSF
		General Office	97.6	TSF
		General Light Industrial (50% occupied)	241.8	TSF
		Motel	100	ROOM
M21	Pechanga Commercial Site (PP 2010-123)	Shopping Center	208.160	TSF
M22	Menifee Town Center Specific Plan	Shopping Center	409.370	TSF
		Hotel	99	ROOM
		Single Family Residential	277	DU
		Condo/Townhomes / Apartments	548	DU
M23	Junction at Menifee	Shopping Center	526.800	TSF
	Menifee Shopping Center	Shopping Center	238.180	TSF
M24	TR 28788 & TR 29794	Single Family Residential (50% Built)	334	DU
M25	CUP 2016-110	Fast-food w/ Drive-Thru	2.400	DU
M26	Newport & Menifee Retail	Shopping Center	138.091	TSF
M27	The Lakes (TR 30422 / SP 247 Amendment 1)	Single Family Residential (75% Built)82	327	DU
M28	TTM 34037	Single Family Residential	132	DU
M29	TTM 31856	Single Family Residential	79	DU
M30	TTM 35876	Single Family Residential	17	DU
M31	TTM 33738	Single Family Residential	52	DU
M32	TTM 31456	Single Family Residential	177	DU
M33	GPA 2016-061; SPA -062; TR -063	Single Family Residential	54	DU
M34	CUP 2016-263	Manufacturing	12.323	TSF
M35	TR 32025	Single Family Residential	198	DU
M36	TR 30812	Single Family Residential	29	DU
M37	PP 2016-239	Recreation Community Center	N/A	
M38	CUP 2016-233	Automobile Parts Sales	17.600	TSF

Table 4.0-1 Cumulative Project List (Cont'd)

No.	Project Name	Land Use	Quantity[1]	
M39	PAR 2015-228	Gas Station & Market / Car Wash	8	VFP
		Fast-food w/ Drive-Thru	4.365	TSF
M40	PAR 2016-215	Gas Station & Market / Car Wash	4	VFP
		Fast-food w/ Drive-Thru	3.200	TSF
		Retail	2.000	TSF
M41	CUP 2015-157	Car Wash	4.392	TSF
		Tire Shop	6.166	TSF
M42	PAR 2016-154/PP 2017-021	Wholesale Market	29.536	TSF
		Retail	12.993	TSF
		High Turnover (Sit-Down) Restaurant	8.646	TSF
M43	PP 2016-124	Fast-food w/ Drive-Thru	6.200	TSF
		Retail	1.000	TSF
		Gas Station & Market / Car Wash	12	VFP
M44	PP 2016-164	Fast-food w/ Drive-Thru	2.730	TSF
M45	TR 2016-038	Single Family Residential	18	DU
M46	PP 22628; EOT 2016-102	Mixed Commercial/Industrial	N/A	
M47	CUP 2016-183	Assisted Living	45.246	TSF
		Mixed Office/Retail	10.368	TSF
M48	TM 28790	Single Family Residential	156	DU
M49	TR 28859	Single Family Residential (65% Built)	86	DU
M50	TR 28859-1	Single Family Residential	--	
M51	CUP 2013-157	Tire Store	7.171	TSF
M52	PP 2015-164	Senior Adult Attached Housing	100	DU
		Apartments	238	DU
M53	EOT 2015-012	General Light Industrial	97.564	TSF
M54	PP 2015-099	Retail	9.750	TSF
M55	PAR 2015-133	Condo/Townhomes	126	DU
M56	TR 31536	Single Family Residential	44	DU
M57	TTM 2015-165	Single Family Residential	68	DU
M58	TR 2017-174; CUP 2017-173; PP 2017-175	Assisted Living	142	Rooms
		Memory Care	36	Rooms
		Office	21.722	TSF
M59	2011-003	Office	21.623	TSF
		Warehouse	40.000	TSF
M60	2015-211	Single Family Residential	75	DU
M61	PAR 2016-039/TR33511	Single Family Residential	71	DU
M62	Motte Distribution Rincon Center	Warehouse	312.983	TSF
		High-Cube Warehouse	1,012.080	TSF

Table 4.0-1 Cumulative Project List (Cont'd)

No.	Project Name	Land Use	Quantity[1]	
CITY OF PERRIS				
P1	Towne Center (DPR 06-0337)	Shopping Center	286.000	TSF
		Free-Standing Discount Store	221.000	TSF
P2	Metrolink Station	Light Rail Transit	680	SP
P3	PDO 07-12-0006	Condo/Townhomes	400	DU
		Shopping Center	60.000	TSF
P4	Remaining DPR 04-0621 (Perris Crossing)	Fast-food w/ Drive-Thru	16.300	TSF
		General Office	24.200	TSF
		Specialty Retail	26.825	TSF
		Shopping Center	209.500	TSF
P5	Green Valley Specific Plan	Single Family Residential	976	DU
		Condo/Townhomes	1,472	DU
		Apartments	926	DU
		Community Center	131.769	TSF
		Shopping Center	303.831	TSF
	Riverwoods Specific Plan	Single Family Residential	663	DU
		Elementary School	600	STU
		City Park	12	AC
		Community Center	2.500	TSF
P6	TR 31304	Single Family Residential	123	DU
	TR 31407	Single Family Residential	243	DU
	TR 31650	Single Family Residential	61	DU
	TR 30973	Single Family Residential	35	DU
	TR 31225	Single Family Residential	57	DU
	TR 31226	Single Family Residential	82	DU
	TR 33050	Single Family Residential	35	DU
	TR 33199	Single Family Residential	26	DU
	TR 33200	Single Family Residential	130	DU
	TR 33247	Single Family Residential	28	DU
	TR 33193	Condo/Townhomes	94	DU
	TR 32032	Single Family Residential	108	DU
	TR 31926	Single Family Residential	337	DU
	TR 33900	Single Family Residential	198	DU
	TR 33973	Single Family Residential	384	DU
	TR 31925	Single Family Residential	10	DU
	TR 36343	Single Family Residential	184	DU
	TR 32666	Single Family Residential	663	DU

Table 4.0-1 Cumulative Project List (Cont'd)

No.	Project Name	Land Use	Quantity[1]	
P7	DPR 07-0130 (First Industrial)	High-Cube Warehouse	760.000	TSF
	DPR 08-01-0007 (First Industrial)	High-Cube Warehouse	3,200.000	TSF
	DPR 08-04-0006 (First Industrial)	High-Cube Warehouse	3,400.000	TSF
P8	TR 32525	Single Family Residential	162	DU
P9	Downtown Specific Plan	Single Family Residential	391	DU
		Apartments	2,598	DU
		Condo/Townhomes	377	DU
		General Office	1,588.271	TSF
		Shopping Center	536.576	TSF
		General Light Industrial (Existing Uses)	-344	TSF
	DPR 12-07-0011	Specialty Retail	12.48	TSF
P10	Parkwest Specific Plan	Single Family Residential	2,027	DU
	TR 34078	Single Family Residential	72	DU
	TR 31678	Single Family Residential	67	DU
	DPR 06-0378	Senior Apartments	429	DU
	DPR 10-03-0001	Senior Apartments	190	DU
	TR 31651	Single Family Residential	57	DU
	TR 31240-1	Single Family Residential	114	DU
	DPR 12-05-0013	Apartments	75	DU
P11	DPR 08-04-0016 (Redlands Retail)	Shopping Center	643.000	TSF
	DPR 10-01-0008	Shopping Center	43.000	TSF
	DPR 07-07-0032	Shopping Center	83.464	TSF
P12	DPR 11-12-0009	Hotel	100	ROOM
P13	DPR 14-03-0018; MA 14-03-0019	Manufacturing	47	TSF
P14	ADPR 14-03-0008	City Park	6.0	AC

Table 4.0-1 Cumulative Project List (Cont'd)

No.	Project Name	Land Use	Quantity[1]	
COUNTY OF RIVERSIDE				
R1	TR 31500	Single Family Residential	182	DU
	TR 32514	Condo/Townhomes	86	DU
	TR 30972	Single Family Residential	91	DU
		City Park	1.50	AC
R2	TR 30266	Single Family Residential	245	DU
		Condo/Townhomes	265	DU
		Elementary School	600	STU
		City Park	5	AC
		Shopping Center	183.600	TSF
	TR 33498	Condo/Townhomes	233	DU
	TR 34677	Single Family Residential	420	DU
		City Park	4.1	AC
	TR 31100	Single Family Residential	286	DU
	TTM 34842	Single Family Residential	32	DU
	TT 31537	Single Family Residential	588	DU
		Elementary School	600	DU
	TR 30808	Single Family Residential	393	DU
R3	PP 25248	Shopping Center	8.239	TSF
R4	TR 29322	Single Family Residential	202	DU

[1] TSF = Thousand Square Feet; DU = Dwelling Unit; AC = Acres; STU = Students; VFP = Vehicle Fueling Positions

(Urban Crossroads, 2019d, Table 4-2)

4.0.3 Identification of Impacts

Subsections 4.1 through 4.17 of this EIR evaluate the 17 environmental subjects warranting detailed analysis, as determined by this EIR's Initial Study and in consideration of public comment on this EIR's NOP and the 2018 updates to Appendix G to the CEQA Guidelines. The format of discussion is standardized as much as possible in each section for ease of review. The environmental setting is discussed first, followed by a discussion of the Project's potential environmental impacts based on specified thresholds of significance used as criteria to determine whether potential environmental effects are significant.

The thresholds of significance used in this EIR are based on the thresholds presented in CEQA Guidelines Appendix G and as applied by the City of Menifee to create the Project's Initial Study Checklist (included in *Technical Appendix A* to this EIR). The thresholds are intended to assist the reader of this EIR in understanding how and why this EIR reaches a conclusion that an impact would or would not occur, is significant, or is less than significant.

Serving as the CEQA Lead Agency for this EIR, the City of Menifee is responsible for determining whether an adverse environmental effect identified in this EIR should be classified as significant or less than significant. The standards of significance used in this EIR are based on the independent judgment of the City of Menifee, taking into consideration CEQA Guidelines Appendix G; the City of Menifee's Municipal Code and adopted City policies; the judgment of the technical experts that prepared this EIR's Technical Appendices; performance standards adopted, implemented, and monitored by regulatory agencies; significance standards recommended by regulatory agencies; and the standards in CEQA that trigger the preparation of an EIR.

As required by CEQA Guidelines § 15126.2(a), impacts are identified in this EIR as direct, indirect, cumulative, short-term, long-term, on-site, and/or off-site impacts of the proposed Project. A summarized "impact statement" is provided in each subsection following the analysis. The following terms are used to describe the level of significance related to the physical conditions within the area affected by the proposed Project:

- No Impact: An adverse change in the physical environment would not occur.

- Less-than-Significant Impact: An adverse change in the physical environment would occur but the change would not be substantial or potentially substantial and would not exceed the threshold(s) of significance presented in this EIR.

- Significant Impact: A substantial or potentially substantial adverse change in the physical environment would occur and would exceed the threshold(s) of significance presented in this EIR, requiring the consideration of mitigation measures or alternatives to the proposed Project.

Each subsection also includes a discussion or listing of the applicable regulatory criteria (laws, policies, regulations) that the Project is required to comply with (if any). If impacts are identified as significant after mandatory compliance with regulatory criteria, feasible mitigation measures are presented that would either avoid the impact or reduce the magnitude of the impact. The following terms are used to describe the level of significance following the application of recommended mitigation measures:

- Less-than-Significant Impact with Mitigation: A substantial or potentially substantial adverse change in the physical environment would occur that would exceed the threshold(s) of significance presented in this EIR; however, the impact can be avoided or reduced to a less than significant level through the application of feasible mitigation measures.

- Significant and Unavoidable Impact: A substantial or potentially substantial adverse change in the physical environment would occur that would exceed the threshold(s) of significance presented in this EIR. Feasible and enforceable mitigation measures that have a proportional nexus to the Project's impact are either not available or would not be fully effective in avoiding or reducing the impact to below a level of significance.

For any impact identified as significant and unavoidable, the City of Menifee would be required to adopt a statement of overriding considerations pursuant to CEQA Guidelines § 15093 in order to approve the Project despite its significant impact(s) to the environment. The statement of overriding considerations would list the specific economic, legal, social, technological, and other benefits of the Project, supported by substantial evidence in the Project's administrative record, that outweigh the unavoidable impacts.

4.1 AESTHETICS

This Subsection describes the aesthetic qualities and visual resources present on the Project site and in the site's vicinity and evaluates the potential effects that the Project may have on these resources. Descriptions of existing visual characteristics, both on-site and in the vicinity of the Project site, and the analysis of potential impacts to aesthetic resources are based, in part, on field observations and site photographs collected by T&B Planning Inc. in June 2017, analysis of aerial photography (Google Earth, 2016), and Project application materials submitted to the City of Menifee and described in Section 3.0, *Project Description*, of this EIR. This Subsection also is based in part on information and policies contained in the City of Menifee General Plan (Menifee, 2013a).

4.1.1 EXISTING CONDITIONS

The Project site encompasses 331.0 acres in a developed and developing area of the City of Menifee. The City of Menifee is bound to the west by the City of Canyon Lake and City of Lake Elsinore; to the north by the City of Perris; to the east by unincorporated Riverside County; and to the south by the City of Murrieta. Regional transportation facilities in the Project site's vicinity include Interstate 215 (I-215), located approximately 0.1 mile west of the Project site, State Route 74 (SR 74), located approximately 1.2 miles north of the Project site, and State Route 79 (SR 79), located approximately 5.4 miles to the east. The Project site is located east of I-215, and Encanto Drive, south of Rouse Road, west of the future extension of Antelope Road, and generally north of Chambers Avenue. Topographically, the site ranges in elevation from approximately 1,431 feet above mean sea level (amsl) near the western Project boundary to 1,654 feet amsl along the knoll in the northeastern corner of the site. (Google Earth, 2016)

Pursuant to CEQA Guidelines § 15125, the physical environmental condition for purposes of establishing the setting of an EIR is the environment as it existed at the time of the EIR's NOP was released for public review. The NOP for this EIR was released on November 14, 2017. As of that date, the site consisted of an undeveloped piece of property historically used for dryland farming. Dryland farming on the Project site ended in 2016. The Project site is currently subject to discing related to on-going fire abatement activities. Portions of the site also contain wild grass, weeds, brush, and scattered mature trees. The northeastern corner of the site contains a knoll with several rock outcroppings. The existing conditions of the Project site were previously shown on Figure 2-4, *Aerial Photograph*.

To illustrate the existing visual conditions of the Project site in more detail, a photographic inventory was prepared. Figure 4.1-1, *Site Photograph Key Map*, depicts the locations of six (6) vantage point photographs, each of which are described below. These photographs, shown on Figure 4.1-2 and Figure 4.1-3, provide a representative visual inventory of the site's visual characteristics as seen from surrounding public viewing areas. It should be noted that while site photographs were collected in June 2017, conditions on the property have not substantially changed since that time; thus, the photographs presented in this section provide an accurate reflection of the existing conditions of the Project site and surrounding areas.

- Site Photograph 1 (Figure 4.1-2): Site Photograph 1 was taken on Rouse Road just east of the intersection of Rouse Road and Encanto Drive (along the Project's northwestern corner), looking east to south. As the majority of the central portion of the photograph shows, the site largely consists of undeveloped areas subject to routine discing as part of on-going fire abatement activities. The left site of the photograph shows Rouse Road, as well as ornamental trees and electrical lines located north of Rouse Road that are associated with existing residential development. The right portion of the photograph shows the rear area of the Evans Brown Mortuary.

Figure 4.1-1

0 250 500 1,000 Feet

SITE PHOTOGRAPH KEY MAP

East

South

Site Photograph 1: From along Rouse Road looking east to south.

East

West

Site Photograph 2: From along Rouse Road looking east to west.

Southeast

Northwest

Site Photograph 3: From along Rouse Road looking southeast to northwest.

Figure 4.1-2

NOT TO SCALE

SITE PHOTOGRAPHS 1, 2 & 3

West

North

Site Photograph 4: From the intersection of Antelope Road and Chambers Avenue looking west to north.

West

East

Site Photograph 5: From along Chambers Avenue looking west to east.

North

East

Site Photograph 6: From along Encantor Drive looking north to east.

Figure 4.1-3

NOT TO SCALE

SITE PHOTOGRAPHS 4, 5 & 6

Also visible in the foreground of the right portion of the photograph is an electricity pole, dumpster, and decorative rocks associated with the Evans Brown Mortuary. From this location, distant views of the hillsides associated with Double Butte Mountain are visible along the horizon in the right portion of the photo. On the horizon of the photo at lower elevations than the visible hillsides are ornamental trees associated with existing development within the City of Menifee that occur to the south of the Project site.

- Site Photograph 2 (Figure 4.1-2): Site Photograph 2 was taken along Rouse Road near the intersection with Sherman Road, and depicts views of the Project site from east (left side of the photograph) to west (right side of the photograph). As shown in this photo, a majority of the Project site is routinely disturbed as part of on-going fire abatement activities. The existing knoll in the northeast corner of the Project site is visible in the left portion of the photo. In the distance along the horizon are hillsides associated with the Double Butte Mountain. At the base of the hillsides, existing development and associated landscaping located south of the Project site are visible.

- Site Photograph 3 (Figure 4.1-2): Site Photograph 3 was taken in the northeastern corner of the Project site along an unimproved segment of Antelope Road looking southeast (left side of the photograph) to northwest (right side of the photograph). As the majority of the photograph shows, the Project site largely consists of undeveloped land that is routinely disturbed as part of on-going fire abatement activities. The background of the left side of the photograph depicts a small hillside located east of the Project site as well as unimproved dirt roads that traverse the northeast corner of the Project site and continue along the lower elevations of the off-site hillsides to the southeast. In addition, the foreground of the left portion of the photograph shows several items that appear to be part of a trash scatter on the Project site. The right portion of the photograph shows an unimproved dirt road which traverses the base of the hillside present in the northeast corner of the Project site, and existing development within the City of Menifee in the background. The background of the left-central portion of the photograph shows hillsides associated with Double Butte Mountain. On the horizon of the photo at lower elevations than the visible hillsides are ornamental trees and homes associated with existing development within the City of Menifee to the south of the Project site.

- Site Photograph 4 (Figure 4.1-3): Site Photograph 4 was taken along intersection of Antelope Road and Chambers Avenue (along the Project's southeastern boundary), looking west (left side of the photograph) to north (right side of the photograph). As the majority of the photograph shows, the Project site largely consists of undeveloped land that is routinely disturbed as part of on-going fire abatement activities. The foreground of the photo shows an unimproved segment of Chambers Avenue in the central and left portions of the photograph, and an unimproved dirt segment of Antelope Road in the right portion of the photograph. The background of the left portion of photograph shows ornamental trees and residential development along the improved section of Chambers Avenue, as well as hillsides located within Quail Valley. The right portion of the photograph shows a small hillside that occurs in the northeast portion of the site, as well as electrical lines that go up the side of the hillside. The background of the central portion of the photograph shows ornamental trees and existing development within the City of Menifee and the hillsides located in the City of Menifee and in surrounding jurisdictions.

- Site Photograph 5 (Figure 4.1-3): Site Photograph 5 was taken along Chambers Avenue at the intersection with Sherman Road, along the Project's southern boundary, and depicts views looking west (left side of the photograph) to east (right side of the photograph). In the foreground is a man-

made drainage ditch that conveys nuisance and storm flows from a storm drain outlet at the intersection of Sherman Road and Chambers Avenue. Wetland vegetation occurs within the drainage ditch. In the remaining portion of the foreground is ruderal vegetation, beyond which are agricultural fields that are routinely disturbed as part of on-going fire abatement activities. Existing development to the north of the Project site is visible along the horizon in the left and central portions of the photograph. In the right side of the photograph along the horizon is the knoll that occurs in the northeastern portion of the Project site, to the right of which are hillsides associated with Double Butte Mountain.

- Site Photograph 6 (Figure 4.1-3): Site Photograph 6 was taken along Encanto Drive along the Project's southwestern boundary looking north (left side of the photograph) to east (right side of the photograph). As the majority of the photograph shows, the Project site largely consists of undeveloped land that is routinely disturbed as part of on-going fire abatement activities on-site. The left portion of the photograph shows Encanto Road in the foreground, and shows ornamental trees and existing development in the distance. The background of the central portion of the photograph shows existing development and ornamental trees located north of the Project site within the City of Menifee, as well as hillsides and mountains in the distance. Along the right portion of the photo is a parking lot associated with an existing motel located southwest of the Project site. Along the horizon in the right portion of the photo is the knoll located in the northeastern corner of the Project site, to the right of which are hillsides associated with Double Butte Mountain.

As can be seen in the above photos, the Project site does not contain any sources of artificial lighting under existing conditions although street lights do occur along the improved portions of Chambers Avenue. Additionally, and with the exception of the knoll in the northeast corner of the site, the Project site does not contain any topographically prominent landforms, visually prominent rock outcroppings or trees. The visual elements on-site under existing conditions are not major components of the surrounding viewshed.

4.1.2 Applicable Regulatory Requirements

A. Local Regulations

1. City of Menifee General Plan

The City of Menifee General Plan does not have any specific sections related to aesthetics and visual resources. However, the Land Use Element of the Menifee General Plan includes policies related to transitions between uses, and ensuring new development is carefully designed to avoid or incorporate natural features, which have applicability to the topic of aesthetics. The Land Use Element provides direction related to how future development is intended to build out, such as the intensity/density and character of new development. The Land Use Element also addresses the relationship between development, community enhancement, and natural resource management.

The Open Space and Conservation Element of the Menifee General Plan addresses open space and scenic resources in the City of Menifee. The Open Space and Conservation Element includes goals related to Natural Landforms, which also has applicability to the topic of aesthetics.

The Community Design Element of the Menifee General Plan addresses the protection and enrichment of the visual quality of Menifee, protection of the City's scenic resources, protection of the character of the City's neighborhoods, and utilizing buffers to transition between dissimilar land uses. The Community Design Element includes goals and policies related to Community Image, Rural Design, Design Quality, Corridors and Scenic Resources, Economic Development Corridor Design, and Community Design Features. The

Community Design Element also identifies scenic corridors, which are roadways (including State- and County-eligible and designated scenic highways) that traverse scenic resources, and identify policies that are intended to protect and maintain the scenic resources within these corridors. The State and County Scenic Highways in the vicinity of the Project site are shown on Figure 4.1-4, *Scenic Highways Map*. As shown in Figure 4.1-4, the portion of I-215 located approximately 0.3-mile south of the Project site, a portion of McCall Boulevard located approximately 0.3-mile south of the Project site, and a portion of Menifee Road located approximately 1.0 mile east of the Project site are considered County-Eligible Scenic Highways (Menifee, 2013a, Exhibit C-8). Additionally, Figure 4.1-4 indicates that a segment of SR-74 located approximately 1.0 mile north of the Project site is considered a State-Eligible Scenic Highway. The Community Design Element indicates that the City's scenic corridors are the same roadways designated Eligible County Scenic Highways. (Menifee, 2013a, Community Design Element)

2. City of Menifee Municipal Code Chapter 6.01

City of Menifee Municipal Code Chapter 6.01, *Dark Sky; Light Pollution*, establishes lighting standards for specific types of lamps, shielding, hours of operation, and outdoor advertising displays. Low-pressure sodium lamps are preferred. All outdoor lights, with certain exceptions, must be shielded. Security lighting may remain on all night; decorative lighting must be off between 11:00 PM and sunrise; and advertising lighting may remain on until midnight. (Menifee, 2013b, p. 5.1-9; Menifee, 2018)

4.1.3 Basis for Determining Significance

Section I of Appendix G to the CEQA Guidelines addresses typical adverse effects to aesthetics, and includes the following threshold questions to evaluate the Project's impacts on aesthetics (OPR, 2018):

a. *Have a substantial adverse effect on a scenic vista;*

b. *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;*

c. *In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, impacts would be potentially significant if the Project were to conflict with applicable zoning and other regulations governing scenic quality; or*

d. *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.*

4.1.4 Impact Analysis

Threshold a: Would the Project have a substantial adverse effect on a scenic vista?

As described above in Subsection 4.1.1, the Project site is currently undeveloped and was historically utilized for dryland farming, which ended on-site in 2016. Under existing conditions, the majority of the site has been disturbed from regular discing as part of on-going fire abatement activities. Aside from a knoll present in the northeastern corner of the Project site, the site exhibits relatively little topographic variation and slopes gently downward from east to west.

As shown on the existing conditions site photographs (see Figure 4.1-2 through Figure 4.1-3), the Project site does not afford any prominent vistas or views open to the public.

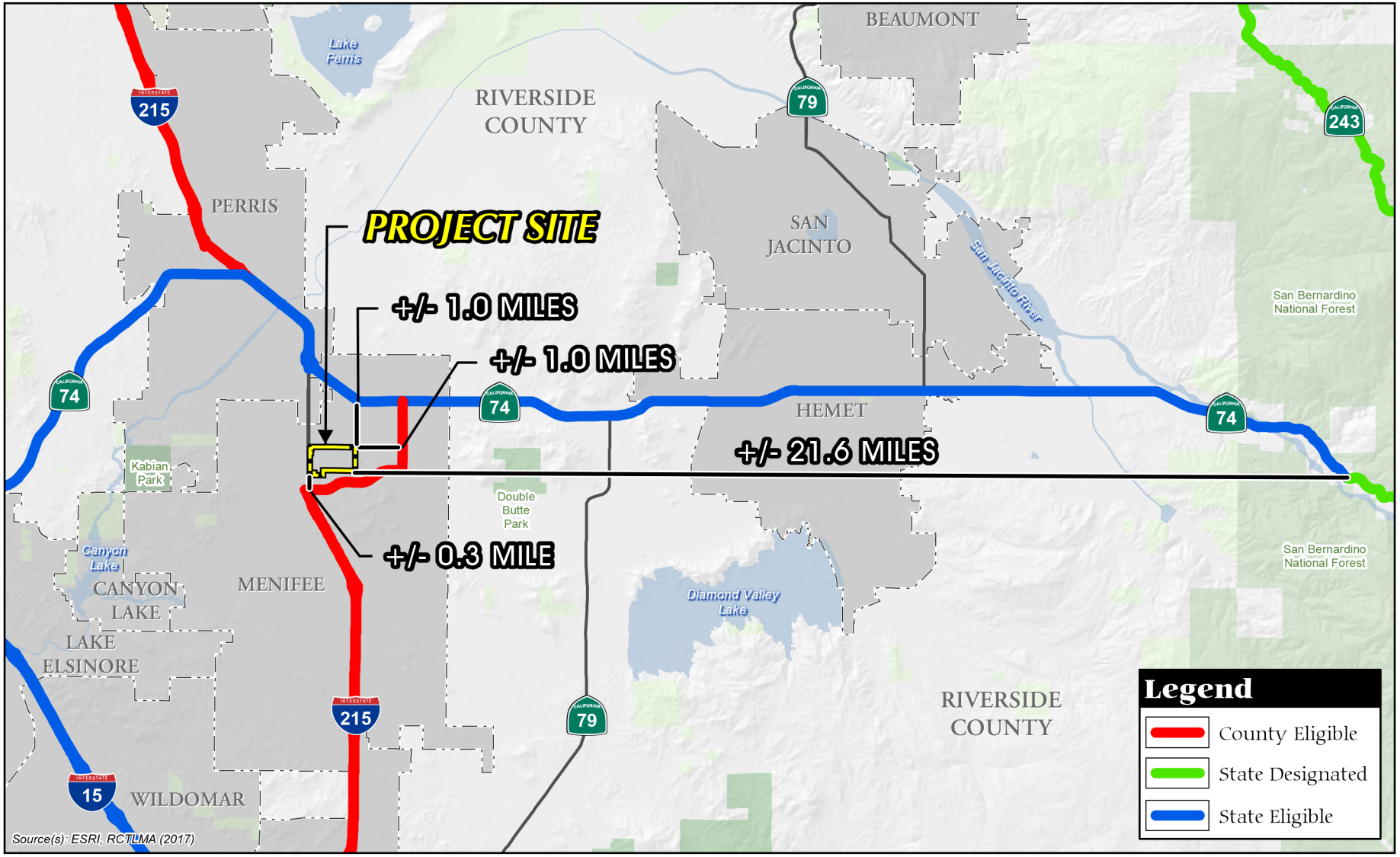


Figure 4.1-4

SCENIC HIGHWAYS MAP

In fact, the only visually prominent resources within the Project's viewshed are distant views of surrounding hillsides. However, views of these features are highly common within the Project vicinity, and are not unique to the Project site. Residential buildings on the Project site would have a maximum height of 40 feet, and commercial buildings would have a maximum height of 45 feet. The proposed building heights would be similar to the building heights of the surrounding developments and would not substantially affect views of a scenic vista.

With implementation of the Project, the site would be developed with up to 1,061 residential homes, approximately 225,000 s.f. of commercial land uses, a 12.9-acre community park/community center, a 1.9-acre private recreation center, 7.9 acres of paseos/neighborhood parks, and 26.4 acres containing three water quality/detention basins. The proposed water quality/detention basins would be visually prominent from the Project site and surrounding off-site locations. A water quality/detention basin is proposed to be located in the northwest corner of the Project site within Planning Area 19 that would be visible from the I-215 freeway, Encanto Drive, Rouse Road, and from surrounding developments located north of the Project site. Another water quality/detention basin is proposed to be located in the northern portion of the Project site in Planning Area 20 that would be visible from Rouse Road, Sherman Road, and from off-site developments located north of the Project site, while a third water quality/detention basin is proposed in the southern portion of the Project site in Planning Area 21 that would be visible from Chambers Road, Sherman Road, and from surrounding off-site development located south of the Project site. View of the water quality/detention basins would not substantially affect views of a scenic vista.

Development of the Project site with residential and commercial uses would not substantially obstruct any prominent scenic vistas or views open to the public, including hillside views. Additionally, the knoll that occurs in the northeast portion of the site would be preserved as planned open space. Accordingly, impacts would be less than significant.

Threshold b: ***Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?***

According to information for the California Department of Transportation (Caltrans), there are no officially designated scenic highways within the Project site's vicinity (Caltrans, 2011). The nearest officially designated State Scenic Highway to the site is the easternmost segment of SR-74 that provides ingress/egress to the San Jacinto Mountains, located approximately 21.6 miles east of the Project site (Caltrans, 2011; Google Earth, 2016). At this distance, the Project would have no effect on views available from this segment of SR-74.

There are no officially-County-designated scenic highways located within the Project vicinity (Menifee, 2013a, Exhibit C-8). As shown on Figure 4.1-4, the portion of the I-215 located approximately 0.3-mile to the south of the Project site, a portion of McCall Boulevard located approximately 0.3-mile south of the Project site, and a portion of Menifee Road located approximately 1.0 mile east of the Project site are considered County-Eligible Scenic Highways (Menifee, 2013a, Exhibit C-8). T&B Planning, Inc. conducted a viewshed analysis using Google Earth Pro, which indicated that the Project would be visible from a small segment of I-215 southwest of the Project site, and visible from a small segment of McCall Boulevard southeast of the Project site. However, I-215 and McCall Boulevard are not officially designated by Riverside County as scenic highways. Additionally, due to topography, future on-site development would not be prominently visible from these facilities. Views of the Project site would be further restricted due to intervening development and vegetation/landscaping, which are not accounted for by Google Earth Pro's viewshed analysis. Accordingly, due to the distance between County-Eligible Scenic Highways from the Project site, their unofficial designation

status as scenic highways, and the lack of visibility potential of future development on the Project site due to distance and intervening development and landscaping, the Project would result in less-than-significant impacts to County-designated scenic highways.

As stated above in Subsection 4.1.2, the segment of SR-74 located approximately 1.0 mile to the north of the Project site is eligible to be a State scenic highway, but is not currently designated (Caltrans, 2011). T&B Planning conducted a viewshed analysis using Google Earth Pro, which indicated that the Project site would not be visible from any nearby segment of SR-74. Accordingly, due to the distance and lack of views of the Project site from SR-74, as well as the unofficial designation status as a scenic highway, the Project would have no impact on State-designated scenic highways. Thus, the Project has no potential to substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings along a State-designated scenic highway facility, and thus no such impacts would occur. Please refer to Threshold a, above, for a discussion and analysis of the Project's potential impacts to scenic resources that are not visible from any State-designated scenic highway facilities.

Threshold c:	***In non-urbanized areas, would the Project substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, impacts would be potentially significant if the Project were to conflict with applicable zoning and other regulations governing scenic quality?***

Under existing conditions, the 331.0-acre Project site consists of undeveloped land that is subject to discing as part of on-going fire abatement activities. Portions of the site also contain wild grass, weeds, brush, and scattered mature trees. With implementation of the Project, the site would be developed with up to 1,061 residential homes, approximately 225,000 s.f. of commercial land uses, a 12.9-acre community park/community center, a 1.9-acre private recreation center, 7.9 acres of paseos/neighborhood parks, and 26.4 acres containing three water quality/detention basins. The proposed water quality/detention basins would be visually prominent from the Project site and surrounding off-site locations. A water quality/detention basin is proposed to be located in the northwest corner of the Project site within Planning Area 19 that would be visible from the I-215 freeway, Encanto Drive, Rouse Road, and from surrounding developments located north of the Project site. Another water quality/detention basin is proposed to be located in the northern portion of the Project site in Planning Area 20 that would be visible from Rouse Road, Sherman Road, and from off-site developments located north of the Project site, while a third water quality/detention basin is proposed in the southern portion of the Project site in Planning Area 21 that would be visible from Chambers Road, Sherman Road, and from surrounding off-site development located south of the Project site.

All development on the Project site would be required to comply with the Design Guidelines of the Legado Specific Plan (SP 2017-187), which have been crafted to ensure that future development on-site is aesthetically pleasing and not offensive. The Design Guidelines contain standards related to architecture, landscaping, walls/fences, and other elements of the physical environment to provide specific guidance for future implementing development. The Design Guidelines also provide specific standards related to the screening of the visually prominent water quality/detention basins proposed on-site. Per the requirements of the Design Guidelines, all three water quality/detention basins would be landscaped in conformance with City of Menifee standards to minimize the visual effects of the basins. The edges of the water quality/detention basins would be planted with enhanced landscaping including groundcover, shrubs, and trees to provide visual screening. Furthermore, each of the water quality/detention basins would have a 6-foot high view fence or a 6-foot high block wall surrounding the basin to screen from public view, which would further ensure the water quality/detention basins would not degrade the visual character or quality of the Project site. Thus, there are

no components of the Project that would substantially degrade the existing visual character or quality of public views of the site and its surroundings. Accordingly, impacts would be less than significant.

Threshold d: ***Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?***

Under existing conditions, the Project site consists of undeveloped land and does not contain any sources of artificial lighting, although street lights do occur along the improved portions of Chambers Avenue. With implementation of the Project, the site would be developed with up to residential, commercial, and recreational uses that would generate sources of artificial light. Implementation of the Project would result in new sources of light in the Project area as compared to existing conditions.

The Project would be required to comply with the provisions of the proposed Legado Specific Plan which includes the following design guidelines for exterior lighting pertaining to daytime/nighttime views:

- All outdoor lighting, including spotlights, floodlights, electrical reflectors and other means of illumination for signs, structures, landscaping, parking, loading, unloading and similar areas, shall be focused, directed, and arranged to prevent glare or direct illumination on streets or adjoining property.

- All outdoor lighting shall comply with the requirements of Chapter 6.01: Dark Sky; Light Pollution of the MMC.

- The type and location of building lighting should preclude direct glare onto adjacent property, streets and skyward;

- Lighting should be incorporated into signage design when appropriate in order to minimize glare and light spillage while accentuating the design of the signage.

The City of Menifee is required to review future implementing building permits for compliance with the Specific Plan regulations and provisions related to lighting. Mandatory compliance with the design guidelines of the Specific Plan would ensure that all outdoor lighting sources on the Project site would be designed to prevent glare and light spillage to the surrounding properties and streets. Thus, light and glare impacts associated with the proposed commercial and residential land uses on site would be less than significant assuming mandatory compliance with City of Menifee Municipal Code Chapter 6.01 and the lighting provisions of the Specific Plan.

Although impacts associated with commercial and residential uses would be less than significant, the Project proposes a 12.9-acre community park/community center with sports fields and field lighting. The 12.9-acre community park/community center site is located adjacent to an existing single-family residential neighborhood to the south and the existing Life Care Center to the southwest. According to standards established by the Institution of Lighting Engineers (ILE) and the Electric Power Research Institute (EPRI), and based on the environmental characteristics of the Project area (i.e., an area of medium ambient brightness), a significant lighting impact could occur if future lighting at the community park/community center were to expose residential structures to the south or the Life Care Center building to the southwest to lighting levels exceeding 0.8 foot-candles during pre-curfew hours (before 11:00 pm) or 0.2 foot-candles during post-curfew hours (after 11:00 pm to dusk). This is evaluated as a significant impact for which mitigation may be required. (ILE, 1997; EPRI, 2000)

In addition, the Project site is located within Zone B of the Mt. Palomar Nighttime Lighting Policy Area (Menifee, 2013b, p. 5.1-2). All development projects within Zone B of the Mt. Palomar Nighttime Lighting Policy Area are required to adhere to the requirements of Menifee Municipal Code Chapter 6.01, which establishes lighting standards for specific types of lamps, shielding, hours of operation, and outdoor advertising displays to protect the Observatory. Municipal Code Chapter 6.01 states that low-pressure sodium lamps are the preferred illuminating source, and that outdoor lighting fixtures are required to be shielded. Pursuant to Section 6 of Municipal Code Chapter 6.01, future building permits would be required to include specific information with regards to lighting, as follows: 1) the location of the site where outdoor light fixtures would be installed; 2) plans indicating the location and type of fixtures of the premises; and 3) a description of the outdoor light fixtures, including, but not limited to, manufacturer's catalog cuts and drawings. The required plans and descriptions enable the City to determine whether compliance with the requirements of the ordinance are met. No building permits would be issued by the City unless the building permit applications demonstrate consistency with the various provisions of Municipal Code Chapter 6.01. (Menifee, 2018)

None of the Project's proposed building materials would consist of reflective materials, except for the proposed windows, which would not be mirrored and would have similar low-potential glare characteristics as do other windows on buildings in the surrounding area. The Project does not include any components that would generate substantial amounts of reflective surfaces to the Project vicinity; therefore, impacts associated with glare would be less than significant. Mandatory compliance with the development standards and design guidelines of the Legado Specific Plan (SP 2017-187) and the City of Menifee Municipal Code would ensure that all lighting and building design elements proposed by the Project are designed to prevent the creation of substantial light or glare that could affect day or nighttime views in the area. Accordingly, implementation of the Project would result in a less-than-significant impact related to new sources of light or glare.

Although the Project would add a new source of light and glare to the Project area as compared to existing conditions, the Project would be required to comply with the lighting standards in the Specific Plan and the lighting provisions of City of Menifee Municipal Code Chapter 6.01, which would reduce impacts associated with the proposed commercial and residential land uses to less-than-significant levels. However, a significant impact would occur if sports lighting were to be proposed in the on-site community park/community center, and if such lighting were to expose the residential buildings to the south or the Life Care Center building to the southwest to lighting levels exceeding 0.8 foot-candles during pre-curfew hours (before 11:00 pm) or 0.2 foot-candles during post-curfew hours (after 11:00 pm to dusk). This is evaluated as a potentially significant impact for which mitigation may be required.

City Regulations and Design Requirements CRDR 4.1-1 and CRDR 4.1-2 requires mandatory compliance with the Project's Specific Plan design guidelines related to lighting, as well as mandatory compliance with the lighting provisions provided in Municipal Code Chapter 6.01, which would ensure that the Project would not create a new source of substantial light or glare. Implementation of Mitigation Measure MM 4.1-1 would ensure that appropriate measures are incorporated into the design of the proposed sports field lighting fixtures so as not to expose the nearby residential and Life Care Center buildings to lighting levels exceeding the levels recommended by the ILE and EPRI for pre-curfew or post-curfew hours (EPRI, 2000; ILE, 1997). Implementation of the required mitigation would reduce impacts to less-than-significant levels.

4.1.5 Cumulative Impact Analysis

Due to the existing topography on- and off-site, landscaping, and development with the Project's immediate vicinity, the Project's viewshed is fairly limited. Thus, the Project's potential to result in cumulatively considerable visual quality impacts would be limited to a geographic area that extends a relatively short

distance from the Project site. Based on the viewshed analyses conducted in Google Earth Pro by T&B Planning (maximum viewshed of approximately 6.2 miles from the approximate center of the Project site), that Project site under existing conditions is primarily visible to small areas of open space and residential communities that surround the site. The viewshed analysis also indicated the Project would be visible from a small segment of I-215 to the west of the Project site, as well as a small segment of SR-74 to the northwest of the Project site. The Project site is also visible from the hillsides located approximately 1.2 miles southeast of the Project site, and the hillsides located approximately 1.8 miles west of the Project site. Accordingly, for purposes of analysis herein, the Project's cumulative study area for purposes of scenic views is limited to these surrounding areas, as areas beyond this study area would not be in the same viewshed as the Project.

As noted under the discussion of Threshold a, the Project site does not contain any scenic vistas under existing conditions, and the Project would be visible from off-site locations. The Project would not have an impact to views of the surrounding hillsides due to the Project site's elevation relative to surrounding properties. When viewed in the context of cumulative development in the immediate vicinity of the Project site, future development on the site and other existing and planned developments within the Project's viewshed would not obstruct any prominent vistas or views open to the public. Accordingly, the Project would not result in a cumulatively-considerable impact to scenic vistas.

As noted in the analysis of Threshold b, the Project site is not within the viewshed of an officially-designated State Scenic Highway; thus, the Project has no potential to result in cumulatively-considerable impacts to officially-designated State Scenic Highways. The Project site is located in the vicinity of highways designated as State "Eligible" scenic highways; however, due to the distance of the Project site from the Eligible scenic highways, and existing intervening development, the Project site would not be prominently visible from State "Eligible" scenic highways. Furthermore, these highways are not officially designated as State Scenic Highways. The viewshed analysis conducted by T&B Planning, Inc. indicated the site is visible from small segments of I-215 to the south, and McCall Boulevard to the southeast, both of which are County-Eligible Scenic Highways. When viewed in the context of existing and future development in the Project's viewshed, the Project would appear as a continuation of existing development patterns, which include a mixture of residential, commercial, and recreational land uses. Therefore, impacts to nearby scenic highway corridors would be less-than-cumulatively-considerable.

As discussed in the analysis of Threshold c, the Project would be required to comply with the Design Guidelines of the Legado Specific Plan, which would ensure that the Project is developed in such a fashion so as not to degrade the visual character or quality of the Project site or its surroundings. The Project would be visually compatible with existing residential and commercial developments in the Project's viewshed. The existing viewshed comprises existing and planned development dominated by single-family residential communities with some neighborhood-serving commercial uses, and because the Project proposes to develop the site with single-family residential uses, a community park/community center, recreational uses, and water quality/detention basins in a manner consistent with the proposed Legado Specific Plan development standards, impacts due to the existing and planned visual character of quality of the site and its surroundings would be less-than-cumulatively-considerable. There are no components of the Project that would result in cumulatively-considerable impacts to the existing visual character or quality of the site and its surroundings. Accordingly, cumulatively-considerable impacts would be less than significant.

As discussed under the analysis of Threshold d, the Project incorporates Design Guidelines for exterior lighting and would be required to comply with the regulations of City of Menifee Municipal Code Chapter 6.01. All development within the immediate vicinity of the Project site also would be required to comply with the Municipal Code Chapter 6.01 regarding lighting. All streetscape lighting within the immediate vicinity of the

Project would therefore be required to use lamp covers to ensure light is cast downwards towards sidewalks and streets, thereby preventing "spillover" effects that could interfere with nighttime views in the area. The Project has been designed to comply with the Municipal Code Chapter 6.01, and measures have been incorporated into the Specific Plan to further ensure that Project lighting elements do not adversely affect nighttime views in the local area. Additionally, there are no components of the Project that would produce substantial amounts of glare, such as mirrored windows. Although sports field lighting elements are proposed within the community park/community center on site that may result in direct impacts to surrounding uses, there are no other sources of substantial lighting in the immediate area that could cumulatively contribute to excessive lighting levels affecting sensitive receptors. Therefore, a cumulatively-considerable impact associated with light and glare would not occur.

4.1.6 Significance of Impacts Before Mitigation

Threshold a: Less-than-Significant Impact. The Project would not result in damage to any scenic resources on-site that are visually prominent from off-site locations. The Project also would not obstruct distant views of hills and mountains that frame the Project's viewshed. Additionally, future development on-site would be required to comply with the Design Guidelines of the proposed Legado Specific Plan, which have been crafted specifically to ensure future development on-site is not aesthetically offensive.

Threshold b: Less-than-Significant Impact. The Project site is not located within the viewshed of any officially designated scenic highways, and would not be visually prominent from any County-Eligible facilities. Impacts to scenic highways corridors would be less than significant.

Threshold c: Less-than-Significant Impact. City Regulation and Design Requirement CRDR 4.1-1 requires mandatory compliance with the Design Guidelines of the Legado Specific Plan, which would ensure that the Project does not degrade the visual character or quality of the Project site or its surroundings. The Project would not be visually offensive either on-site or within the context of surrounding uses and planned development. There are no components of the Project that would result in the substantial degradation of the visual character or quality of public views of the Project site and surrounding areas. Accordingly, impacts due to the degradation of the existing visual character or quality of the Project site and its surroundings would be less than significant.

Threshold d: Significant Direct Impact. City Regulations and Design Requirements CRDR 4.1-1 and CRDR 4.1-2 requires mandatory compliance with the Project's Specific Plan design guidelines related to lighting, as well as mandatory compliance with the lighting provisions provided in Municipal Code Chapter 6.01, which would ensure that the Project would not create a new source of substantial light or glare. Nonetheless an adverse effect to daytime and nighttime views in the area would occur and impacts would be potentially significant prior to mitigation.

4.1.7 City Regulations, Design Requirements, and Mitigation

Applicable City Regulations and Design Requirements

The following are applicable regulations and design requirements within the City of Menifee. Although these requirements technically do not meet CEQA's definition for mitigation, they are imposed herein to ensure Project compliance with applicable City regulations and design requirements.

CRDR 4.1-1 The Project is required to comply with the Design Guidelines of the proposed Specific Plan No. 2017-187. Compliance with these Project design features would be assured by the City's

future review of implementing building permits for compliance with the Specific Plan's design features that would serve to reduce and/or avoid impacts relating to aesthetics.

CRDR 4.1-2 The Project is required to comply with City of Menifee Municipal Code Chapter 6.01, which is intended to restrict the permitted use of certain light fixtures emitting light into the night sky which could have a detrimental effect on astronomical observation and research. Municipal Code Chapter 6.01 sets forth requirements for lamp source and shielding of light emissions for outdoor fixtures to reduce "skyglow" or light pollution that affects day or nighttime views from the Mt. Palomar Observatory (located approximately 31 miles southeast of the Project site in northern San Diego County). Compliance with Municipal Code Chapter 6.01 would ensure the Project does not include light fixtures that would emit excessive amounts of light into the night sky and would reduce lighting-related impacts.

Mitigation

MM 4.1-1 Prior to approval of any improvement plans for the 12.9-acre community park/community center on site that propose sports field lighting exceeding 25 feet in height, the Project Applicant shall prepare and the City of Menifee Building and Safety Department shall approve a Lighting Impact Study (LIS). The required LIS shall demonstrate that the proposed lighting elements would not expose adjacent residential structures or the adjacent Life Care Center building to lighting levels exceeding 0.8 foot-candles during pre-curfew hours (before 11:00 pm) or 0.2 foot-candles during post-curfew hours (after 11:00 pm to dusk) as measured on both the vertical and horizontal planes. If necessary, the required LIS shall identify modifications to the design of the proposed lighting elements and/or shall impose operational constraints on the use of the lighting elements (e.g., requiring that all lighting elements be extinguished prior to 11:00 pm) to ensure that the nearby residential and the Life Care Center structures are not exposed to lighting levels exceeding 0.8 foot-candles during pre-curfew hours (before 11:00 pm) or 0.2 foot-candles during post-curfew hours (after 11:00 pm to dusk).

4.1.8 Significance of Impacts After Mitigation

Threshold d: Less-than-Significant Impact with Mitigation Incorporated. Implementation of Mitigation Measure MM 4.1-1 would ensure that appropriate measures are incorporated into the design of the proposed sports field lighting fixtures so as not to expose the nearby residential and Life Care Center buildings to lighting levels exceeding the levels recommended by the ILE and EPRI for pre-curfew or post-curfew hours (EPRI, 2000; ILE, 1997). Implementation of the required mitigation would reduce impacts to less-than-significant levels.

4.2 AIR QUALITY

This subsection is based on a technical report titled, "Legado Specific Plan Air Quality Impact Analysis" (herein, "AQIA"), which is dated August 16, 2019 and is included as *Technical Appendix B* to this EIR (Urban Crossroads, 2019a). Refer to Section 7.0, *References*, for a complete list of reference sources.

4.2.1 EXISTING CONDITIONS

A. South Coast Air Basin

The Project site is located in the South Coast Air Basin (SCAB) within the jurisdiction of the South Coast Air Quality Management District (SCAQMD). 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. The Project site is located within the SCAB, which is a 6,745-square mile subregion of the SCAQMD that includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The larger South Coast district boundary includes 10,743 square miles. (Urban Crossroads, 2019a, p. 10)

The SCAB is bound by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the Mojave Desert Air Basin is bound by the San Gabriel Mountains to the south and west, the Los Angeles / Kern County border to the north, and the Los Angeles / San Bernardino County border to the east. The Riverside County portion of the Salton Sea Air Basin is bound by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley. (Urban Crossroads, 2019a, p. 10)

B. Regional Climate

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality. (Urban Crossroads, 2019a, p. 10)

The annual average temperatures throughout the SCAB vary from the low to middle 60s (degrees Fahrenheit). 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. (Urban Crossroads, 2019a, p. 10)

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 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 within 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. These effects decrease with distance from the coast. (Urban Crossroads, 2019a, p. 10)

More than 90 percent of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen 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. (Urban Crossroads, 2019a, p. 11)

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, and on the longest day of the year there are approximately 14 ½ hours of possible sunshine. (Urban Crossroads, 2019a, p. 11)

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the 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. This period 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. (Urban Crossroads, 2019a, p. 11)

In the SCAB, there are two distinct temperature inversion structures that 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. (Urban Crossroads, 2019a, p. 11)

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 NO_X and 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. (Urban Crossroads, 2019a, p. 11)

C. Wind Patterns

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. (Urban Crossroads, 2019a, p. 12)

Wind patterns across the south coastal region are characterized by westerly and southwesterly on-shore 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. (Urban Crossroads, 2019a, p. 12)

D. Criteria Pollutants

Criteria pollutants are pollutants that are regulated through the development of human health-based and/or environmentally-based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below:

- Carbon Monoxide (CO) is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of CO in the SCAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections. (Urban Crossroads, 2019a, p. 12)

- Sulfur Dioxide (SO_2) is 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). (Urban Crossroads, 2019a, p. 12)

- Nitrogen oxides (NO_X) consist of nitric oxide (NO), nitrogen dioxide (NO_2) and nitrous oxide (N_2O) and are 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. As 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 the regional monitoring station. (Urban Crossroads, 2019a, p. 12)

- Ozone (O_3) is a highly reactive and unstable gas that is formed when volatile organic compounds (VOCs) 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. (Urban Crossroads, 2019a, p. 12)

- PM_{10} (Particulate Matter less than 10 microns) is a major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. Particulate matter pollution is a major cause of reduce visibility (haze) which is caused by the scattering of light and consequently the significant reduction of air clarity. 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. Additionally, it should be noted that PM_{10} is considered a criteria air pollutant. (Urban Crossroads, 2019a, pp. 12-13)

- $PM_{2.5}$ (Particulate Matter less than 2.5 microns) is a similar air pollutant consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is 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 released 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. $PM_{2.5}$ is a criteria air pollutant. (Urban Crossroads, 2019a, p. 13)

- Volatile Organic Compounds (VOC) are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form ozone to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include: carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The SCAQMD uses the terms VOC and ROG (see below) interchangeably. (Urban Crossroads, 2019a, p. 13)

- Reactive Organic Gases (ROG) are similar to VOCs, and also are precursors in forming ozone. 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. The SCAQMD uses the terms ROG and VOC (see previous) interchangeably. (Urban Crossroads, 2019a, p. 13)

- Lead (Pb) is a heavy metal that is highly persistent in the environment and is considered a criteria pollutant. 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. The major sources of lead emissions are ore and metals processing, particularly lead smelters, and piston-engine aircraft operating on leaded aviation gasoline. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. It should be noted that the Project does not include operational activities such as metal processing or lead-acid battery manufacturing. As such, the Project is not anticipated to generate a quantifiable amount of lead emissions. (Urban Crossroads, 2019a, p. 13)

E. 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 sub-groups 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 outdoor sports and live in communities with high ozone levels. (Urban Crossroads, 2019a, pp. 13-14)

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 diminishes with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes. (Urban Crossroads, 2019a, p. 14)

- **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. (Urban Crossroads, 2019a, p. 14)

  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. (Urban Crossroads, 2019a, p. 14)

- **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, 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. (Urban Crossroads, 2019a, p. 14) 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. (Urban Crossroads, 2019a, p. 14)

  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 $PM_{2.5}$. (Urban Crossroads, 2019a, p. 15)

- **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. Increase in resistance to airflow 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 sub-groups. (Urban Crossroads, 2019a, p. 15)

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. (Urban Crossroads, 2019a, p. 15)

- **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, an increase in resistance to airflow, as well as a 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. (Urban Crossroads, 2019a, p. 15)

  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. (Urban Crossroads, 2019a, p. 15)

  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. (Urban Crossroads, 2019a, p. 15)

- **Lead**. Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb 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 Pb levels are associated with increased blood pressure. (Urban Crossroads, 2019a, p. 15)

  Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb 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 Pb because of previous environmental Pb exposure of their mothers. (Urban Crossroads, 2019a, pp. 15-16)

- **Odors**. The science of odor as a health concern is still new. Merely identifying the hundreds of VOCs that result in 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, studies have shown that the VOCs that cause odors 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. (Urban Crossroads, 2019a, p. 16)

F. Existing Air Quality

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of 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 are shown in Table 4.2-1, *Ambient Air Quality Standards*. (Urban Crossroads, 2019a, p. 16)

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 4.2-1. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1- and 24-hour), NO_2, PM_{10}, and $PM_{2.5}$ are not to be exceeded. All others are not to be equaled or exceeded. It should be noted that the three-year period is presented for informational purposes and is not the basis for how the State assigns attainment status. Attainment status for a pollutant means that the Air District meets the standards set by the U.S. Environmental Protection Agency (EPA) or the California EPA. Conversely, nonattainment means that an area has monitored air quality that does not meet the NAAQS or CAAQS standards. In order to improve air quality in nonattainment areas, a State Implementation Plan (SIP) is drafted. The SIP outlines the measures that the State will take to improve air quality. Once nonattainment areas meet the standards and additional re-designation requirements, the EPA will designate the area as a maintenance area. (Urban Crossroads, 2019a, p. 16)

1. Regional Air Quality

Air pollution contributes to a wide variety of adverse health effects. The EPA has established national ambient air quality standards (NAAQS) for six of the most common air pollutants: carbon monoxide, lead, ozone, particulate matter, nitrogen dioxide, and sulfur dioxide which are known as criteria pollutants. The SCAQMD monitors levels of various criteria pollutants at 37 permanent monitoring stations and five single-pollutant source Lead (Pb) air monitoring sites throughout the air district. On February 20, the California Air Resources Board (CARB) posted the 2018 amendments to the State and national area designations. See Table 4.2-2, *Attainment Status of Criteria Pollutants in the SCAB*, for attainment designations for the SCAB. Appendix 2.1 of the Project's AQIA (*Technical Appendix B*) provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the SCAB. (Urban Crossroads, 2019a, p. 19)

2. Local Air Quality

The Project site is located within the Source Receptor Area (SRA) 24. Within SRA 24, the SCAQMD Perris Valley monitoring station (SRA 24) is located 4.90 miles north of the Project site and is the nearest long-term air quality monitoring site for O_3 and PM_{10}. Data for CO NO_2 was obtained from the Elsinore Valley monitoring station (SRA 25) located 8.60 miles east of the Project site. The SCAQMD Metropolitan Riverside County 1 (SRA 23) monitoring station is located 21.80 miles northeast of the Project site and is the next nearest monitoring site and provides data for $PM_{2.5}$. It should be noted that the Elsinore Valley and Metropolitan Riverside County 1 monitoring station was utilized in lieu of the Perris Valley monitoring station only where data was not available from the nearest monitoring site. (Urban Crossroads, 2019a, p. 19)

The most recent three (3) years of data available is shown on Table 4.2-3, *Project Air Quality Monitoring Summary (2015-2017)*, and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ for 2015 through 2017 was obtained from the SCAQMD Air Quality Data Tables.

Additionally, data for SO_2 has been omitted as attainment is regularly met in the SCAB and few monitoring stations measure SO_2 concentrations. (Urban Crossroads, 2019a, pp. 19-20)

Table 4.2-1 Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	**Averaging Time**	**California Standards [1]**		**National Standards [2]**		
		Concentration [3]	**Method [4]**	**Primary [3,5]**	**Secondary [3,6]**	**Method [7]**
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	**No National Standards**		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page ...

Table 4.2-1 Ambient Air Quality Standards (Cont'd)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

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

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

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

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

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (5/4/16)**

(Urban Crossroads, 2019a, Table 2-1)

Table 4.2-2 Attainment Status of Criteria Pollutants in the SCAB

Criteria Pollutant	State Designation	Federal Designation
Ozone – 1-hour standard	Nonattainment	--
Ozone – 8-hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
Carbon Monoxide	Attainment	Unclassifiable/Attainment
Nitrogen Dioxide	Attainment	Unclassifiable/Attainment
Sulfur Dioxide	Unclassifiable/Attainment	Unclassifiable/Attainment
Lead[1]	Attainment	Unclassifiable/Attainment

Note: See Appendix 2.1 to the Project's AQIA (*Technical Appendix B*) for a detailed map of State/National Area Designations within the SCAB
"- "= The national 1-hour O3 standard was revoked effective June 15, 2005.
(Urban Crossroads, 2019a, Table 2-2)

Table 4.2-3 Project Air Quality Monitoring Summary (2015-2017)

POLLUTANT	STANDARD	YEAR		
		2015	2016	2017
O_3				
Maximum Federal 1-Hour Concentration (ppm)		0.124	0.131	0.120
Maximum Federal 8-Hour Concentration (ppm)		0.102	0.098	0.105
Number of Days Exceeding Federal 1-Hour Standard	>0.07 ppm	25	23	33
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	50	56	86
Number of Days Exceeding Federal 8-Hour Standard	> 0.070 ppm	0	1	0
Number of Days Exceeding State 8-Hour Standard	> 0.070 ppm	49	55	80
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	0.8	1.2	1.2
Maximum Federal 8-Hour Concentration	> 20 ppm	0.6	0.6	0.8
NO_2				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.047	0.051	0.049
Annual Federal Standard Design Value		9	8	8
PM_{10}				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 150 $\mu g/m^3$	74.0	76.0	75.0
Annual Federal Arithmetic Mean ($\mu g/m^3$)		30.3	32.2	32.2
Number of Days Exceeding Federal 24-Hour Standard	> 150 $\mu g/m^3$	0	0	0
Number of Days Exceeding State 24-Hour Standard	> 50 $\mu g/m^3$	3	5	11
$PM_{2.5}$				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 35 $\mu g/m^3$	54.7	39.1	50.3
Annual Federal Arithmetic Mean ($\mu g/m^3$)	> 12 $\mu g/m^3$	11.9	12.5	12.2
Number of Days Exceeding Federal 24-Hour Standard	> 35 $\mu g/m^3$	9	4	6

Source: Data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ was obtained from SCAQMD Air Quality Data Tables.
-- = data not available

-- = data not available from SCAQMD or ARB
Source: SCAQMD's Air Quality Data Tables and ARB's iADAM Top 4 Summary
(Urban Crossroads, 2019a, Table 2-3)

4.2.2 Applicable Regulatory Requirements

The following is a brief description of the federal, state, and local environmental laws and related regulations governing air quality emissions.

A. Federal Regulations

1. Federal Clean Air Act

The Clean Air Act (CAA; 42 U.S.C. § 7401 et seq.) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes Environmental Protection Agency (EPA) to establish NAAQS to protect public health and public welfare and to regulate emissions of hazardous air pollutants, which include O_3, CO, NO_x, SO_2, PM_{10}, $PM_{2.5}$, and lead. (EPA, 2017a)

One of the goals of the CAA was to set and achieve NAAQS in every state by 1975 in order to address the public health and welfare risks posed by certain widespread air pollutants. The setting of these pollutant standards was coupled with directing the states to develop state implementation plans (SIPs), applicable to appropriate industrial sources in the state, in order to achieve these standards. The CAA was amended in 1977 and 1990 primarily to set new goals (dates) for achieving attainment of NAAQS since many areas of the country had failed to meet the deadlines. (EPA, 2017a)

The sections of the federal CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions address the urban air pollution problems of ozone (smog), carbon monoxide (CO), and particulate matter (PM_{10}). Specifically, it clarifies how areas are designated and re-designated "attainment." It also allows EPA to define the boundaries of "nonattainment" areas: geographical areas whose air quality does not meet federal air quality standards designed to protect public health. (EPA, 2017b) Mobile source emissions are regulated in accordance with the CAA Title II provisions. These standards are intended to reduce tailpipe emissions of hydrocarbons, CO, and NO_X on a phased-in basis that began in model year 1994. Automobile manufacturers also are required to reduce vehicle emissions resulting from the evaporation of gasoline during refueling. These provisions further require the use of cleaner-burning gasoline and other cleaner-burning fuels such as methanol and natural gas. (EPA, 2017c)

Section 112 of the Clean Air Act addresses emissions of hazardous air pollutants. Prior to 1990, CAA established a risk-based program under which only a few standards were developed. The 1990 Clean Air Act Amendments revised Section 112 to first require issuance of technology-based standards for major sources and certain area sources. "Major sources" are defined as a stationary source or group of stationary sources that emit or have the potential to emit 10 tons per year or more of a hazardous air pollutant or 25 tons per year or more of a combination of hazardous air pollutants. An "area source" is any stationary source that is not a major source. (EPA, 2017a)

For major sources, Section 112 requires that EPA establish emission standards that require the maximum degree of reduction in emissions of hazardous air pollutants. These emission standards are commonly referred to as "maximum achievable control technology" or "MACT" standards. Eight years after the technology-based MACT standards are issued for a source category, EPA is required to review those standards to determine whether any residual risk exists for that source category and, if necessary, revise the standards to address such risk. (EPA, 2017a)

B. State Regulations

1. California Clean Air Act (CCAA)

The California Clean Air Act (CCAA) establishes numerous requirements for district plans to attain state ambient air quality standards for criteria air contaminants. The CCAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the State's ambient air quality standards, the CAAQS, by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, established standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. Generally, the CAAQS are more stringent than the NAAQS. For districts with serious air pollution, its attainment plan should include the following: no net increase in emissions from new and modified stationary sources; and best available retrofit technology for existing sources. (SCAQMD, 2017b)

2. Air Quality Management Planning

The California Air Resources Board (CARB) and local air districts throughout the State are responsible for developing clean air plans to demonstrate how and when California will attain air quality standards established under both the CAA and CCAA. For the areas within California that have not attained air quality standards, CARB works with local air districts to develop and implement State and local attainment plans. In general, attainment plans contain a discussion of ambient air quality data and trends; a baseline emissions inventory; future year projections of emissions, which account for growth projections and already adopted control measures; a comprehensive control strategy of additional measures needed to reach attainment; an attainment demonstration, which generally involves complex modeling; and contingency measures. Plans may also include interim milestones for progress toward attainment. Air quality planning activities undertaken by CARB also include the development of policies, guidance, and regulations related to State and federal ambient air quality standards; coordination with local agencies on transportation plans and strategies; and providing assistance to local districts and transportation agencies. (CARB, 2012)

3. Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted 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-efficient technologies and methods. Energy-efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2019 version of Title 24 was adopted by the California Energy Commission (CEC) and will become effective on January 1, 2020. The 2019 Title 24 standards are applicable to the Project. (Urban Crossroads, 2019a, p. 22)

California Code of Regulations, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2011, and is administered by the California Building Standards Commission. CALGreen is updated on a regular basis, with the most recent update consisting of the 2016 California Green Building Code Standards that became effective January 1, 2017. Local jurisdictions are permitted to adopt more stringent requirements, as state law provides methods for local enhancements. CALGreen recognizes that many jurisdictions have developed existing construction and demolition ordinances and defers to them as the ruling guidance provided they establish a minimum 65 percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. The State Building Code provides the minimum standard that buildings must meet in order to be certified for occupancy,

which is generally enforced by the local building official. CALGreen requires: (Urban Crossroads, 2019a, pp. 22-23)

- Short-term bicycle parking. If a commercial project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of tenant-occupied motorized vehicle parking capacity, with a minimum of one space (5.106.4.1.2).
- Designated parking. Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/vanpool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling (5.410.1).
- Construction waste. A minimum 65 percent diversion of construction and demolition waste from landfills, increasing voluntarily to 80 percent for new homes and commercial projects (5.408.1, A5.408.3.1 [nonresidential], A5.408.3.1 [residential]). All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled (5.408.3).
- Wastewater reduction. Each building shall reduce the generation of wastewater by one of the following methods:
  - The installation of water-conserving fixtures (5.303.3) or
  - Using non-potable water systems (5.303.4).
- Water use savings. 20 percent mandatory reduction of indoor water use with voluntary goal standards for 30, 35 and 40 percent reductions (5.303.2, A5303.2.3 [nonresidential]).
- Water meters. Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day (5.303.1).
- Irrigation efficiency. Moisture-sensing irrigation systems for larger landscaped areas (5.304.3).
- Materials pollution control. Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard (5.404).
- Building commissioning. Mandatory inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies (5.410.2).

C. Local Regulations

1. Air Quality Management Planning

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use 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, local governments, as well as state and federal agencies to reduce emissions from stationary,

mobile, and indirect sources to meet state and federal ambient air quality standards. (Urban Crossroads, 2019a, p. 41)

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB for PM_{10}, $PM_{2.5}$, and ozone. Currently, these state and federal air quality standards are exceeded in most parts of the 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 to minimize any negative fiscal impacts of air pollution control on the economy. (Urban Crossroads, 2019a, p. 41)

In March 2017, the AQMD released the Final 2016 AQMP. The 2016 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as, explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels. Similar to the 2012 AQMP, the 2016 AQMP incorporates scientific and technological information and planning assumptions, including the 2016 RTP/SCS, a planning document that supports the integration of land use and transportation to help the region meet the federal Clean Air Act requirements. (Urban Crossroads, 2019a, pp. 41-42)

2. City of Menifee General Plan-Open Space and Conservation Element

The City of Menifee General Plan does not have any specific elements related to air quality. However, the Open Space and Conservation Element includes policies related to air quality and a goal to reduce impacts to air quality in the Menifee area by minimizing pollution and particulate matter. The Open Space and Conservation Element provides direction to comply with federal, state, and local air quality regulations and also encourages support of regional agencies in their efforts to reduce air pollution at the regional level. The Open Space and Conservation Element also provides direction regarding buffering sensitive land uses. As discussed in the Project's AQIA (*Technical Appendix B*), none of the General Plan policies or actions are directly applicable to the Project. (Menifee, 2013a, Open Space and Conservation Element; Urban Crossroads, 2019a, pp. 7-8)

4.2.3 Basis for Determining Significance

Section III of Appendix G to the CEQA Guidelines addresses typical adverse effects to air quality, and includes the following threshold questions to evaluate the Project's impacts on air quality (OPR, 2018):

a. *Conflict with or obstruct implementation of the applicable air quality plan;*

b. *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard;*

c. *Expose sensitive receptors to substantial pollutant concentrations; or*

d. *Result in other emissions (such as those leading to odors) affecting a substantial number of people.*

The above-listed thresholds are drawn directly from Section III of Appendix G to the CEQA Guidelines and address typical adverse project effects on regional air pollution and nearby sensitive receptors (OPR, 2018). The City of Menifee has chosen to apply SCAQMD significance thresholds, as presented in SCAQMD's

CEQA Air Quality Significance Thresholds (SCAQMD, 2015a), to evaluate the Project's air quality impacts against the above Appendix G standards.

Accordingly, Threshold a., which addresses Section III.a of Appendix G to the State CEQA Guidelines, evaluates whether the Project would conflict with SCAQMD's 2016 AQMP, which addresses state and federal requirements under the CAA. A conflict with the AQMP standards and requirements would inhibit the SCAQMD's ability to achieve state and federal standards for air quality.

Thresholds b. and c. address Sections III.b, III.c, and III.d, respectively, of Appendix G to the CEQA Guidelines. Emissions generated by a development project would be significant under Threshold b. if emissions are projected to exceed the regional thresholds established by the SCAQMD for criteria pollutants, and would be significant under Threshold c. if emissions are projected to exceed the localized thresholds established by the State of California and the SCAQMD for criteria pollutants. Table 4.2-4, *Maximum Daily Regional Emissions Thresholds*, and Table 4.2-5, *Maximum Daily Localized Emissions Thresholds*, summarize the SCAQMD's regional and localized significance thresholds, respectively, for regulated pollutants.

Table 4.2-4 Maximum Daily Regional Emissions Thresholds

Pollutant	Construction	Operations
Regional Thresholds		
NO_X	100 lbs/day	55 lbs/day
VOC	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: Regional Thresholds presented in this table are based on the SCAQMD Air Quality Significance Thresholds, March 2015
(Urban Crossroads, 2019a, Table 3-1)

Table 4.2-5 Maximum Daily Localized Emissions Thresholds

Pollutant	Construction	Operations
Localized Thresholds		
NO_X	237 lbs/day (Grading Phase 1 & 2)	N/A
CO	1,346 lbs/day (Grading Phase 1 & 2)	N/A
PM_{10}	11 lbs/day (Grading Phase 1 & 2)	N/A
$PM_{2.5}$	7 lbs/day (Grading Phase 1 & 2)	N/A

Source: Localized Thresholds presented in this table are based on the SCAQMD Final Localized Significance Threshold Methodology, July 2008
(Urban Crossroads, 2019a, Table 3-9)

Additionally, and based on the SCAQMD's CEQA Air Quality Handbook (1993), a project's localized CO emissions 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

Threshold d. addresses Section III.e of Appendix G to the State CEQA Guidelines. SCAQMD Rule 402 ("Nuisance") and California Health & Safety Code, Division 26, Part 4, Chapter 3, Section § 41700 prohibit the emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of the public, including odors. The potential to violate Rule 402 or § 41700 is used herein as a basis to consider a project's odors or other emissions to be significant and require feasible mitigation measures.

The SCAQMD published a report giving direction on how to address cumulative impacts from air pollution, titled *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (SCAQMD, 2003). In this report the AQMD states on page D-3:

> *"…the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.*

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant. This analysis assumes that individual projects that do not generate emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts also would not cause a cumulatively considerable increase in emissions for those pollutants for which the SCAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual Project-related emissions that exceed SCAQMD thresholds for Project-specific impacts would be considered cumulatively considerable.

4.2.4 Impact Analysis

Threshold a:	***Would the Project conflict with or obstruct implementation of the applicable air quality plan?***

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use 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 SCAG, county transportation commissions, local governments, as well as state and federal

agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards. (Urban Crossroads, 2019a, p. 41)

Currently, state and federal air quality standards are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of 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 to minimize any negative fiscal impacts of air pollution control on the economy. In March 2017, the AQMD released the Final 2016 AQMP. The 2016 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels. Similar to the 2012 AQMP, the 2016 AQMP incorporates scientific and technological information and planning assumptions, including the 2016 RTP/SCS, a planning document that supports the integration of land use and transportation to help the region meet the federal Clean Air Act requirements. (Urban Crossroads, 2019a, pp. 41-42)

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 Project has the potential to result in significant air quality emissions that could 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 during both construction and long-term operation. Each is discussed below.

Construction Impacts

The violations that Consistency Criterion No. 1 refers to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if localized significance thresholds (LSTs) were exceeded. As shown in Table 4.2-7 included under Threshold b, below and Table 4.2-11, included under Threshold c, below, the Project would not exceed the applicable regional significance thresholds or LST thresholds (after implementation of mitigation), respectively, for construction activity. Therefore, the Project would not conflict with the AQMP according to this criterion. (Urban Crossroads, 2019a, p. 42)

Operational Impacts

As indicated in Table 4.2-12 and under the analysis of the Project's consistency with the SCAQMD regional thresholds (refer to the discussion of Threshold b., below), the Project, even with mitigation, has the potential to exceed the applicable thresholds for VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$. Thus, the Project would have the potential to contribute to existing and projected violations of the CAAQS and NAAQS. Accordingly, operation emissions associated with the Project would represent a conflict with Consistency Criterion No. 1. (Urban Crossroads, 2019a, p. 42)

On the basis of the preceding discussion, the Project is determined to be inconsistent with the first criterion; thus, impacts would be significant on both a direct and cumulative basis.

- ***Consistency Criterion No. 2****: The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.*

The 2016 AQMP demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the SCAG, which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in the City of Menifee General Plan (General Plan) is considered to be consistent with the AQMP. (Urban Crossroads, 2019a, p. 42) Provided below is a discussion of the consistency of the Project's construction and operational phases with the AQMP growth assumptions.

Construction Impacts

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities. As such, construction activities associated with the Project would not exceed the assumptions in the AQMP, and construction activities would be consistent with Consistency Criterion No. 2. (Urban Crossroads, 2019a, p. 42)

Operational Impacts

The City of Menifee General Plan Land Use Map designates the 331.0-acre Project site as "Fleming Ranch Specific Plan (SP)," although no Specific Plan has been adopted for the site. Nonetheless, the General Plan assumes that the Project site would be developed with 1,588 dwelling units, 71,176 s.f. of commercial retail, and 160,300 s.f. of non-retail uses (i.e., commercial office and light industrial land uses) (Menifee, 2013a, Exhibit LU-4). Because the land use inputs of the City's General Plan were utilized by the SCAQMD as part of the growth assumptions contained in the 2016 AQMP, it follows that the 2016 AQMP assumed the above-described land uses for the Project site. The Project proposes up to 1,061 single-family dwelling units, up to 225,000 s.f. of commercial retail uses, a 10,000-s.f. community recreation center, and 11.23 acres of recreational uses. The Project proposes 527 fewer residential units and 6,476 s.f. less non-residential square footage (i.e., commercial retail, commercial office, and light industrial land uses) than was assumed by the 2016 AQMP. The Project also includes a 10,000-s.f. community recreation center and 11.23 acres of recreational uses; however, these uses are substantially consistent with the recreational land use designations applied to the site by the General Plan. Although no Specific Plan has been adopted for the Project site under existing conditions, the General Plan does acknowledge that the Project's land use and development would intensify as compared to existing conditions and accounts for the land use intensity in the General Plan Land Use Map. Development of the Project as proposed would likely result in fewer emissions than what was proposed in the City of Menifee General Plan EIR because the Project proposes 527 fewer residential units and 6,476 s.f. less non-residential square footage (i.e., commercial retail, commercial office, and light industrial land uses) than was assumed by the 2016 AQMP. As previously noted, the Project includes a 10,000-s.f. community recreation center and 11.23 acres of recreational uses; however, these uses are substantially consistent with the recreational land use designations applied to the site by the General Plan and would not result in an increase in emissions. As such, the Project's land use and development intensity would not exceed the underlying assumptions in the General Plan and, thus, the Project would result in fewer emissions than were accounted for as part of the 2016 AQMP. (Urban Crossroads, 2019a, p. 43)

On the basis of the foregoing, the Project's construction and operational activities would be consistent with the growth assumptions utilized in the 2016 AQMP and would, therefore, be consistent with Consistency Criteria No. 2.

Although the Project would be consistent with the Consistency Criteria No. 2, the Project's operational emissions of VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$ would exceed the applicable SCAQMD Regional Thresholds even with the application of mitigation measures. As such, the Project's impacts due to a conflict with the 2016 SCAQMD AQMP would represent a significant impact on both a direct and cumulatively-considerable basis prior to mitigation.

Implementation of Mitigation Measures MM 4.2-1 through **Error! Reference source not found.** would eliminate the Project's operational exceedances of the SCAQMD Regional Thresholds for CO, PM_{10}, and $PM_{2.5}$. However, even with implementation of mitigation measures and compliance with the Project's CRDRs, the Project's emissions of VOCs and NO_x would still be above the SCAQMD Regional Thresholds for these pollutants. Additional mitigation for the Project's impacts due to VOC and NO_X emissions is not available because a majority of the Project's emissions would be due to vehicular sources, which are regulated at the state and federal level and cannot be regulated at a project level. Accordingly, the Project's direct and cumulatively-considerable impact due to a conflict with the 2016 SCAQMD AQMP would remain significant and unavoidable after mitigation.

Threshold b: ***Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard?***

On October 17, 2017, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the California Emissions Estimator Model™ (CalEEMod™) v2016.3.2. The purpose of this model is to calculate construction-source and operational-source criteria pollutants (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and greenhouse gas (GHG) emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures. Accordingly, the latest version of CalEEMod™ has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendices 3.1 through 3.4 to the Project's AQIA (*Technical Appendix B* to this EIR). (Urban Crossroads, 2019a, p. 26)

❑ Construction Emissions Impact Analysis

Construction Modeling Inputs

Construction activities associated with the Project will result in emissions of NO_X, VOC, PM_{10}, $PM_{2.5}$, SO_x, and CO. Construction related emissions are expected from the following construction activities: (Urban Crossroads, 2019a, pp. 26-27)

- Grading (Phase 1)
- Building Construction
- Architectural Coating
- Grading (Phase 2)
- Paving

Construction is expected to commence in April 2019 and would last through December 2025. Construction duration by phase is shown in Table 3-2 of the Project's AQIA (*Technical Appendix B*). The duration of construction activity was estimated based on information provided by the Project Applicant and the 2021 Project buildout year (for Phase 1). The construction schedule utilized in the analysis, shown in AQIA Table 3-2, represents a "worst-case" analysis scenario should construction occur any time after the respective dates because emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent[1]. A detailed summary of construction equipment, shown in Table 3-3 of the Project's AQIA (*Technical Appendix B*). The site-specific construction fleet may vary due to specific project needs at the time of construction. The duration of construction activity and associated equipment both represent a reasonable approximation of the expected construction fleet as required per CEQA guidelines. Please refer to specific detailed modeling inputs/outputs contained in Appendices 3.1 and 3.4 of the Project's AQIA (*Technical Appendix B*). (Urban Crossroads, 2019a, p. 27)

Grading Activities

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." Fugitive dust 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.). The CalEEMod model was utilized to calculate fugitive dust emissions resulting from this phase of activity. (Urban Crossroads, 2019a, p. 27)

Development of the Project would generate approximately 1.0 million cubic yards of earthwork volume. Additionally, there would be roughly 1.5 million yards of remedial earthwork volume consisting primarily of over-excavation. In total, development and over-excavation (with adjustment factors such as shrinkage, bulking and subsidence) would generate approximately 2.5 million yards of earthwork volume. The fill earthwork quantities are expected to match the cut earthwork quantities resulting in an overall balanced earthwork operation requiring no importing or exporting of earthwork materials. In general, the grading plan generates mostly cut earthwork operations on the east side of the SP area which provides the needed fill materials on the west side. (Urban Crossroads, 2019a, p. 27)

Construction Worker Vehicle Trips

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 based on information CalEEMod model defaults. (Urban Crossroads, 2019a, p. 27)

Off-Site Utility, Infrastructure, and On-Site Improvements

Construction emissions associated with off-site utility, infrastructure, and on-site ancillary improvements may occur; however, at this time, a specific schedule of activities is unknown. Notwithstanding, impacts associated with these potential activities are not expected to exceed the maximum daily emissions identified for other Project-related construction activities evaluated in the Project's AQIA (*Technical Appendix B*). As such, no impacts beyond what has already been identified in the Project's AQIA are expected to occur. (Urban Crossroads, 2019a, pp. 27-28)

[1] As shown in the CalEEMod User's Guide Version 2016.3.1, Table 3.4 "OFFROAD Equipment Emission Factors" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements

Project Construction-Source Emissions Summary

The estimated maximum daily construction emissions without mitigation are summarized in Table 4.2-6, *Emissions Summary of Overall Construction (Without CRDRs* and Mitigation). Detailed construction model outputs are presented in Appendix 3.1 of the Project's AQIA (*Technical Appendix B*). As shown in Table 4.2-6, under the assumed scenarios, and absent mitigation or City regulations and design requirements, emissions resulting from the Project construction would not exceed the Regional Significant Thresholds established by the SCAQMD for emissions of any pollutant. Accordingly, prior to mitigation or regulatory requirements, the Project's construction activities would not violate the SCAQMDs air quality standards and impacts would be less than significant on a direct and cumulatively considerable basis. Although impacts would be less than significant, the Project would be required to comply with SCAQMD Rule 403, which requires that the Project follow guidelines to limit fugitive dust emissions.

Table 4.2-6 Emissions Summary of Overall Construction (Without CRDRs and Mitigation)

Year	Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2019	8.12	68.72	53.21	0.18	13.16	6.29
2020	35.09	65.90	56.87	0.19	12.37	4.65
2021	34.43	60.45	53.48	0.19	12.11	4.40
2022	33.84	54.72	50.55	0.18	11.88	4.19
2023	33.22	45.67	47.63	0.18	11.69	4.00
2024	37.78	92.05	88.94	0.27	24.26	9.64
2025	33.45	48.60	58.64	0.20	11.99	4.17
Maximum Daily Emissions	**37.78**	**92.05**	**88.94**	**0.27**	**24.26**	**9.64**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

(Urban Crossroads, 2019a, Table 3-4)

As shown in Table 4.2-7, *Emissions Summary of Overall Construction (With CRDRs and Mitigation)*, mandatory compliance with SCAQMD Rule 403 (as required by CRDR 4.2-1) would ensure that construction-related emissions of are further reduced to below the SCAQMD Regional Thresholds; thus, the Project's construction-related emissions would be less than significant. (Urban Crossroads, 2019a, p. 29)

Table 4.2-7 Emissions Summary of Overall Construction (With CRDRs and Mitigation)

Year	Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2019	8.12	68.72	53.21	0.18	2.68	4.32
2020	34.36	65.90	56.87	0.19	12.37	4.65
2021	33.70	60.45	53.48	0.19	12.11	4.40
2022	33.11	54.72	50.55	0.18	11.88	4.19
2023	32.49	45.67	47.63	0.18	11.69	4.00
2024	37.05	92.05	88.94	0.27	18.00	7.34
2025	32.72	48.60	58.64	0.20	11.99	4.17
Maximum Daily Emissions	**37.05**	**92.05**	**88.94**	**0.27**	**18.00**	**7.34**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

(Urban Crossroads, 2019a, Table 3-5)

❑ Operational Emissions Impact Analysis

Operational Modeling Inputs

Operational activities associated with the Project would result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Operational emissions would be expected from the following primary sources: area source emissions, energy source emissions, and mobile source emissions. Each is discussed below. (Urban Crossroads, 2019a, p. 30)

Area Source Emissions

- Architectural Coatings. Over a period of time the buildings that are part of this Project would 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 the CalEEMod. (Urban Crossroads, 2019a, p. 30)

- Consumer Products. 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. The emissions associated with the use of consumer products were calculated based on defaults provided within the CalEEMod. (Urban Crossroads, 2019a, p. 30)

- Hearths/Fireplaces. The emissions associated with the use of hearths/fireplaces were calculated based on assumptions provided in the CalEEMod model. The Project is required to comply with SCAQMD Rule 445, which prohibits the use of wood-burning stoves and fireplaces in new development. In order to account for the requirements of this Rule, the unmitigated CalEEMod model estimates were adjusted to remove wood-burning stoves and fireplaces. As the project is required to comply with SCAQMD Rule 445, the removal of wood-burning stoves and fireplaces is not considered "mitigation" although

it must be identified as such in CalEEMod in order to treat the case appropriately. (Urban Crossroads, 2019a, p. 31)

- 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 the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in the CalEEMod. (Urban Crossroads, 2019a, p. 31)

Energy Source Emissions

- 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 consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from off-site generation of electricity is generally excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using the CalEEMod. (Urban Crossroads, 2019a, p. 31)

Mobile Source Emissions

- Vehicles. Project mobile-source air quality 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 impacts are derived primarily from vehicle trips generated by the Project. The emissions associated with mobile source emissions were calculated based on the trip characteristics included in the Project's Traffic Impact Analysis (EIR *Technical Appendix K*). (Urban Crossroads, 2019a, p. 31)

Operational Emissions Summary

The estimated operation-source emissions without CRDRs and mitigation are summarized in Table 4.2-8, *Maximum Daily Operational Emissions Summary (Without CRDRs* and Mitigation). Detailed operation model outputs are presented in Appendix 3.3 of the Project's AQIA (*Technical Appendix B*). Table 4.2-8 shows that under the assumed scenarios, emissions resulting from Project operations would exceed the numerical thresholds established by the SCAQMD for VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$. Thus, Project operational emissions would result in a significant impact due to a violation of the applicable air quality standards for VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$. (Urban Crossroads, 2019a, pp. 31-32)

As shown in Table 4.2-2, the SCAB currently is considered nonattainment for PM_{10} under state designation, and is considered nonattainment for both federal and state designations for $PM_{2.5}$. Accordingly, the Project's emissions of PM_{10} and $PM_{2.5}$ also would contribute substantially to the existing air quality violations for these pollutants, and would result in a cumulatively-considerable net increase of these pollutants; thus, Project impacts due to emissions of PM_{10} and $PM_{2.5}$ would be significant on a direct and cumulatively-considerable basis. (Urban Crossroads, 2019a, pp. 31-32)

Table 4.2-8 Maximum Daily Operational Emissions Summary (Without CRDRs and Mitigation)

Operational Activities – Summer Scenario	Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Source	350.50	23.02	627.05	1.38	81.53	81.53
Energy Source	0.98	8.42	3.67	0.05	0.68	0.68
Mobile Source	32.45	202.78	350.13	1.68	134.32	36.53
Total Maximum Daily Emissions	**383.93**	**234.22**	**980.85**	**3.11**	**216.53**	**118.74**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**YES**	**YES**	**YES**	**NO**	**YES**	**YES**
Operational Activities – Winter Scenario	**Emissions (pounds per day)**					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Source	350.50	23.02	627.05	1.38	81.53	81.53
Energy Source	0.98	8.42	3.67	0.05	0.68	0.68
Mobile Source	27.07	201.06	305.05	1.55	134.32	36.54
Total Maximum Daily Emissions	**378.55**	**232.50**	**935.78**	**2.98**	**216.54**	**118.75**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**YES**	**YES**	**YES**	**NO**	**YES**	**YES**

(Urban Crossroads, 2019a, Table 3-6)

Additionally, the SCAB is considered nonattainment for ozone under both federal and state classifications. As such, the Project's emissions of VOCs and NO_X, both of which are precursors to ozone, would contribute to the region's non-attainment status under both state and federal designations for ozone and would result in a cumulatively-considerable net increase of these pollutants; therefore, Project emissions of VOCs and NO_X would be significant on both a direct and cumulatively-considerable basis. (Urban Crossroads, 2019a, pp. 31-32)

As shown in Table 4.2-12, *Maximum Daily Operational Emissions Summary (With Mitigation)*, implementation of Regulatory Requirements CRDR 4.2-1 through CRDR 4.2-5, Design Requirements CRDR 4.2-6 and CRDR 4.2-7, and Mitigation Measures MM 4.2-1 through MM 4.2-3, would reduce the Project's operational exceedances of the SCAQMD Regional Thresholds for CO, PM_{10}, and $PM_{2.5}$. Implementation of CRDRs and Mitigation Measures would reduce, but would not eliminate, the Project's operational exceedances of the SCAQMD Regional Thresholds for VOCs and NO_X. No feasible mitigation measures or CRDRs beyond those already identified exist that would reduce emissions of NO_X and VOCs to levels that are less than significant. It is important to note that the majority of VOC emissions are derived from consumer products. For analytical purposes, consumer products include cleaning supplies, kitchen aerosols, cosmetics and toiletries. As such, the Project cannot meaningfully control consumer products via mitigation; thus, VOC emissions are considered significant and unavoidable as no feasible mitigation measure exists that would reduce this impact to less-than-significant levels. Additionally, a majority of the Project's NO_X emissions are derived from vehicle usage. Since the Project does not have regulatory authority to control tailpipe emissions, no feasible mitigation measures exist that would reduce NO_X emissions to levels that are less than significant. Accordingly, the following impacts associated with Project operations would remain significant and unavoidable: a) the Project's direct and cumulatively-considerable impact due to a violation of the applicable

air quality standards for VOCs and NO_X, and b) the Project's emissions of VOCs and NO_X that would contribute to the region's non-attainment status under both state and federal designations for ozone.

Threshold c: Would the Project expose sensitive receptors to substantial pollutant concentrations?

During both construction and long-term operation, the Project has the potential to expose nearby sensitive receptors to substantial pollutant concentrations. The following provides an analysis based on the applicable LSTs established by the State of California and SCAQMD, along with an analysis of the Project's potential to result in or contribute to CO "Hot Spots" which also could adversely affect sensitive receptors.

❑ LST Overview

Background on LST Development

The LST analysis provided in the Project's AQIA (*Technical Appendix B*) makes use of methodology included in the SCAQMD Final Localized Significance Threshold Methodology ("LST Methodology"). 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 LSTs. (Urban Crossroads, 2019a, p. 33)

The significance of localized emissions impacts depends on whether ambient levels in the vicinity of any given 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 non-attainment pollutants. (Urban Crossroads, 2019a, p. 33)

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4[2]. LSTs 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 lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses. (Urban Crossroads, 2019a, pp. 33-34)

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 LSTs 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. The analysis makes use of methodology included in the SCAQMD Final Localized Significance Threshold Methodology (LST Methodology). (Urban Crossroads, 2019a, p. 34)

[2] The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities. Further, the SCAQMD defines Environmental Justice as "…equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution." (Urban Crossroads, 2019a, pp. 33-34)

Applicability of LSTs for the Project

For this Project, the appropriate Source Receptor Area (SRA) for the LST analysis is the Perris Valley monitoring station (SRA 24). LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. The SCAQMD produced look-up tables for projects less than or equal to five acres in size. (Urban Crossroads, 2019a, p. 34)

In order to determine the appropriate methodology for determining localized impacts that could occur as a result of Project-related construction, the following process is undertaken: (Urban Crossroads, 2019a, p. 34)

- The CalEEMod model is utilized to determine the maximum daily on-site emissions that would occur during construction activity.

- The equipment-specific grading rates listed in Appendix A of the CalEEMod User's Guide is used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod.

- If the total acreage disturbed is less than or equal to five acres per day, then the SCAQMD's screening look-up tables are utilized to determine if a Project has the potential to result in a significant impact (the SCAQMD recommends that Projects exceeding the screening look-up tables undergo dispersion modeling to determine actual impacts). The look-up tables establish a maximum daily emissions threshold in pounds per day that can be compared to CalEEMod outputs.

Emissions Considered

SCAQMD's Methodology clearly states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs." Therefore, for purposes of the construction LST analysis only emissions included in the CalEEMod "on-site" emissions outputs were considered. (Urban Crossroads, 2019a, p. 34)

Maximum Daily Disturbed Acreage

Table 4.2-9, *Maximum Disturbed Acreage*, was prepared to determine the maximum daily disturbed acreage for use in determining the applicability of the SCAQMD's LST look-up tables. As shown, the Project could actively disturb approximately 4.0 acres per day during both Phases 1 and 2 of grading according to the maximum number of acres a given piece of equipment can pass over in an 8-hour workday (as shown on Table 4.2-9). The equipment-specific grading rates are summarized in the CalEEMod user's guide, Appendix A: Calculation Details for CalEEMod (October 2017). (Urban Crossroads, 2019a, pp. 34-35)

Table 4.2-9 Maximum Disturbed Acreage

Construction Phase	Equipment Type	Equipment Quantity	Acres graded per 8-hour day	Operating Hours per Day	Acres graded per day
Grading (Phase 1 & 2)	Crawler Tractors	2	0.5	8	1.0
	Graders	1	0.5	8	0.5
	Rubber Tired Dozers	1	0.5	8	0.5
	Scrapers	2	1	8	2.0
Total acres disturbed per day during Grading (Phase 1 & 2)					4.0

(Urban Crossroads, 2019a, Table 3-8)

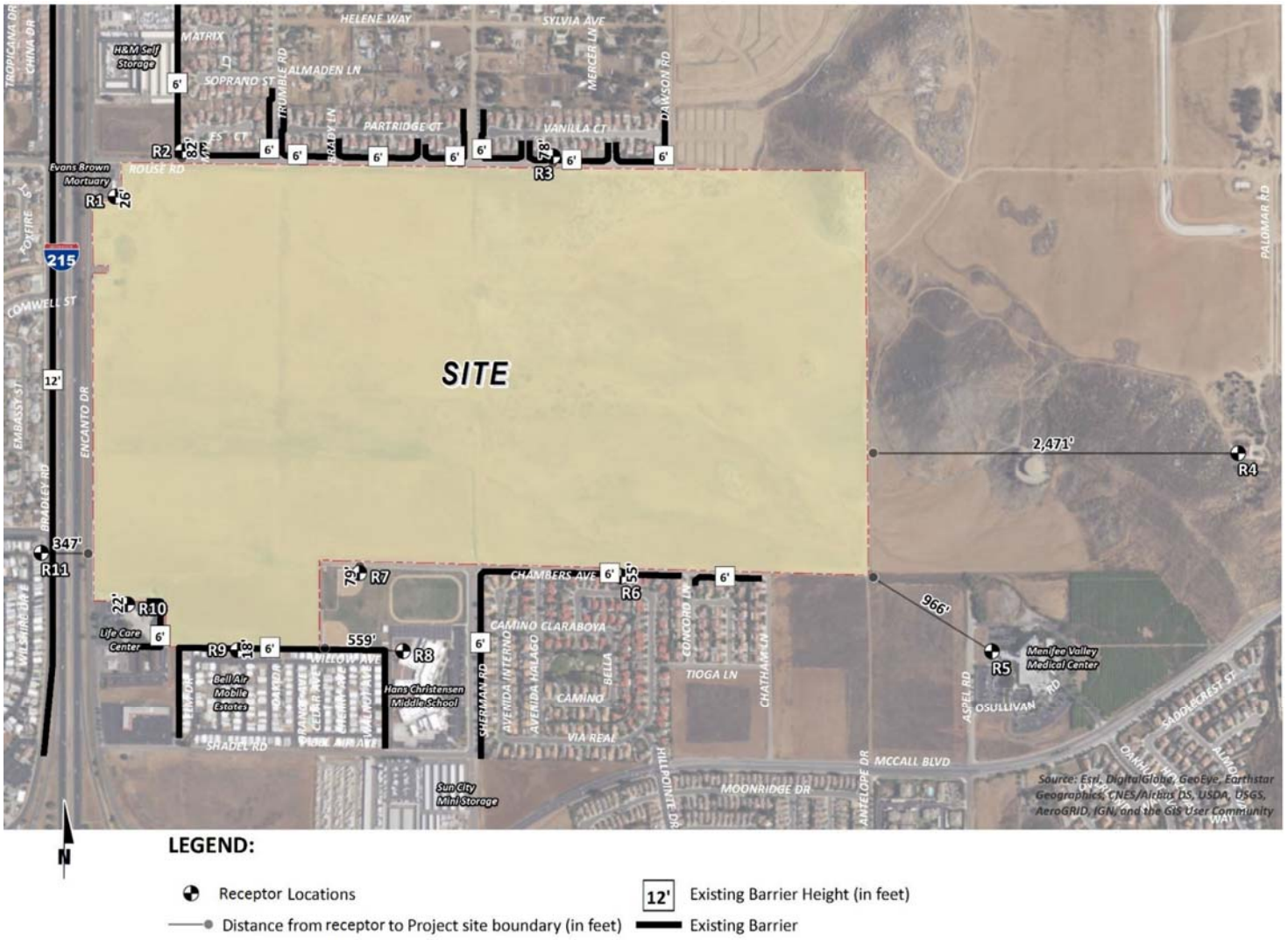
Sensitive Receptors

Some people are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects. These groups of people include children, the elderly, persons with preexisting respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Structures that house these persons or places where they gather to exercise are defined as "sensitive receptors." (Urban Crossroads, 2019a, p. 35)

Sensitive receptor locations near the Project site include existing residential, commercial, school, and medical uses, with the closest sensitive receptor is the existing mobile home estates located at approximately 18 feet south of the Project site boundary (Represented by R9), as shown on Figure 4.2-1, *Receiver Locations*. Provided below is a summary of the receiver locations depicted in Figure 4.2-1. (Urban Crossroads, 2019a, pp. 35-36)

- R1: Located approximately 26 feet north of the Project site, R1 represents the existing Evans Brown Mortuary on the southeast corner of Encanto Drive and Rouse Road.
- R2: Location R2 represents existing residential homes located approximately 82 feet north of the Project site across Rouse Road.
- R3: Location R3 represents the future single-family residential homes located roughly 78 feet north of the Project site across Rouse Road.
- R4: Location R4 represents the existing single-family residential home located approximately 2,471 feet east of the Project site.

Figure 4.2-1 Receiver Locations



(Urban Crossroads, 2019a, Exhibit 3-A)

- R5: Located approximately 966 feet southeast of the Project site, R5 represents the existing Menifee Valley Medical Center on Aspel Road.
- R6: Location R6 represents existing residential homes located approximately 55 feet south of the Project site across Chambers Avenue.
- R7: Location R7 represents the existing sports fields of the Hans Christensen Middle School located roughly 79 feet south of the Project site on Chambers Avenue.
- R8: Location R8 represents the closest building of the Hans Christensen Middle School to the Project site boundaries at approximately 559 feet.
- R9: Located approximately 18 feet south of the Project site, R9 represents the existing Bell Air Mobile Home Estates.
- R10: Location R10 represents existing Life Care Center approximately 22 feet south of the Project site on Encanto Drive.
- R11: Location R11 represents the existing single-family residential homes located roughly 347 feet west of the Project site across I-215.

Notwithstanding, the Methodology explicitly states that "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." Accordingly, LSTs for receptors at 25 meters are utilized in this analysis and provide for a conservative i.e. "health protective" standard of care. This would also ensure that any other sensitive receptors (residents or school students) located in close proximity to the Project site are considered to determine if potential impacts would occur. (Urban Crossroads, 2019a, p. 36)

❑ Construction-Source Emissions LST Analysis

Because the total acreage disturbed is less than five acres per day for both the site preparation phase and the grading phase, the SCAQMD's screening look-up tables are utilized in determining impacts. It should be noted that since the look-up tables identify thresholds at only one acre, two acres, and five acres, linear regression has been utilized, consistent with SCAQMD guidance, in order to interpolate the threshold values for the other disturbed acreage and distances not identified in the look-up tables. (Urban Crossroads, 2019a, p. 36)

Table 4.2-10, *Localized Significance Summary – Construction (Without CRDRs)*, identifies the localized impacts at the nearest receptor location in the vicinity of the Project. Without mitigation, localized construction emissions would exceed the applicable SCAQMD LSTs for emissions of PM_{10} during Phase 1 and Phase 2 Grading activities. The Project would be required to comply with the provisions of SCAQMD Rule 403, "Fugitive Dust," by implementing dust control measures during construction. As shown in Table 4.2-11, *Localized Significance Summary – Construction (With CRDRs)*, mandatory compliance with SCAQMD Rule 403, as would be assured by City Regulation and Design Requirement CRDR 4.2-1 (refer to subsection 4.2.7), the Project's potential to result in the exposure of sensitive receptors to substantial construction-related pollution concentrations would be reduced to less-than-significant levels. Outputs from the model runs for construction LSTs without and with implementation of CRDR 4.2-1 are provided in Appendices 3.1 and 3.2, respectively, to the Project's AQIA (*Technical Appendix B*). (Urban Crossroads, 2019a, p. 38)

Table 4.2-10 Localized Significance Summary – Construction (Without CRDRs)

On-Site Grading (Phase 1) Emissions	Emissions (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	**65.83**	**33.93**	**12.94**	**6.23**
SCAQMD Localized Threshold	237	1,346	11	7
Threshold Exceeded?	**NO**	**NO**	**YES**	**NO**
On-Site Grading (Phase 2) Emissions	**Emissions (pounds per day)**			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	**38.98**	**27.66**	**11.84**	**5.21**
SCAQMD Localized Threshold	237	1,346	11	7
Threshold Exceeded?	**NO**	**NO**	**YES**	**NO**

(Urban Crossroads, 2019a, Table 3-10)

Table 4.2-11 Localized Significance Summary – Construction (With CRDRs)

On-Site Demolition Emissions	Emissions (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	**65.83**	**33.93**	**6.68**	**3.93**
SCAQMD Localized Threshold	237	1,346	11	7
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
On-Site Site Preparation Emissions	**Emissions (pounds per day)**			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	**38.98**	**27.66**	**5.57**	**2.92**
SCAQMD Localized Threshold	237	1,346	11	7
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

(Urban Crossroads, 2019a, Table 3-11)

❑ Operational-Source Emissions LST Analysis

The Project involves the construction and operation of 1,061 single-family detached residential dwelling units, up to 225,000 square feet of commercial use, a 10,000 s.f. community recreation center, and up to 11.23 acres of community park use. According to SCAQMD LST methodology, LSTs would apply to the operational phase of a proposed project, if the project includes stationary sources, or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., transfer facilities and warehouse buildings). The Project does not include such uses, and thus, due to the lack of significant stationary source emissions, no long-term localized significance threshold analysis is needed.

Although the Project does not require a long-term localized significance threshold analysis, a reasonable effort is required to provide the connection between project-related emissions and potential health impacts. CEQA requires that a Lead Agency (City of Menifee) make a reasonable effort to provide an appropriate, project-specific context and connection between mass pollutant emissions estimates (i.e., pounds per day or tons per year) and the potential health impacts associated with such emissions estimates, or to explain what is and is

not yet known about the Project's "bare" emissions numbers and their potential adverse health impacts. (See *Sierra Club v. County of Fresno* 6 Cal. 5th 502 (Dec. 2018)) As noted under Threshold a, the Project would result in an increase in regional VOC and NOx emissions. (SCAQMD, 2015a)

SCAQMD has indicated that for criteria pollutants such as ozone, VOC, and NOx, it is more difficult to quantify health impacts from relatively small projects due to the time and influence of meteorological conditions for the reactions causing health impacts to occur. SCAQMD notes that scientifically, health effects from ozone are correlated with increases in the ambient level of ozone in the air a person breathes; however, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels over an entire region. SCAQMD also indicated that there was not a way to accurately quantify ozone-related health impacts caused by NOx of VOC emissions from relatively small projects. (SCAQMD, 2015b, pp. 10-12) From a regional perspective, the Project is considered a "relatively small project" because the Project's scale and because the Project would not have the potential to generate emissions that would result in a regional impact. Thus, based on information from SCAQMD, a correlation between the Project's emissions and their potential adverse health impacts is not possible.

Accordingly, based on the information from SCAQMD and the Project's lack of operational stationary source emissions, operational-source emissions would not exceed the LSTs and impacts would be less than significant. (Urban Crossroads, 2019a, p. 39)

❑ CO "Hot Spot" Analysis

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots." Further, detailed modeling of Project-specific CO "hot spots" is not needed to reach this conclusion. (Urban Crossroads, 2019a, p. 38)

An adverse CO concentration, known as a "hot spot," would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. At the time of the 1993 Handbook, the SCAB was designated nonattainment under the California AAQS and National AAQS for CO. (Urban Crossroads, 2019a, p. 38)

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/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 increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment, as previously noted in Table 4.2-2. Also, CO concentrations in the Project vicinity have steadily declined, as indicated by historical emissions data presented previously in Table 4.2-3. (Urban Crossroads, 2019a, pp. 38-39)

To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods. This "hot spot" analysis did not predict any violation of CO standards, as shown in Table 3-12 of the Project's AQIA (*Technical Appendix B*). (Urban Crossroads, 2019a, p. 39)

Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SCAB were a result of unusual meteorological and

topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, 9.3 ppm 8-hr CO concentration measured at the Long Beach Blvd. and Imperial Hwy. intersection (highest CO generating intersection within the "hot spot" analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 8.6 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared. In contrast, the ambient 8-hr CO concentration within the Project study area is estimated at 1.4 ppm - 1.6 ppm (refer to Table 4.2-3). Therefore, even if the traffic volumes for the Project were double or even triple the traffic volumes generated at the Long Beach Blvd. and Imperial Hwy. intersection, coupled with the on-going improvements in ambient air quality, the Project would not be capable of resulting in a CO "hot spot" at any study area intersections. (Urban Crossroads, 2019a, p. 39)

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour - or 24,000 vehicles per hour where vertical and/or horizontal air does not mix - in order to generate a significant CO impact. (Urban Crossroads, 2019a, p. 39)

Traffic volumes generating the CO concentrations for the "hot spot" analysis are shown in Table 3-13 of the Project's AQIA (*Technical Appendix B*). The busiest intersection evaluated was that at Wilshire Blvd. and Veteran Ave., which has a daily traffic volume of approximately 100,000 vehicles per day and AM/PM traffic volumes of 8,062 vehicles per hour and 7,719 vehicles per hour, respectively. The 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm; this indicates that, should the daily traffic volume increase four times to 400,000 vehicles per day, CO concentrations (4.6 ppm x 4= 18.4 ppm) would still not likely exceed the most stringent 1-hour CO standard (20.0 ppm)[3]. At buildout of the Project, the highest average daily trips on a segment of road would be 94,100 daily trips on I-215 Northbound Ramps at Newport Road, which is lower than the highest daily traffic volumes on La Cienega Boulevard and Century Boulevard. As shown in Table 3-14 of the Project's AQIA, the highest trips on a segment of road for the Project is 7,556 vehicles per hour on I-215 Southbound Ramps and Newport Road. As such, Project-related traffic volumes are less than the traffic volumes identified in the 2003 AQMP. (Urban Crossroads, 2019a, p. 40)

The Project would not produce the volume of traffic required to generate a CO "hot spot" either in the context of the 2003 Los Angeles hot spot study, or based on representative BAAQMD CO threshold considerations. Therefore, CO "hot spots" are not an environmental impact of concern for the Project. Localized air quality impacts related to mobile-source CO emissions would, therefore, be less than significant. (Urban Crossroads, 2019a, p. 40)

Threshold d: ***Would the Project result in other emissions (such as those leading to odors) affecting a substantial number of people?***

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, and fiberglass molding facilities. The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities, as well as the temporary storage of typical solid waste (refuse) associated with the Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction.

[3]Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm).

The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is 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 Project also would be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the Project construction and operations would be less than significant and no mitigation is required. (Urban Crossroads, 2019a, p. 44)

4.2.5 Cumulative Impact Analysis

Threshold a.

As indicated under the analysis of Threshold a., the Project's operational-related emissions would exceed the SCAQMD regional thresholds for VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$. As such, the Project would conflict with AQMP Consistency Criterion No. 1, and would, therefore, conflict with the SCAQMD 2016 AQMP. Other projects within the SCAB also have the potential to conflict with the AQMP; therefore, the Project's impacts due to a conflict with the AQMP would be cumulatively considerable.

Threshold b.

As indicated under the analysis of Threshold b., emissions resulting from the Project construction would not exceed any of the Regional Significant Thresholds established by the SCAQMD. Although the Project would not exceed any of the Regional Significance Thresholds during construction, the Project would be required to comply with SCAQMD Rule 403, which requires that the Project follow guidelines to limit fugitive dust emissions. Other cumulative developments also would be required to comply with SCAQMD Rule 403 (refer to CRDR 4.2-1); thus, the Project's construction-related emissions would be less-than-cumulatively considerable.

For operational activities, emissions resulting from Project operations would exceed the numerical thresholds established by the SCAQMD for VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$. Thus, Project operational emissions would result in a significant impact due to a violation of the applicable air quality standards for VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$. The Project's emissions of PM_{10} and $PM_{2.5}$ also would contribute substantially to the existing air quality violations for these pollutants, and would result in a cumulatively-considerable net increase of these pollutants; thus, Project impacts due to emissions of PM_{10} and $PM_{2.5}$ would be significant on a direct and cumulatively-considerable basis. Additionally, the Project's emissions of VOCs and NO_X, both of which are precursors to ozone, would contribute to the region's non-attainment status under both state and federal designations for ozone and would result in a cumulatively-considerable net increase of these pollutants; therefore, Project emissions of VOCs and NO_X would be significant on both a direct and cumulatively-considerable basis.

Threshold c.

As discussed under the analysis of Threshold c., the Project's localized construction emissions would exceed the applicable SCAQMD LSTs for emissions of PM_{10}. However, the Project and other projects in the area would be required to comply with the provisions of SCAQMD Rule 403, "Fugitive Dust" by implementing dust control measures during construction. As previously presented in Table 4.2-11, compliance with City Regulation and Design Requirement CRDR 4.2-1 would ensure that the Project's localized emissions of PM_{10} would be reduced to below the SCAQMD LST threshold. Thus, with implementation of City Regulation and Design Requirement CRDR 4.2-1, the Project's cumulatively-considerable localized emissions during construction would be reduced to less-than-significant levels. Additionally, due to the nature of the Project's

proposed land uses, Project operations would result in less-than-cumulatively considerable impacts associated with LSTs. Additionally, operational-related impacts due to CO "Hot Spots" also would be less-than-cumulatively considerable.

Threshold d.

Potential odor sources associated with the Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities; however, construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. Although it is possible other construction activities could occur in close proximity concurrent with Project construction, due to the short duration and intermittent nature of construction-related odors, impacts would be less-than-cumulatively considerable.

For long-term operation, the Project does not contain land uses typically associated with emitting objectionable odors. The Project and other cumulative developments would be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances and would be required to store refuse within covered containers. Therefore, odors associated with the Project operations would be less-than-cumulatively considerable.

4.2.6 Significance of Impacts Before Mitigation

Threshold a: Significant Direct and Cumulatively-Considerable Impact. The Project's operational-related emissions would exceed the SCAQMD regional thresholds for VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$. As such, the Project would conflict with AQMP Consistency Criterion No. 1, and would, therefore, conflict with the SCAQMD 2016 AQMP.

Threshold b: Significant Direct and Cumulatively-Considerable Impact. Emissions resulting from the Project construction would not exceed any Regional Significant Thresholds established by the SCAQMD. However, the Project would be required to comply with SCAQMD Rule 403 (City Regulation and Design Requirement CRDR 4.2-1), which requires that the Project follow guidelines to limit fugitive dust emissions. Mandatory compliance with SCAQMD Rule 403 would ensure that construction-related emissions are further reduced to below the SCAQMD Regional Thresholds, resulting in less-than-significant impacts.

For operational activities, emissions resulting from Project operations would exceed the numerical thresholds established by the SCAQMD for VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$. Thus, Project operational emissions would result in a significant impact due to a violation of the applicable air quality standards for VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$. The Project's emissions of PM_{10} $PM_{2.5}$ also would contribute substantially to the existing air quality violations for these pollutants, and would result in a cumulatively-considerable net increase of these pollutants. Additionally, the Project's emissions of VOCs and NOx, both of which are precursors to ozone, would contribute to the region's non-attainment status under both state and federal designations for ozone and would result in a significant direct and cumulatively-considerable net increase of these pollutants. Thus, prior to mitigation, operation-related emissions would be significant on a direct and cumulatively basis.

Threshold c: Less-than-Significant Impact. The Project's localized construction emissions would exceed the applicable SCAQMD LSTs for emissions of PM_{10}. City Regulation and Design Requirement CRDR 4.2-1 requires mandatory compliance with the provisions of South Coast Air Quality Management District Rule 403, "Fugitive Dust," which requires the implementation of dust control measures during construction. Mandatory compliance with Rule 403 would ensure that the Project's localized emissions during construction do not

exceed the SCAQMD LST thresholds for any criteria pollutant, including PM_{10}. Thus, impacts would be less than significant.

Threshold d: Less-than-Significant Impact. The Project would not create objectionable odors affecting a substantial number of people during either construction or long-term operation. In addition, the Project would be subject to City Regulation and Design Requirement CRDR 4.2-4, which requires compliance with SCAQMD 402, that would prevent occurrences of public nuisances and would be required to store refuse within covered containers. Impacts would be less than significant.

4.2.7 City Regulations, Design Requirements, and Mitigation

Applicable City Regulations and Design Requirements

The following are standard project design requirements within the City of Menifee. Although these requirements technically do not meet CEQA's definition for mitigation, they are imposed herein to ensure Project compliance with applicable project design and regulatory requirements. Note that the Project would comply with the most up-to-date regulatory conditions and requirements as appropriate.

CRDR 4.2-1 The Project is required to comply with the provisions of South Coast Air Quality Management District Rule 403, "Fugitive Dust" by implementing the following dust control measures during construction activities, such as earth moving activities, grading, and equipment travel on unpaved roads. Compliance with Rule 403 would ensure dust control measures are implemented on the Project site to reduce construction-related air emissions. Prior to grading permit issuance, the City shall verify that the following notes are included on the grading plan. Project contractors shall be required to ensure compliance with the notes and permit periodic inspection of the construction site by City of Menifee staff or its designee to confirm compliance. These notes also shall be specified in approved bid documents for construction issued to prospective construction contractors.

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour (mph) per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the midmorning, afternoon, and after work is done for the day.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 mph or less.

CRDR 4.2-2 The Project is required to comply with the provisions of South Coast Air Quality Management District Rule 1113, *Table of Standards*, by requiring that all architectural coatings must consist of low VOCs (i.e., VOCs of less than 50 grams per liter [g/L]) unless otherwise specified in the SCAQMD Table of Standards. Compliance with Rule 1113 would ensure architectural coatings consist of low VOCs on the Project site to reduce construction-related air emissions. Prior to building permit issuance, the City shall verify that the following note is included on the building plans. Project contractors shall be required to ensure compliance with the note and permit periodic inspection of the construction site by City of Menifee staff or its designee to confirm compliance. This note also shall be specified in bid documents issued to prospective construction contractors.

- All architectural coatings must consist of low VOCs (i.e., VOCs of less than 50 grams per liter [g/L]) unless otherwise specified in the SCAQMD Table of Standards pursuant to SCAQMD Rule 1113.

CRDR 4.2-3 The Project is required to comply with applicable SCAQMD rules for construction activities on the Project site. SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to: Rule 1403 (Asbestos); Rule 431.2 (Low Sulfur Fuel); and Rule 1186 / 1186.1 (Street Sweepers). Compliance with applicable SCAQMD rules for construction activities would ensure applicable measures are implemented on the Project site during construction to reduce construction-related air emissions.

CRDR 4.2-4 The Project is required to comply with the provisions of SCAQMD Rule 402, "Nuisance" which requires that a person shall not discharge air contaminants or other materials that would cause health or safety hazards to any considerable number of persons or the public. Compliance with Rule 402 would ensure nuisance air contaminants or other materials are not emitted which would help to reduce construction-related air emissions.

CRDR 4.2-5 The Project is required to comply with SCAQMD Rule 445, which prohibits the installation of permanent wood-burning devices into new development, and limits the installation of other permanent indoor or outdoor wood-burning devices and gaseous-fueled devices. Compliance with SCAQMD Rule 445 would prohibit the use of wood burning stoves and fire places which would reduce air emissions during operation of the Project.

CRDR 4.2-6 In conformance with the Legado Specific Plan (Specific Plan No. 2017-187), the Project is required to create pedestrian connections that would be constructed at selected roads as set forth in the Legado Specific Plan (Specific Plan No. 2017-187), in order to provide pedestrian access to the various uses and activity centers within the Project. Facilitating pedestrian access encourages people to walk instead of drive. The Project would not impose barriers to pedestrian access and interconnectivity. Furthermore, the mix of uses within the Specific Plan as proposed by the Project acts to reduce travel distances and regional vehicle miles traveled (VMT) by consolidating trips and reducing requirements for multiple trips.

CRDR 4.2-7 The Project is required by the Legado Specific Plan (Specific Plan No. 2017-187) to create local "light" vehicle networks, such as NEV networks. NEVs offer an alternative to traditional vehicle trips and can legally be used on roadways with speed limits of 35 MPH or less (unless specifically restricted). To create an NEV network, the Project shall implement NEV lanes. Compliance with the NEV network requirement in the Legado Specific Plan would ensure the NEV network is installed and would encourage the use of alternative transportation to reduce air emissions during operation of the Project.

Mitigation Measures

MM 4.2-1 Prior to issuance of building permits, the Project Applicant shall demonstrate that the proposed building components would surpass by a minimum of 5% the 2019 Title 24 performance standards or shall comply with the Title 24 requirements in effect at the time, whichever is more stringent, established under the Building Energy Efficiency Standards contained in the

California Code of Regulations (CCR), Title 24, Part 6 (Title 24, Title 24 Energy Efficiency Standards).

MM 4.2-2 Prior to issuance of building permits, the Project Applicant shall demonstrate that the proposed roofs of the buildings are designed to accommodate maximally sized photovoltaic (PV) solar arrays taking into consideration limitations imposed by other rooftop equipment, roof warranties, building and fire code requirements, and other physical or legal limitations. The Project shall develop each Project building with the necessary electrical system and other infrastructure to accommodate maximally sized PV arrays in the future. The electrical system and infrastructure shall be clearly labeled with noticeable and permanent signage which informs future tenant/purchasers of the existence of this infrastructure.

MM 4.2-3 Prior to approval of implementing commercial plot plan(s) within Planning Area 16 of the Legado Specific Plan, the City of Menifee Planning Division shall ensure that the plot plan(s) include a minimum of three (3) electric-vehicle charging stations. The electric-vehicle charging stations also shall be depicted on building plans for implementing development within Planning Area 16. Prior to issuance of occupancy permits for the proposed commercial land uses within Planning Area 16, the City of Menifee Building and Safety Department shall ensure that a minimum of three electric-vehicle charging stations have been installed on-site.

4.2.8 Significance of Impacts After Mitigation

Threshold a: Significant and Unavoidable Direct and Cumulatively-Considerable Impact. Implementation of Mitigation Measures MM 4.2-1 through MM 4.2-3 would eliminate the Project's operational exceedances of the SCAQMD Regional Thresholds for CO, PM_{10}, and $PM_{2.5}$. However, even with implementation of mitigation measures and compliance with the Project's CRDRs, the Project's emissions of VOCs and NO_x would still be above the SCAQMD Regional Thresholds for these pollutants. Additional mitigation for the Project's impacts due to VOC and NO_X emissions is not available because a majority of the Project's emissions would be due to vehicular sources, which are regulated at the state and federal level and cannot be regulated at a project level. Accordingly, the Project's direct and cumulatively-considerable impact due to a conflict with the 2016 SCAQMD AQMP would remain significant and unavoidable after mitigation.

Threshold b: Significant and Unavoidable Direct and Cumulatively-Considerable Impact. As shown in Table 4.2-12, *Maximum Daily Operational Emissions Summary (With Mitigation)*, implementation of Regulatory Requirements CRDR 4.2-1 through CRDR 4.2-5, Design Requirements CRDR 4.2-6 and CRDR 4.2-7, and Mitigation Measures MM 4.2-1 through MM 4.2-3, would reduce the Project's operational exceedances of the SCAQMD Regional Thresholds for CO, PM_{10}, and $PM_{2.5}$. Implementation of CRDRs and Mitigation Measures would reduce, but would not eliminate, the Project's operational exceedances of the SCAQMD Regional Thresholds for VOCs and NO_X. No feasible mitigation measures or CRDRs beyond those already identified exist that would reduce emissions of NO_X and VOCs to levels that are less than significant. It is important to note that the majority of VOC emissions are derived from consumer products. For analytical purposes, consumer products include cleaning supplies, kitchen aerosols, cosmetics, and toiletries. As such, the Project cannot meaningfully control consumer products via mitigation; thus, VOC emissions are considered significant and unavoidable as no feasible mitigation measure exists that would reduce this impact to less-than-significant levels. Additionally, a majority of the Project's NO_X emissions are derived from vehicle usage. Since the Project does not have regulatory authority to control tailpipe emissions, no feasible mitigation measures exist that would reduce NO_X emissions to levels that are less than significant. Accordingly, the following impacts associated with Project operations would remain significant and unavoidable: a) the

Project's direct and cumulatively-considerable impact due to a violation of the applicable air quality standards for VOCs and NO_X, and b) the Project's emissions of VOCs and NO_X that would contribute to the region's non-attainment status under both state and federal designations for ozone.

Table 4.2-12 Maximum Daily Operational Emissions Summary (With Mitigation)

Operational Activities – Summer Scenario	Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Source	72.48	1.01	87.48	4.62e-03	0.49	0.49
Energy Source	0.57	4.88	2.15	0.03	0.39	0.39
Mobile Source	32.00	200.13	336.15	1.61	127.81	34.77
Total Maximum Daily Emissions	**105.06**	**206.02**	**425.77**	**1.64**	**128.69**	**35.64**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**YES**	**YES**	**NO**	**NO**	**NO**	**NO**
Operational Activities – Winter Scenario	**Emissions (pounds per day)**					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Source	72.48	1.01	87.48	4.62e-03	0.49	0.49
Energy Source	0.57	4.88	2.15	0.03	0.39	0.39
Mobile Source	26.65	198.28	293.87	1.48	127.82	34.77
Total Maximum Daily Emissions	**99.70**	**204.17**	**383.49**	**1.52**	**128.70**	**34.77**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**YES**	**YES**	**NO**	**NO**	**NO**	**NO**

(Urban Crossroads, 2019a, Table 3-7)

4.3 BIOLOGICAL RESOURCES

The analysis in this Subsection is based, in part, on information from the report titled "Biological Technical Report for Fleming Ranch" by Glen Lukos Associates, Inc. (herein GLA), dated October 13, 2017 [revised April 26, 2018, September 5, 2018, and August 6, 2019], the report titled "Jurisdictional Delineation of Fleming Ranch, City of Menifee, Riverside County, California" by GLA, dated October 13, 2017 [revised April 26, 2018, and August 7, 2019], the report titled "Western Riverside County Multiple Species Habitat Conservation Plan Determination of Biologically Equivalent or Superior Preservation For Impacts to Riparian/Riverine Resources" by GLA, dated November 15, 2017 [revised February 15, 2018, September 5, 2018, August 7, 2019, and December 19, 2019], and the report titled "Addendum to the Biological Technical Report and the Jurisdictional Delineation Report for the Legado Development Project, City of Menifee, Riverside County" by GLA, dated October 4, 2019. These reports are included as *Technical Appendix C1*, *Technical Appendix C2*, *Technical Appendix C3*, and *Technical Appendix C4* to this EIR, respectively.

4.3.1 EXISTING CONDITIONS

The following Subsection describes biological resources that are located within the Project's Study Area. The Project's Study Area includes on- and off-site areas that would be impacted by grading and development activities, as shown on EIR Figure 3-18, *Proposed Physical Disturbances*.

A. Vegetation Communities

The Project's biological technical report *(Technical Appendix C1*) documents the botanical resources at the Project site and off-site improvement areas (herein, "Study Area") based on a literature search; a list of target special-status plant species and sensitive vegetation communities that could occur within the Project area; general field reconnaissance surveys; vegetation mapping; and habitat assessments and focused surveys for special status species (pursuant to Multiple Species Habitat Conservation Plan [MSHCP] requirements). The majority of the Project site is disturbed from historic dryland farming activities that occurred on-site until 2016 and from discing associated with on-going fire abatement activities. The site mostly contains maintained fields supporting a predominance of non-native, ruderal vegetation. The northeastern portion of the site has not historically been farmed due to the presence of scattered rock outcrops. However, this area still has been subject to disturbance, and is vegetated with a mix of non-native plants and some native forb species associated with grasslands. The northeastern corner of the site consists of a hill vegetated with Riversidean sage scrub. Table 4.3-1, *Summary of Study Area Vegetation Communities*, provides a summary of the existing vegetation communities occurring within the Project's Study Area, while the location of each vegetation community is depicted on Figure 4.3-1, *Vegetation Map*. (GLA, 2019a, p. 23)

Table 4.3-1 Summary of Study Area Vegetation Communities

VEGETATION/LAND USE TYPE	ON-SITE	OFF-SITE	TOTAL
Agriculture	299.26	0.01	299.27
Cactus Scrub	0.55	0	0.55
Disturbed/Developed	16.30	4.08	20.48
Riversidean Sage Scrub	1.56	0.26	1.82
Ruderal	13.21	0.86	14.07
Seasonal Pools	0.04	0	0.04
Total	**331.02**	**5.21**	**336.23**

(GLA, 2019a, Table 4.3)

Source(s): Glen Lukos (08-06-2019)

NOT TO SCALE

Figure 4.3-1

VEGETATION MAP

A description of the vegetation communities occurring on-site and within off-site improvement areas is provided below:

1. Agricultural Land

Approximately 299.27 acres of the Project site consist of agricultural land, including 0.01 acre of the off-site impact areas. These areas consist of cultivated barley (*Hordeum vulgare*) that are routinely maintained and harvested. (GLA, 2019a, p. 24)

2. Cactus Scrub

The Project site contains a slightly elevated outcrop area (approximately 0.55 acre) in the eastern portion of the site containing patches of cane cholla (*Cylindropuntia californica* var. *parkeri*). In addition, this area contains a small population of Parry's spineflower (*Chorizanthe parryi* var. *parryi*). Other species include stink net (*Onocsiphon piluliferum*), everlasting nest straw (*Stylocline gnaphaloides*), rattlesnake week (*Daucus pusillus*), Hartweg's milkvine (*Sarcostemma cycanchoides* ssp. *hartwegii*), Mediterranean schismus (*Schismus barbatus*), and red brome (*Bromus madritensis* ssp. *rubens*). (GLA, 2019a, p. 24)

3. Disturbed Developed Areas

Approximately 20.48 acres of the Study Area consist of disturbed/developed lands, including 4.08 acres of the off-site impact areas. These areas consist of improved storm water channels, and existing paved and unpaved roads. The disturbed/developed lands are mainly unvegetated, however, vegetation observed in these areas include Russian thistle (*Salsola tragus*), summer mustard (*Hirschfeldia incana*), and telegraph weed (*Heterotheca grandiflora*). (GLA, 2019a, p. 24)

4. Riversidean Sage Scrub

Approximately 1.82 acres of the Study Area contain areas of sparse Riversidean Sage Scrub (including 0.26 acre in the off-site impact area), the majority of which is associated with a rocky hill located in the northeastern portion of the Project site. These areas are characterized by sparse brittlebush (*Encelia farinosa*) and California buckwheat (*Eriogonum fasciculatum*) intermixed with rock outcrops and ruderal vegetation. Additional species include California sagebrush (*Artemisia californica*), California aster (*Corethrogyne filaginifolia* var. *californica*), white sage (*Salvia apiana*), and common fiddleneck (*Amsinkia intermedia*). A much smaller patch of buckwheat-dominated scrub located in the northeast portion of the site would be impacted under the Project. (GLA, 2019a, p. 24)

5. Ruderal Areas

Approximately 14.07 acres of the Study Area is dominated by ruderal vegetation, including 0.86 acre of the off-site impact areas. This habitat type consists of both native species with an affinity for disturbance as well as non-native species common in disturbed areas. Vegetation within this habitat consists of foxtail chess (*Bromus madritensis* subsp. *rubens*), summer mustard, Russian thistle, red-stemmed filaree (*Erodium cicutarium*), prickly lettuce (*Lactuca serriola*), California aster (*Corethrogyne filaginifolia* var. *californica*), paniculate tarplant (*Deinandra paniculata*), California plantain (*Plantago erecta*), common fiddleneck, telegraph weed, common cryptantha (*Cryptantha intermedia*), cheeseweed (*Malva parviflora*), and field bindweed (*Convolvulus arvensis*). (GLA, 2019a, p. 25)

6. Seasonal Pools

Two disturbed depressions exhibiting indicators of seasonal ponding occur in the northeastern portion of the Project site. Based on the surrounding flat topography, and the appearance of the depression area, it appears that the broader depression area may have been a former borrow site and was artificially created. Each of the two seasonal pools is approximately 0.02 acre, for a total of 0.04 acre. The southernmost pool has in the past been utilized as an unauthorized dump area. The northernmost pool is also degraded, having been impacted by temporary grading activities from an adjacent property, and off-road vehicle use in general. The pools are mostly unvegetated, though both support scattered individuals of woolly marbles (*Psilocarphus brevissimus*) that is associated with vernal pools. (GLA, 2019a, p. 25)

B. Special Status Habitats

The California Natural Diversity Database (CNDDB) identified the four special-status vegetation communities for the Romoland and surrounding quadrangle maps: Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, and Southern Sycamore Alder Riparian Woodland. The Project site does not contain any of the communities identified by the CNDDB, but does support a small amount of riparian/wetland habitat associated with the drainage ditch. (GLA, 2019a, pp. 25-26)

C. Special-Status Plants

Table 4-2 of the Project's Biological Technical Report (*Technical Appendix C1*) provides a list of special-status plants evaluated for the Project site through general biological surveys, habitat assessments, and focused surveys. Species were evaluated based on the following factors: 1) species identified by the CNDDB and CNPS as occurring (either currently or historically) on or in the vicinity of the Project site, 2) applicable MSHCP survey areas, and 3) any other special-status plants that are known to occur within the vicinity of the Project site, or for which potentially suitable habitat occurs within the site. Two special-status plants have been detected at the Project site: Parry's spineflower (*Chorizanthe parryi* var. *parryi*) and paniculate tarplant (*Deinandra paniculata*). Each is described below. (GLA, 2019a, pp. 26-31)

1. Paniculate Tarplant

The paniculate tarplant was detected throughout the ruderal areas located in the northeastern portion of the Project site. This species has a California Native Plant Society (CNPS) Rank of 4.2 (defined as uncommon in California but can be fairly endangered depending on the location). The paniculate tarplant is not a Covered Species under the MSHCP; however, it is a common and widespread species in the French Valley region of western Riverside County. (GLA, 2019a, pp. 31-32)

2. Parry's Spineflower

Parry's spineflower is an annual herb designated as a CNPS List 1B.1 species. This species is known from Los Angeles, Riverside, and San Bernardino County. Parry's spineflower occurs in a variety of habitats including chaparral and coastal scrub. Parry's spineflower was detected within the cactus scrub area mapped in the eastern portion of the property. Parry's spineflower is designated as a Covered Species by the MSHCP, and does not have any additional conservation requirements. Objective 3 of the MSHCP species-specific conservation objectives for Parry's spineflower states the following: *Within the MSHCP Conservation Area, confirm 10 localities (locality in this sense is not smaller than one quarter section) with at least 1,000 individuals (unless a smaller population has been demonstrated to be self-sustaining).* This objective would not apply to the Project site since the population is smaller than the 1,000-individual threshold (and likely not self-sustaining), the area supporting the spineflower is well below the size indicated as a "locality", and the

Project site is not located within the MSHCP Criteria Area, i.e., the site is not targeted for inclusion into to the MSHCP Conservation Area. (GLA, 2019a, p. 32)

D. Narrow Endemic Plant Species

Focused surveys were conducted for the Narrow Endemic Plant target species as determined by the corresponding MSHCP survey area. None of the target species were observed on-site. A discussion of each species is provided below (GLA, 2019a, p. 32)

1. Munz's onion (Allium munzii)

Munz's onion is a perennial herb found on mesic exposures or seasonally moist microsites in grassy openings in coastal sage scrub, chaparral, juniper woodland, valley and foothill grasslands in clay soils. Associated with a special "clay soil flora" found in southwestern Riverside County that includes herbs such as chocolate lily (*Fritillaria biflora*), Palmer's grappling hook (*Harpagonella palmeri*), knotweed spine flower (*Chorizanthe polygonoides* var. *longispina*), snakeroot (*Sanicula bipinnatifida, S. arguta*), lomatium (*Lomatium utriculatum, L. dasycarpum*), shooting stars (*Dodecatheon clevelandii*), goldenstar (*Bloomeria crocea*), soaproot (*Chlorogalum parviflorum*), many-stemmed dudleya (*Dudleya multicaulis*) and red-skinned onion (*Allium haematochiton*). The species is known only from Riverside County, occurring at elevations ranging from 300 to 1070 meters. The flowering period for species extends from March to May. Munz's onion was not detected on-site during focused surveys, and is not expected to occur on-site due to a lack of suitable habitat. The site is mapped to contain Porterville clay soils; however, the mapping area occurs within flat areas heavily disturbed through agriculture and is not suitable to support Munz's onion. (GLA, 2019a, p. 32)

2. San Diego ambrosia (Ambrosia pumila)

San Diego ambrosia occurs in open floodplain terraces or on in the watershed margins of vernal pools. This species occurs in a variety of associations that are dominated by sparse non-native grasslands or ruderal habitat in association with river terraces, vernal pools, and alkali playas. The extant Riverside County localities are found on Garretson gravelly fine sandy loams when in association with floodplains, and on Las Posas loam in close proximity to silty, alkaline soils of the Willows series at Skunk Hollow. The site has a low potential to support San Diego ambrosia; however, the species was not detected during focused surveys. In addition, areas with potential to support the ambrosia do not occur within the MSHCP survey area. (GLA, 2019a, pp. 32-33)

3. Many-stemmed dudleya (Dudleya multicaulis)

Many-stemmed dudleya is a perennial herb often associated with clay soils in barrens, rocky places, and ridgelines as well as thinly vegetated openings in chaparral, coastal sage scrub, and southern needlegrass grasslands on clay soils. The majority of populations are associated with coastal sage scrub or open coastal sage scrub. The species is known from Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties, occurring at elevations ranging from 15 to 790 meters. The flowering period extends from April to July. The site contains a few small areas with low potential to support the species, however the species was not detected during focused surveys. In addition, areas with potential to support the dudleya do not occur within the MSHCP survey area. (GLA, 2019a, p. 33)

4. Spreading navarretia (Naverretia fossalis)

Spreading navarretia is an annual herb associated with vernal pools, and depressions and ditches in areas that once supported vernal pools. In western Riverside County, spreading navarretia has been found in relatively undisturbed and moderately disturbed vernal pools within a larger vernal floodplain dominated by annual alkali

grassland or alkali playa. The alkali vernal playa/pool habitat found in the Hemet area is based primarily on silty clay soils in the Willows and Travers series. These soils are usually saline-alkaline in nature and reliably pond water for long durations. This species occurs at elevations ranging from 30 to 1,300 meters and has a flowering period extending from April until June. The Project site contains two seasonal depressions that were evaluated for spreading navarretia; however, the species was found to be absent during focused surveys. Also, the depressions do not occur within the MSHCP survey area. (GLA, 2019a, p. 33)

5. California Orcutt's grass (Orcuttia californica)

California Orcutt's grass is an annual herb occurring in southern California vernal pools. The species is known from Los Angeles, Riverside, San Diego, and Ventura Counties, occurring at elevations ranging from 15 to 650 meters. All known Californica Orcutt grass localities are associated with vernal pools. In Riverside County, this species is found in southern basaltic claypan vernal pools at the Santa Rosa Plateau, and alkaline vernal pools as at Skunk Hollow and at Salt Creek west of Hemet. The blooming period for the species extends from April to August. The Project site contains two seasonal depressions that were evaluated for Orcutt grass; however, the species was found to be absent during focused surveys. Also, the depressions do not occur within the MSHCP survey area. (GLA, 2019a, p. 33)

6. Wright's trichocoronis (Trichocoronis wrightii var. *wrightii)*

Wright's trichocoronis is an annual herb occurring in meadows and seeps; marshes and swamps; riparian forest; and vernal pools, and is associated with alkaline soils. In western Riverside County, Wright's trichocoronis is found in the alkali vernal plains and associated with alkali playa, alkali annual grassland, and alkali vernal pool habitats; occupying the more mesic portions of these habitats. Wright's trichocoronis is frequently associated with other rare species, including San Jacinto Valley crownscale (*A. coronata* var. *notatior*), Davidson's saltscale (*A. serenana* var. *davidsonii*), vernal barley (*Hordeum intercedens*), smooth tarplant (*Hemizonia pungens* ssp. *laevis*), and spreading navarretia (*Navarretia fossalis*). The species occurs at elevations ranging from 5 to 435 meters, and has a blooming period extending from May to September. The Project site contains two seasonal depressions that were evaluated for Wright's trichocoronis, as well as other areas on-site with potentially alkaline soils; however, the species was found to be absent during focused surveys. Also, the areas evaluated do not occur within the MSHCP survey area. (GLA, 2019a, pp. 32-33)

E. Special-Status Animals

Table 4-3 of the Project's Biological Technical Report (*Technical Appendix C1*) provides a list of special-status animals evaluated for the Project site through general biological surveys, habitat assessments, and focused surveys. Species were evaluated based on the following factors, including: 1) species identified by the CNDDB as occurring (either currently or historically) on or in the vicinity of the Project site, 2) applicable MSHCP survey areas, and 3) any other special-status animals that are known to occur within the vicinity of the Project site, for which potentially suitable habitat occurs on the site. (GLA, 2019a, pp. 34-39)

GLA identified two special-status animals at the Project site: burrowing owl (*Athene cunicularia*), and coastal California gnatcatcher (*Polioptila californica californica*). Each of these special status animals is discussed in further detail below. (GLA, 2019a, p. 34)

1. Burrowing Owl

GLA conducted focused breeding surveys at the Study Area to determine the presence or absence of the burrowing owl. The burrowing owl is a State Species of Special Concern (SSC) and is a covered but not yet adequately conserved species under the Western Riverside County MSHCP. During the focused surveys, a

family group (breeding pair with at least 3 juveniles) of burrowing owls was detected in the northeastern portion of the Project site. The area where the burrowing owls were detected contains scattered rock outcrops where the property has not been maintained over the years by discing/farming. Due to the relative lack of disturbance, the area supporting ground squirrels results in numerous suitable burrows. At least two occupied burrows were mapped, including what was presumed to be the nest burrow (based on the relative abundance of diagnostic signs), and a second burrow containing owl signs. Additional satellite escape burrows were noted when the owls flushed from their primary burrows. The remainder of the Project site is generally unsuitable to support breeding burrowing owls due to the lack of burrows resulting from regular discing and historic farming operations, although the site represents general foraging habitat for burrowing owls. Figure 4.3-2, *Burrowing Owl Survey Location Map*, depicts the locations of the burrowing owl burrows identified during the survey. (GLA, 2019a, pp. 39-40)

2. Coastal California Gnatcatcher

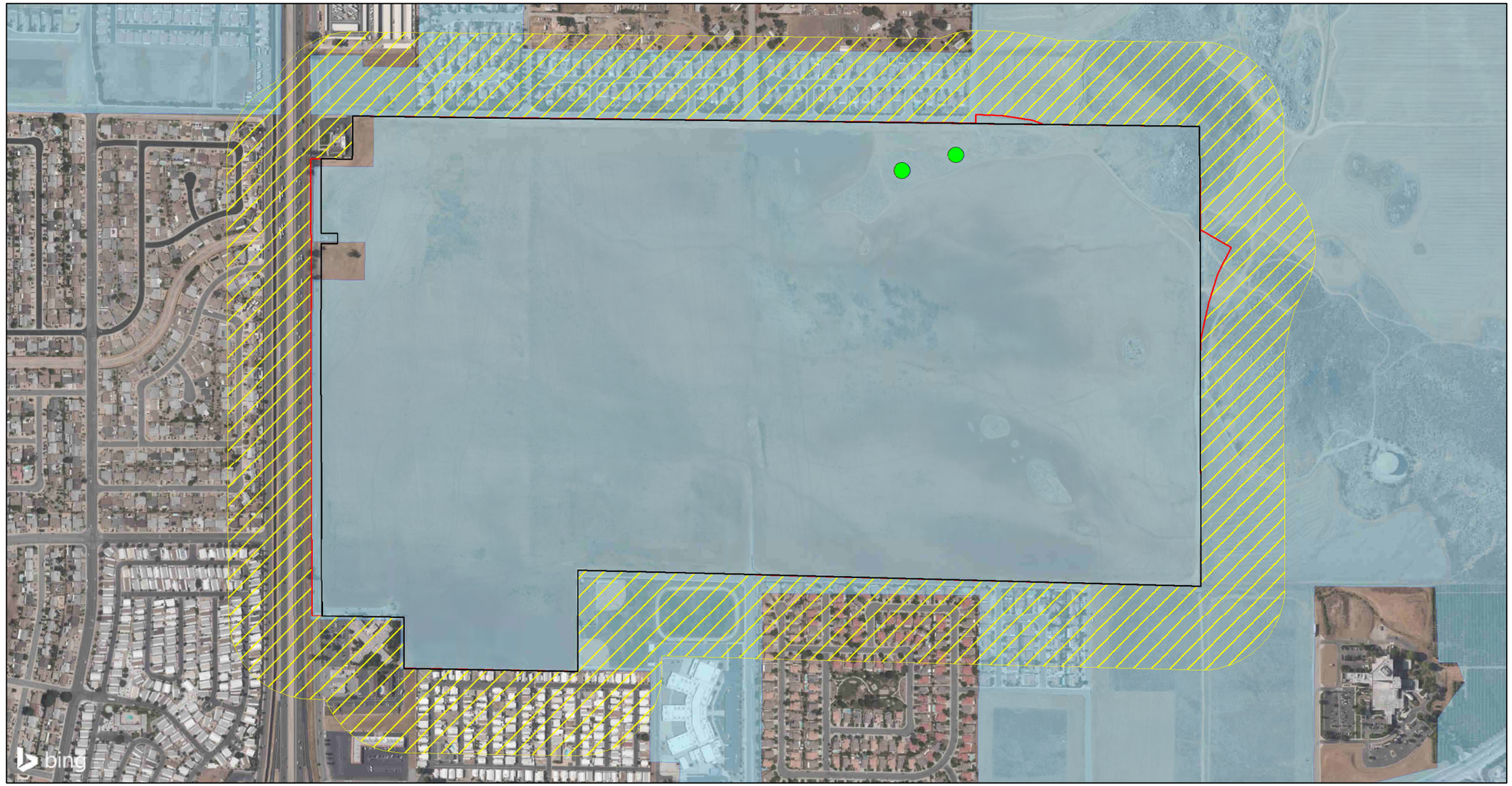
The coastal California gnatcatcher was heard vocalizing within Riversidean sage scrub vegetation located outside of the development footprint, but within the Project's open space. The coastal California gnatcatcher is Federally listed as Threatened and is designated as a California Species of Special Concern. The gnatcatcher typically occurs in or near sage scrub habitat, which is a broad category of vegetation that includes the following plant communities: Venturan coastal sage scrub, Diegan coastal sage scrub, maritime succulent scrub, Riversidean sage scrub, Riversidean alluvial fan sage scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub. (GLA, 2019a, p. 40)

The gnatcatcher is designated as a Covered Species Adequately Conserved under the MSHCP without additional survey/conservation requirements. The only restrictions on the take of the gnatcatchers are from Condition 5b of the MSHCP Federal Fish and Wildlife take permit. Specifically, Condition 5b states that the "clearing of occupied habitat within [Public/Quasi Public (PQP)] lands and the Criteria Area between March 1 and August 15 is prohibited." Since the Project site is not located within existing PQP/Conserved Lands or the MSHCP Criteria Area, Condition 5b of the MSHCP permit does not apply to the Project. As such, impacts to gnatcatcher occupied habitat is covered and mitigated for by the MSHCP, with the only restriction that the Project not impact active gnatcatcher nests pursuant to the Migratory Bird Treaty Act and California Fish and Game Code. (GLA, 2019a, p. 40)

F. Special-Status Wildlife Species – Not Observed but with a Potential to Occur

1. Listed Fairy Shrimp

The MSHCP identifies two species of listed fairy shrimp that occur within the overall MSHCP Plan Area, and that have special survey requirements pursuant to *Volume I, Section 6.1.2* of the MSHCP. These include the listed Riverside fairy shrimp (*Streptocephalus woottoni*) and the listed Vernal Pool fairy shrimp (*Branchinecta lynchi*).



Project Boundary
Offsite Impact Areas
MSHCP Burrowing Owl Survey Area
150-Meter Buffer
Active Burrow

Source(s): Glen Lukos (08-06-2019)

NOT TO SCALE

Figure 4.3-2

BURROWING OWL SURVEY LOCATION MAP

The Santa Rosa Plateau fairy shrimp is endemic to western Riverside County, associated with Southern Basalt Flow vernal pools at and near the Santa Rosa Plateau. This species does not occur on-site due to a lack of suitable habitat, and because the Project site is well outside of the species distribution range. As such, the species will not be further addressed in this Subsection. Additionally, the listed San Diego fairy shrimp (*Branchinecta sandiegonensis*) is not a Covered Species under the MSHCP, but is recently known to occur in Riverside County, and so may have the potential to occur at the site and in proximity to the site. The Riverside fairy shrimp and Vernal Pool fairy shrimp were treated as having a low potential to occur on-site, although it is unclear whether two of the depression features at the site would pond long enough to support the life cycle of the Riverside fairy shrimp. (GLA, 2019a, p. 41)

Pursuant to *Volume I, Section 6.1.2* of the MSHCP, and the MSHCP species-specific conservation objectives for each species, if suitable habitat for either species is identified, a qualified biologist shall conduct a single-season dry or wet season survey for the species in accordance with accepted protocols. In 2005, GLA performed a dry season survey of the two depression features. Soil samples collected from both depression features were found to contain cysts of the genus *Branchinecta*, however no cysts of the genus *Streptocephalus* (i.e., Riverside fairy shrimp) were detected. The non-listed versatile fairy shrimp (*Branchinecta lindahli*) was reared from cysts collected from both depression features. No other species of *Branchinecta*, including the listed vernal pool fairy shrimp *(B. lynchi*) were present in the hatched specimens; however, USFWS does not consider cyst hydration to be conclusive to establish the absence of other species. A wet season survey following a dry season survey would be necessary to demonstrate absence of other *Branchinecta* species. A wet season survey was attempted during the 2005/2006-rainfall season; however, the depression features did not adequately pond to allow for sampling. Due to the lapse of time since the 2005 survey, the results of older survey are no longer adequate. As such, GLA initiated new surveys by first performing a dry season survey for Features 1a, 1b, and 2 in 2017. Cysts of the genus *Branchinecta* were detected in just one of the two depression features (Feature 2). Cysts of the genus *Streptocephalus* were not detected in either feature. The Project's biologist (GLA) notified the USFWS in September 2017 of the intent to perform a wet season survey for the 2018 season; however, the site did not receive adequate rainfall to perform valid wet season surveys, and therefore the surveys could not be completed. GLA re-notified the USFWS on December 6, 2018 to perform a wet season survey for 2019. GLA sampled all of the depression features discussed above, detecting the non-listed *B. lindahli* in Features 2, 3, and 4. No species of listed fairy shrimp were detected in any of the features. Two of the sampled features (3 and 4) were not surveyed during the prior dry season survey; therefore, a dry season survey was completed on July 2, 2019 for both features for the current (2019) season. Cysts of the genus *Branchinecta* were detected in both features, which was consistent with the detection of *B. lindahli* during the wet season surveys. Cysts of the genus *Streptocephalus* were not detected in either feature. With the completion of the 2017 dry season survey, and 2019 dry and season surveys, GLA has successfully completed the two-survey protocol for all depression features at the Project site with the potential to support fairy shrimp, and has demonstrated that listed species of fairy shrimp are absent from the site. The detailed results of the fairy shrimp surveys are included as Appendix C of the BTR (*Technical Appendix C1)*. (GLA, 2019a, pp. 41-42)

2. Special-Status Reptiles

Portions of the Project site have the potential to support special-status reptiles, including the coastal whiptail, coast horned lizard, coast patch-nosed snake, red diamond rattlesnake, and silvery legless lizard. Areas with the potential to support these species include the ruderal/grassland areas in the northeastern portion of the Project site, including Riversidean sage scrub and ruderal/grassland areas. (GLA, 2019a, p. 42)

3. Special-Status Birds

In addition to the burrowing owl. the Project site has the potential to provide foraging habitat for several other special-status birds, including the loggerhead shrike and a few special-status raptors (ferruginous hawk, golden eagle, and white-tailed kite). However, a majority of the Project site, including areas planned for development by the Project, does not contain breeding habitat for these species or other special-status birds. Each of these birds are designated as Covered Species Adequately Conserved under the MSHCP without additional survey/conservation requirements. (GLA, 2019a, p. 42)

4. Special-Status Mammals

The Project site has potential to support several special-status mammals, including the San Diego black-tailed jackrabbit, Dulzura pocket mouse, Los Angeles pocket mouse (LAPM), northwestern San Diego pocket mouse, and Stephens' kangaroo rat (SKR). Impacts to the SKR are covered pursuant to the SKR Habitat Conservation Plan (SKR HCP). The jackrabbit and pocket mice are designated as Covered Species Adequately Conserved under the MSHCP without additional survey/conservation requirements. (GLA, 2019a, p. 42)

G. Critical Habitat

The Project site is not located within USFWS-designated Critical Habitat areas.

1. Raptor Use

The Project site provides suitable foraging habitat for a number of raptor species, including special-status raptors, all of which are designated as Covered Species Adequately Conserved under the MSHCP without additional survey/conservation requirements. (GLA, 2019a, p. 42)

2. Nesting Birds

The Project site contains trees, shrubs, and ground cover that provide suitable habitat for nesting migratory birds. Impacts to nesting birds are prohibited under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code. (GLA, 2019a, p. 43)

H. Wildlife Movement

Wildlife movement activities usually fall into one of three movement categories: 1) dispersal (e.g., juvenile animals from natal areas or individuals extending range distributions); 2) seasonal migration; and 3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). Although the nature of each of these types of movement is species-specific, large open spaces will generally support a diverse wildlife community representing all types of movement.

According to GLA, the Project site lacks migratory wildlife corridors and wildlife nursery sites. The Project site does not occur within Cores or Linkages delineated by the Western Riverside County MSHCP. (GLA, 2019a, p. 3)

I. Jurisdictional Waters and Wetlands

A jurisdictional delineation of the Project site was conducted at the Project site by GLA, which included a review of historic aerial photographs of the Project area to evaluate the presence of drainage features that would potentially be considered jurisdictional features subject to Army Corps of Engineers (ACOE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA); San Diego Regional Water Quality

Control Board (RWQCB) jurisdiction pursuant to Section 401 of the CWA and/or Water Code Section 13260; and California Department of Fish and Wildlife (CDFW) jurisdiction pursuant to Section 1602 of the Fish and Game Code. (GLA, 2019a, p. 10) The Project's jurisdictional delineation report is included as Appendix D of *Technical Appendix C1*.

The Project site contains four naturally occurring drainage features (A, B, C and D) that generally extend from east to west across the property. Due to the relatively flat topography and limited watershed, Drainages A, B, and C terminate within the Project's boundaries without a defined connection to off-site waters. Drainage D consists of a relatively short (1,156 linear feet) feature that has developed as the result of runoff from the terminus of Chambers Road to the east, and the extends west to another paved portion of Chambers Road. From this point the flows extend offsite, crossing Encanto Road and entering a roadside ditch that extends north between Encanto Road and I-215. In addition to these natural features, the Project site contains an artificially-created drainage ditch that originates at the southern site boundary from a storm drain at the northern terminus of Sherman Road, and which extends north for approximately 500 feet north into the property before flows diverge to the west where they assume the general direction of historic flows from the ephemeral portion of Drainage A. The artificial ditch is included in the discussion of Drainage A. The drainage ditch contains a drainage easement that was dedicated to the County of Riverside on June 29, 1988 (recorded instrument #180001). The USGS Romoland quadrangle map show two historic blue-line streams that at one time converged just south of where the flows enter the Project site through the storm drain outlet. The existing drainage ditch is an apparent diversion of the historic flows, which are now greatly supplemented from storm runoff and nuisance flows from an adjacent residential development and other adjacent developments. The ditch contains approximately 0.11 acre of emergent wetlands attributed to nuisance and storm flows that are concentrated on to the Project area from a storm drain outlet located at the intersection of Sherman Road and Chambers Avenue. The emergent vegetation is dominated by southern cattail and bulrush. Since the drainage ditch (including the associated vegetation) is an artificially created feature, the ditch has been excluded from the MSHCP designation of Riparian/Riverine Areas. The County of Riverside Environmental Programs Department (EPD) previously concurred with this determination. (GLA, 2019a, p. 43; GLA, 2019c, pp. 6-7)

The drainage ditch was recently modified in response to a Notice of Violation (NOV) issued by the City of Menifee Code Enforcement Division (dated October 16, 2017). The NOV addressed two concerns with the drainage ditch, including the need for positive drainage and vector breeding harborage, both caused by the accumulation of dirt and vegetation within the ditch. In accordance with the NOV, the property owner was instructed to mow, trim, and remove all overgrown dead, diseased vegetation, while also removing materials as necessary to maintain positive flow away from the storm drain outlet in accordance with the approved Water Quality Management Plan (WQMP). The jurisdictional delineation includes the current condition of the drainage ditch. (GLA, 2019a, pp. 43-44)

1. ACOE/RWQCB Jurisdiction

The Project site contains approximately 0.68 acre of ACOE/RWQCB jurisdiction, of which approximately 0.11 acre supports jurisdictional wetlands. The jurisdictional areas include four (4) drainage features. Additionally, the Project may have the potential to impact 0.02 acre of ACOE/RWQCB jurisdiction associated with potential off-site improvements, as shown on Figure 4.3-3, *Jurisdictional Delineation Map*.

Project Boundary
Offsite Impact Areas
Corps Non-Wetland Waters - Legado Project
Corps Wetland - Leagdo Project
Corps Non-Wetland Waters - Offsite
Corps Wetland - Offsite
6 Width of Jurisdiction in Feet

Source(s): Glen Lukos (10-23-2019)

NOT TO SCALE

Figure 4.3-3

JURISDICTIONAL DELINEATION MAP

The on-site drainage features do not have a direct visible connection to another water of the United States. However, ACOE takes the position that isolated drainage features exhibiting sheet flow connections to other jurisdictional waters up to a 100-year event would be considered jurisdictional, although the sheet-flow connections themselves would not be jurisdictional. It is assumed that the drainage features would ultimately connect to the storm drain at Encanto Drive up to a 100-year event that would ultimately connect to the San Jacinto River (a water of the United States). As such, the drainage features are considered jurisdictional. Table 4.3-2, *Summary of On-Site ACOE/RWQCB Jurisdiction*, summarizes on-site ACOE/RWQCB jurisdiction for the Project site. (GLA, 2019a, p. 44)

The northeastern portion of the Project site contains a small (0.12 acre) vernal pool, that is not subject to the jurisdiction of the Corps, as it is isolated and therefore not a water of the U.S. However, the vernal pool may be regulated as a water of the State since it exhibits beneficial uses related to wildlife use. (GLA, 2019a, p. 44)

Table 4.3-2 Summary of On-Site ACOE/RWQCB Jurisdiction

DRAINAGE	NON-WETLAND WATERS	WETLANDS	TOTAL JURISDICTION
A	0.30	0.11	0.41
B	0.07	0	0.07
C	0.12	0	0.12
D	0.08	0	0.08
Total	**0.57**	**0.11**	**0.68**

(GLA, 2019a, Table 4-4)

Drainage A contains approximately 0.41 acre of ACOE/RWQCB jurisdiction, of which 0.11 acre consists of jurisdictional wetlands. The drainage feature consists of a naturally ephemeral reach, as well as an artificially-created drainage ditch. The ephemeral portion originates in the southeast portion of the property, in part as runoff from Chambers Avenue. The drainage extends northwest for approximately 1,100 linear feet until the Ordinary High Water Mark (OHWM) disappears in the agricultural field. The OWHM of this portion of Drainage A is approximately one-foot wide. The historic extent of this feature presumably carried ordinary flows further west where they would terminate in the west-central portion of the property. However, as noted above, a constructed drainage ditch now conveys flows that enter the property from a storm drain at the northern terminus of Sherman Road, and which extend north to bisect the historic east-west ephemeral drainage channel. The drainage ditch extends for approximately 500 feet north into the property before flows diverge to the west where they assume the general direction of historic flows from the ephemeral portion of Drainage A. The USGS Romoland quadrangle map show two historic blue-line streams that at one time converged just south of where the flows enter the property through a storm drain outlet. The existing drainage ditch is an apparent diversion of the historic flows, which are now greatly supplemented from storm runoff and nuisance flows from an adjacent residential development and other adjacent developments.

Vegetation associated with the wetland portion of drainage ditch includes southern cattail (*Typha domingensis*), Olney's bulrush (*Schoenoplectus americanus*), umbrella sedge (*Cyperus eragrostis*), rabbitsfoot grass (*Polypogon monspeliensis*), smooth cocklebur (*Xanthium strumarium*), and duck weed (*Lemna* sp.). (GLA, 2019a, pp. 44-45)

The artificially-created ditch consists initially of a concrete portion that originates from the storm drain outlet at Sherman Road. The OHWM of the concrete portion ranges from 8 feet wide at the outlet to 13 feet wide. The concrete portion extends north for approximately 120 linear feet to where it transitions to an artificially-

created earthen channel. The earthen channel extends north for approximately 500 linear feet and then curves to the northwest where it then follows the historic of flows associated with Drainage A. Approximately 350 linear feet of the earthen channel consists of earthen side slopes, but the bottom is lined with un-grouted riprap. The OHWM associated with this portion ranges from 13 to 17 feet wide. The remaining 150 linear feet of the artificially-created portion is entirely earthen and the OHWM ranges from 6 to 8 feet wide. From the point where the channel curves northwest, the drainage feature gradually narrows to the point where there is no longer a discernible OHWM. The drainage ditch is currently unvegetated; however, approximately 0.11-acre of the ditch is intermittently vegetated with southern cattails and other vegetation. (GLA, 2019a, pp. 45-46)

Drainage B contains approximately 0.07 acre of ACOE/RWQCB jurisdiction, none of which consists of jurisdictional wetlands. Drainage B is also an ephemeral feature, and traverses from the eastern boundary in a westward direction for approximately 3,100 linear feet until an OHWM is no longer visible near the central portion of the property. Drainage B also exhibits a one-foot-wide OHWM. Vegetation associated with Drainage B is similar to that associated with Drainage C. (GLA, 2019a, p. 45)

Drainage C contains approximately 0.12 acre of ACOE/RWQCB jurisdiction, none of which consists of jurisdictional wetlands. Drainage C is an ephemeral feature that only exhibits flows during and immediately after storm events, supporting a limited OHWM for varying distances. The drainage enters the property at the eastern boundary and extends westward for approximately 3,900 linear feet until an OHWM is no longer visible near the northern central portion of the Property. Drainage C exhibits a one-foot-wide OHWM. Vegetation adjacent to Drainage C consists of Russian thistle (*Salsola tragus*), rattlesnake weed (*Chamaesyce albomarginata*), dove weed (*Eremocarpus setigerus*), vinegar weed (*Trichostema lanceolatum*), cultivated barley (*Hordeum vulgare*), field bindweed (*Convolvulus arvensis*), summer mustard (*Hirschfeldia incana*), and fascicled tarweed (*Hemizonia fasciculata*). (GLA, 2019a, pp. 45-46)

Drainage D contains approximately 0.08 acre of Corps/RWQCB jurisdiction, none of which consists of jurisdictional wetlands. Drainage D consists of an ephemeral feature that is three-feet wide and receives runoff from the western terminus of Chambers Avenue. The drainage only exhibits flows during and immediately after storm events, supporting a limited bed/bank for varying distances before the flows continue along another paved portion of Chambers Avenue before crossing Encanto Road offsite into a ditch that flows north along Encanto Road and I-215. (GLA, 2019a, p. 46)

In addition to the on-site drainage features discussed above, the Project may include impacts to another 0.02 acre of non-wetland/non-riparian waters associated with potential off-site improvements. A small, unvegetated drainage feature is located off-site to the southeast of the Project boundary that currently flows to the west, crossing under an unimproved portion of Antelope Road before spreading into an off-site field east of Chatham Lane and south of Chambers Avenue. The Underwood development project proposed to the east of the Project intends to improve the portion of Antelope Road that crosses the off-site drainage feature. The Underwood project improvements would temporarily impact the drainage feature to replace the stream crossing, but post-development the flows would continue to the west. (GLA, 2019d)

2. CDFW Jurisdiction

The Project site contains approximately 0.68 acre of CDFW jurisdiction on-site, of which 0.11 acre consists of vegetated riparian habitat. Additionally, the Project may have the potential to impact 0.02 acre of CDFW jurisdiction associated with potential off-site improvements. Areas of CDFW jurisdiction for the Project site and potential off-site improvement area are identical to area of ACOE jurisdiction discussed above, and warrant no further discussion. The vernal pool discussed above in Subsection 4.3.1I.1 are not subject to CDFW jurisdiction as it is not a stream or lake. (GLA, 2019a, p. 46) Table 4.3-3, *Summary of On-Site CDFW Jurisdiction*, summarizes CDFW jurisdiction for the Project site.

Table 4.3-3 Summary of On-Site CDFW Jurisdiction

DRAINAGE	UNVEGETATED STREAMBED	RIPARIAN VEGETATION	TOTAL JURISDICTION
A	0.30	0.11	0.41
B	0.07	0	0.07
C	0.12	0	0.12
D	0.08	0	0.08
Total	**0.57**	**0.11**	**0.68**

(GLA, 2019a, Table 4-5)

J. MSHCP Riparian/Riverine Areas and Vernal Pools

1. Riparian/Riverine Areas

The Project site contains a man-made drainage ditch that drains runoff from an adjacent residential development. As noted above, the drainage ditch was recently modified in response to a NOV issued by the City of Menifee Code Enforcement Division.

Since the drainage ditch (including the associated vegetation) is an artificially created feature, the ditch would be excluded from the MSHCP designation of Riparian/Riverine Areas. The County of Riverside Environmental Programs Department (EPD) previously concurred with this determination. As such, impacts to the man-made ditch would not be subject to the MSHCP Determination of Biologically Equivalent or Superior Preservation (DBESP) process. (GLA, 2019a, p. 47)

The Project site contains four drainage features that would be considered MSHCP riparian/riverine features, totaling 0.68 acre. Additionally, the Project may have the potential to impact 0.02 acre of MSHCP riparian/riverine features associated with potential off-site improvements. The Project's on- and potential off-site impacts to MSHCP riparian/riverine features are shown on Figure 4.3-4, *MSHCP Riparian/Riverine Areas Map*. The riparian/riverine areas are the same discussed above in Subsection 4.3.1I.I.1 for on- and potential off-site jurisdictional waters. The riparian vegetation consists of an emergent wetland dominated by southern cattails (*Typha domingensis*) that is supported by runoff from the storm drain at Chambers Avenue. The vegetation is intermittently removed by storm scour and maintenance of the storm drain. Table 4.3-4, *Summary of MSHCP Riparian/Riverine Areas*, summarizes MSHCP Riparian/Riverine Areas for the Project site. (GLA, 2019a, pp. 47-48; GLA, 2019c, pp. 6, 10)

Source(s): Glen Lukos (12-19-2019)

Figure 4.3-4

NOT TO SCALE

MSHCP RIPARIAN/RIVERINE AREAS MAP

Table 4.3-4 Summary of MSHCP Riparian/Riverine Areas

DRAINAGE	UNVEGETATED STREAMBED	RIPARIAN VEGETATION	TOTAL JURISDICTION
A	0.30	0.11	0.41
B	0.07	0	0.07
C	0.12	0	0.12
D	0.08	0	0.08
Off-Site Drainage	0.02	0	0.02
Total	**0.59**	**0.11**	**0.70**

(GLA, 2019c, Table 3-1)

2. Vernal Pools

The Project site contains four depression features that exhibit evidence of seasonal ponding. Features 1, 3, and 4 consist of disturbed depression features, two of which are tire track features, that support upland vegetation and that do not support vernal pool indicator plant species, or other wetland plant species. However, Feature 2 supports a moderate cover of woolly marbles, which is a vernal pool indicator plant species. As such, Feature 2 is classified as a MSHCP vernal pool. The vernal pool is depicted on Figure 4.3-4. Feature 2 was monitored during the 2018-2019 rainy season and exhibited approximately 0.12 acre of surface ponding. (GLA, 2019a, p. 47)

4.3.2 APPLICABLE REGULATORY REQUIREMENTS

The following is a brief description of the federal, state, and local environmental laws and related regulations governing the protection of biological resources.

A. Federal Regulations

1. Endangered Species Act (ESA)

The purpose of the federal Endangered Species Act (ESA) is to protect and recover imperiled species and the ecosystems upon which they depend. It is administered by the U.S. Fish and Wildlife Service (USFWS) and the Commerce Department's National Marine Fisheries Service (NMFS). The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife such as whales and anadromous fish such as salmon. Under the ESA, species may be listed as either endangered or threatened. "Endangered" means a species is in danger of extinction throughout all or a significant portion of its range. "Threatened" means a species is likely to become endangered within the foreseeable future. All species of plants and animals, except pest insects, are eligible for listing as endangered or threatened. (USFWS, 2013)

The ESA makes it unlawful for a person to take a listed animal without a permit. Take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." Through regulations, the term "harm" is defined as "an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering." Listed plants are not protected from take, although it is illegal to collect or maliciously harm them on Federal land. Protection from commercial trade and the effects of federal actions do apply for plants. (USFWS, 2013)

Section 7 of the ESA requires federal agencies to use their legal authorities to promote the conservation purposes of the ESA and to consult with the USFWS and NMFS, as appropriate, to ensure that effects of actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species. During consultation, the "action" agency receives a "biological opinion" or concurrence letter addressing the proposed action. In the relatively few cases in which the USFWS or NMFS makes a jeopardy determination, the agency offers "reasonable and prudent alternatives" about how the proposed action could be modified to avoid jeopardy. It is extremely rare that a project ends up being withdrawn or terminated because of jeopardy to a listed species. (USFWS, 2013)

Section 10 of the ESA may be used by landowners including private citizens, corporations, tribes, states, and counties who want to develop property inhabited by listed species. Landowners may receive a permit to take such species incidental to otherwise legal activities, provided they have developed an approved habitat conservation plan (HCP). HCPs include an assessment of the likely impacts on the species from the proposed action, the steps that the permit holder will take to avoid, minimize, and mitigate the impacts, and the funding available to carry out the steps. HCPs may benefit not only landowners but also species by securing and managing important habitat and by addressing economic development with a focus on species conservation. (USFWS, 2013)

2. Clean Water Act Section 401

Clean Water Act (CWA) Section 401 water quality certification provides states and authorized tribes with an effective tool to help protect water quality, by providing them an opportunity to address the aquatic resource impacts of federally issued permits and licenses. Under Section 401, a federal agency cannot issue a permit or license for an activity that may result in a discharge to waters of the U.S. until the state or tribe where the discharge would originate has granted or waived Section 401 certification. The central feature of CWA Section 401 is the state or tribe's ability to grant, grant with conditions, deny, or waive certification. Granting certification, with or without conditions, allows the federal permit or license to be issued consistent with any conditions of the certification. Denying certification prohibits the federal permit or license from being issued. Waiver allows the permit or license to be issued without state or tribal comment. States and tribes make their decisions to deny, certify, or condition permits or licenses based in part on the proposed project's compliance with Environmental Protection Agency (EPA)-approved water quality standards. In addition, states and tribes consider whether the activity leading to the discharge will comply with any applicable effluent limitations guidelines, new source performance standards, toxic pollutant restrictions, and other appropriate requirements of state or tribal law. (EPA, 2010, p. 1)

Many states and tribes rely on Section 401 certification to ensure that discharges of dredge or fill material into a water of the U.S. do not cause unacceptable environmental impacts and, more generally, as their primary regulatory tool for protecting wetlands and other aquatic resources. However, Section 401 is limited in scope and application to situations involving federally-permitted or licensed activities that may result in a discharge to a water of the U.S. If a federal permit or license is not required, or would authorize impacts only to waters that are not waters of the U.S., the activity is not subject to the CWA Section 401. (EPA, 2010, p. 2)

3. Clean Water Act Section 404

Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Wetlands subject to Clean Water Act Section 404 are defined as "areas that are inundated or saturated by surface or ground water 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. Wetlands generally include swamps, marshes, bogs, and similar areas." Activities

in waters of the United States regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation (e.g. certain farming and forestry activities). (EPA, n.d.)

The basic premise of the program is that no discharge of dredged or fill material may be permitted if: (1) a practicable alternative exists that is less damaging to the aquatic environment; or (2) the nation's waters would be significantly degraded. Applications for permits must, to the extent practicable: (l) demonstrate steps have been taken to avoid wetland impacts; (2) demonstrate that potential impacts on wetlands have been minimized; and (3) provide compensation for any remaining unavoidable impacts. Proposed activities are regulated through a permit review process. (EPA, n.d.)

An individual permit is required for potentially significant impacts. Individual permits are reviewed by the ACOE, which evaluates applications under a public interest review, as well as the environmental criteria set forth in the CWA Section 404(b)(1) Guidelines. However, for most discharges that will have only minimal adverse effects, a general permit may be suitable. General permits are issued on a nationwide, regional, or State basis for particular categories of activities. The general permit process eliminates individual review and allows certain activities to proceed with little or no delay, provided that the general or specific conditions for the general permit are met. States also have a role in Section 404 decisions, through State program general permits, water quality certification, or program assumption. (EPA, n.d.)

4. Executive Order 11990 – Protection of Wetlands

The purpose of Executive Order (EO) 11990 is to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands." To meet these objectives, the Order requires federal agencies, in planning their actions, to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. (FEMA, 2017) The Order applies to:

- Acquisition, management, and disposition of federal lands and facilities construction and improvement projects which are undertaken, financed, or assisted by federal agencies;

- Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities. (FEMA, 2017)

The procedures require the determination of whether or not the proposed project will be in or will affect wetlands. If so, a wetlands assessment must be prepared that describes the alternatives considered. The procedures include a requirement for public review of assessments. (FEMA, 2017)

5. Migratory Bird Treaty Act (16 USC Section 703-712)

The MBTA makes it illegal for anyone to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to federal regulations. The migratory bird species protected by the MBTA are listed in 50 CFR 10.13. The USFWS has statutory authority and responsibility for enforcing the MBTA (16 U.S.C. 703-712). The MBTA implements Conventions between the United States and four countries (Canada, Mexico, Japan, and Russia) for the protection of migratory birds. (USFWS, 2015)

6. *Bald and Golden Eagle Protection Act*

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940, and amended several times since then, prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." "Disturb" means: "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." (USFWS, 2016)

B. *State Regulations*

1. *California Endangered Species Act (CESA)*

The California Endangered Species Act (CESA) states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. The CDFW works with interested persons, agencies, and organizations to protect and preserve such sensitive resources and their habitats. CESA prohibits the take of any species of wildlife designated by the California Fish and Game Commission as endangered, threatened, or candidate species. CDFW may authorize the take of any such species if certain conditions are met. (CDFW, 2017a)

Section 2081 subdivision (b) of the California Fish and Game Code (CFGC) allows CDFW to authorize take of species listed as endangered, threatened, candidate, or a rare plant, if that take is incidental to otherwise lawful activities and if certain conditions are met. These authorizations are commonly referred to as incidental take permits (ITPs). (CDFW, 2017a)

If a species is listed by both the federal ESA and CESA, CFGC Section 2080.1 allows an applicant who has obtained a federal incidental take statement (federal Section 7 consultation) or a federal incidental take permit (federal Section 10(a)(1)(B)) to request that the Director of CDFW find the federal documents consistent with CESA. If the federal documents are found to be consistent with CESA, a consistency determination (CD) is issued and no further authorization or approval is necessary under CESA. (CDFW, 2017a)

A Safe Harbor Agreement (SHA) authorizes incidental take of a species listed as endangered, threatened, candidate, or a rare plant, if implementation of the agreement is reasonably expected to provide a net conservation benefit to the species, among other provisions. SHAs are intended to encourage landowners to voluntarily manage their lands to benefit CESA-listed species. California SHAs are analogous to the federal safe harbor agreement program and CDFW has the authority to issue a consistency determination based on a federal safe harbor agreement. (CDFW, 2017a)

2. *Natural Community Conservation Planning Act (NCCP)*

CDFW's Natural Community Conservation Planning (NCCP) program takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. The NCCP program began in 1991 as a cooperative effort to protect habitats and species. It is broader in its orientation and objectives than the California and Federal Endangered Species Acts, as these laws are designed to identify and protect individual species that have already declined in number significantly. (CDFW, 2017b)

An NCCP identifies and provides for the regional protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. Working with landowners, environmental organizations, and other interested parties, a local agency oversees the numerous activities that compose the development of an NCCP. CDFW and the U.S. Fish and Wildlife Service provide the necessary support, direction, and guidance to NCCP participants. (CDFW, 2017b)

There are currently 14 approved NCCPs (includes 6 subarea plans) and 20 NCCPs in the active planning phase (includes 10 subarea plans), which together cover more than 7 million acres and will provide conservation for nearly 400 special status species and a wide diversity of natural community types throughout California. (CDFW, 2017b)

3. California Fish and Game Code, Section 1600, et seq.

CFGC section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following:

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
- Substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or
- Deposit debris, waste or other materials that could pass into any river, stream, or lake. (CDFW, 2017c)

The CFGC indicates that "any river, stream or lake" includes those that are episodic (they are dry for periods of time) as well as those that are perennial (they flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water. (CDFW, 2017c)

CDFW requires a Lake and Streambed Alteration (LSA) Agreement when it determines that the activity, as described in a complete LSA Notification, may substantially adversely affect existing fish or wildlife resources. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify a project that would eliminate or reduce harmful impacts to fish and wildlife resources. Before issuing an LSA Agreement, CDFW must comply with CEQA. (CDFW, 2017c)

4. Native Plant Protection Act (NPPA) of 1977

The Native Plant Protection Act (NPPA) was enacted in 1977 and allows the Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations. (CDFW, 2017d)

5. Oak Woodlands Conservation Program

The Oak Woodlands Conservation Program offers landowners, conservation organizations, cities and counties an opportunity to obtain funding for projects designed to conserve and restore California's oak woodlands. While the Program is statewide in nature, it provides opportunities to address oak woodland issues on a regional priority basis. The Program is designed to help local efforts achieve oak woodland protection, and provides a mechanism to achieve sustainable ranch and farming operations and healthy oak woodlands. (WCB, 2017)

6. *Unlawful Take or Destruction of Nests or Eggs (CFGC Sections 3503.5-3513)*

Section 3503.5 of the CFGC specifically protects birds of prey, stating: (California Legislative Information, 1985)

> *It is unlawful to take, possess, or destroy any birds in the orders 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.*

Section 3513 of the CFGC duplicates the federal protection of migratory birds, stating: (California Legislative Information, 1977)

> *It is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act.*

7. *Porter-Cologne Water Quality Act*

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code section 13000 *et seq.*), the policy of the State is as follows:

- That the quality of all the waters of the State shall be protected;
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and
- That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation. (SWRCB, 2014)

The Porter-Cologne Act established nine Regional Water Boards (based on hydrogeologic barriers) and the State Water Board, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The State Water Board provides program guidance and oversight, allocates funds, and reviews Regional Water Boards decisions. In addition, the State Water Board allocates rights to the use of surface water. The Regional Water Boards have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The State Water Board and Regional Water Boards have numerous Non-Point Source (NPS)-related responsibilities, including monitoring and assessment, planning, financial assistance, and management. (SWRCB, 2014)

The Regional Water Boards regulate discharges under the Porter-Cologne Act primarily through issuance of National Pollutant Discharge Elimination System (NPDES) permits for point source discharges and waste discharge requirements (WDRs) for NPS discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge. The SWRCB and the RWQCBs can make their own investigations or may require dischargers to carry out water quality investigations and report on water quality issues. The Porter-Cologne Act provides several options for enforcing WDRs and other orders, including cease and desist orders, cleanup and abatement orders, administrative civil liability orders, civil court actions, and criminal prosecutions. (SWRCB, 2014)

The Porter-Cologne Act also requires adoption of water quality control plans that contain the guiding policies of water pollution management in California. A number of statewide water quality control plans have been adopted by the State Water Board. In addition, regional water quality control plans (basin plans) have been adopted by each of the Regional Water Boards and get updated as necessary and practical. These plans identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. The basin plans also contain implementation, surveillance, and monitoring plans. Statewide and regional water quality control plans include enforceable prohibitions against certain types of discharges, including those that may pertain to nonpoint sources. Portions of water quality control plans, the water quality objectives and beneficial use designations, are subject to review by the EPA, when approved they become water quality standards under the CWA. (SWRCB, 2014)

8. California Native Plant Society

The California Native Plant Society (CNPS) is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in the state. CNPS has compiled an inventory of information focusing on geographic distribution and qualitative characterization of rare, threatened, or endangered vascular plant species of California. It also provides information on their population and viability. The inventory list serves as the candidate list for threatened and endangered species identified by CDFW as well as a mechanism for tracking the status of plants in California. (GLA, 2019a, p. 16) The CNPS listings are summarized on Table 4.3-5, *CNPS Ranks 1, 2, 3, & 4, and Threat Code Extensions*. In addition, Table 4.3-5 summarizes the extension code or "threat ranks" that are added as a decimal code after the CNPS listing (e.g., List 1B.1).

Table 4.3-5 CNPS Ranks 1, 2, 3, & 4, and Threat Code Extensions

CNPS RANK	COMMENTS
Rank 1A – Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere	Thought to be extinct in California based on a lack of observation or detection for many years.
Rank 1B – Plants Rare, Threatened, or Endangered in California and Elsewhere	Species, which are generally rare throughout their range that are also judged to be vulnerable to other threats such as declining habitat.
Rank 2A – Plants presumed Extirpated in California, But Common Elsewhere	Species that are presumed extinct in California but more common outside of California
Rank 2B – Plants Rare, Threatened or Endangered in California, But More Common Elsewhere	Species that are rare in California but more common outside of California
Rank 3 – Plants About Which More Information Is Needed (A Review List)	Species that are thought to be rare or in decline but CNPS lacks the information needed to assign to the appropriate list. In most instances, the extent of surveys for these species is not sufficient to allow CNPS to accurately assess whether these species should be assigned to a specific rank. In addition, many of the Rank 3 species have associated taxonomic problems such that the validity of their current taxonomy is unclear.
Rank 4 – Plants of Limited Distribution (A Watch List)	Species that are currently thought to be limited in distribution or range whose vulnerability or susceptibility to threat is currently low. In some cases, as noted above for Rank 3 species, CNPS lacks survey data to accurately determine status in California. Many species have been placed on Rank 4 in previous editions of the "Inventory" and have been removed as survey data has indicated that the species are more common than previously thought. CNPS recommends that species currently included on this list should be monitored to ensure that future substantial declines are minimized.
Extension	**Comments**
.1 – Seriously endangered in California	Species with over 80% of occurrences threatened and/or have a high degree and immediacy of threat.
.2 – Fairly endangered in California	Species with 20-80% of occurrences threatened.
.3 – Not very endangered in California	Species with <20% of occurrences threatened or with no current threats known.

(GLA, 2019a, Table 3-1)

C. *Local Regulations*

1. *Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)*

The Project site is located within the Sun City/Menifee Valley Area Plan portion of the Western Riverside County MSHCP, which is a comprehensive habitat conservation/planning program for Western Riverside County. The intent of the MSHCP is to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. The MSHCP provides coverage (including take authorization for listed species) for special-status plant and animal species, as well as mitigation for impacts to special-status species and associated native habitats. (GLA, 2019a, p. 2)

Through agreements with the USFWS and CDFW, the MSHCP designates 146 special-status animal and plant species as Covered Species, of which the majority have no project-specific survey/conservation requirements. The MSHCP provides mitigation for project-specific impacts to these species for Projects that are compliant/consistent with MSHCP requirements, such that the impacts are reduced to below a level of significance pursuant to CEQA. (GLA, 2019a, p. 2)

The Covered Species that are not yet adequately conserved have additional requirements in order for these species to ultimately be considered "adequately conserved." A number of these species have survey requirements based on a project's occurrence within a designated MSHCP survey area and/or based on the presence of suitable habitat. These include Narrow Endemic Plant Species (MSHCP *Volume I, Section 6.1.3*), as identified by the Narrow Endemic Plant Species Survey Areas (NEPSSA); Criteria Area Plant Species (MSHCP *Volume I, Section 6.3.2*) identified by the Criteria Area Plant Species Survey Areas (CAPSSA); animal species (burrowing owl, mammals, amphibians) identified by survey areas (MSHCP *Volume I, Section 6.3.2*); and species associated with riparian/riverine areas and vernal pool habitats (i.e., least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, and three species of listed fairy shrimp) (MSHCP *Volume I, Section 6.1.2*). An additional 28 species (MSHCP *Volume I, Table 9.3*) not yet adequately conserved have species-specific objectives in order for the species to become adequately conserved. However, these species do not have project-specific survey requirements. (GLA, 2019a, pp. 2-3)

As shown on Figure 4.3-5, *MSHCP Overlay Map*, the Study Area is not located within the MSHCP Criteria Area or the MSHCP CAPSSA. The Study Area also is not located within the MSHCP Mammal or Amphibian Survey Areas, or Core and Linkage areas. However, portions of the Project site are located within the MSHCP NEPSSA, and the entire Project site is located within the Burrowing Owl Survey Area. (GLA, 2019a, p. 3)

Within the designated Survey Areas, the MSHCP requires habitat assessments, and focused surveys within areas of suitable habitat. For locations within the MSHCP Criteria Area with positive survey results, the MSHCP requires that 90 percent of those portions of the property that provide for long-term conservation value for the identified species shall be avoided until it is demonstrated that conservation goals for the particular species have been met throughout the MSHCP. Findings of equivalency shall be made demonstrating that the 90-percent standard has been met, if applicable. If equivalency findings cannot be demonstrated, then "biologically equivalent or superior preservation" must be provided. Accordingly, the biological resources assessment entailed the performance of habitat assessments, and site-specific biological surveys, to evaluate the presence/absence of special-status species in accordance with the requirements of CEQA and the MSHCP; performance of a focused survey for rare plants; performance of a focused survey for the burrowing owl; performance of a jurisdictional delineation of aquatic resources; and performance of a focused survey for the dry season fairy shrimp. (GLA, 2019a, pp. 4-5)

All projects must demonstrate compliance with applicable MSHCP requirements pursuant to the following sections of the MSHCP: Section 6.1.2, "Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools;" Section 6.1.3, "Protection of Narrow Endemic Plant Species;" Section 6.1.4, "Guidelines Pertaining to the Urban/Wildland Interface;" and Section 6.3.2, "Additional Survey Needs and Procedures." (GLA, 2019a, p. 51)

Project Boundary
Offsite Impact Areas
Narrow Endemic Plants Survey Area
Burrowing Owl Survey Area

Source(s): Glen Lukos (08-06-2019)

NOT TO SCALE

Figure 4.3-5

MSHCP OVERLAY MAP

2. Stephen's Kangaroo Rat Habitat Conservation Plan

The SKR HCP was prepared under the direction of the Riverside County Habitat Conservation Agency (RCHCA) Board of Directors, in consultation with USFWS and CDFW. The County of Riverside is a member agency of the RCHCA. The 30-year SKR HCP was designed to acquire and permanently conserve, maintain and fund the conservation, preservation, restoration, and enhancement of Stephens' kangaroo rat-occupied habitat. The SKR HCP covers approximately 534,000 acres within the member jurisdictions and includes an estimated 30,000 acres of occupied Stephens' kangaroo rat habitat. The SKR HCP requires members to preserve and manage 15,000 acres of occupied habitat in seven Core Reserves encompassing over 41,000 acres. (RCHCA, n.d.)

On May 3, 1996, the USFWS issued a permit to the Riverside County Habitat Conservation Agency to incidentally take the federally endangered Stephens' kangaroo rat (*Dipodomys stephensi*). Similarly, the CDFW issued a California Endangered Species Act Management Authorization for Implementation of the Stephens' kangaroo rat on May 6, 1996. To date, more than $50 million has been dedicated to the establishment and management of a system of regional preserves designed to ensure the survival of SKR in the plan area. This effort resulted in the permanent conservation of approximately 50% of the SKR-occupied habitat remaining in the HCP area. Through direct funding and in-kind contributions, SKR habitat in the regional reserve system is managed to ensure its continuing ability to support the species. Core reserves were deemed complete in December of 2003. (RCHCA, n.d.)

3. City of Menifee Tree Preservation Ordinance (Ordinance No. 2015-167)

City of Menifee Ordinance No. 2015-167 (included as Chapter 9.86 of the City of Menifee Municipal Code) provides guidelines for tree removal and tree preservation. As noted in the ordinance, where new tree installation is required, existing healthy trees, with a six inch or larger trunk diameter measure at four feet from the surrounding grade shall be replaced on a three-to-one ratio if removed in addition to any other new tree installation required. The ordinance also requires a Tree Removal Permit for any tree to be removed. (Menifee, 2018, Chapter 9.86)

4. City of Menifee General Plan – Open Space and Conservation Element OSC-8: Biological

The Open Space & Conservation Element of the City of Menifee General Plan identifies the location of biological resources in the City of Menifee and MSHCP survey areas. In addition, the Open Space & Conservation Element of the General Plan includes the following goal and policies that relate to biological resources. (Menifee, 2013a)

- Goal OSC-8: Protected biological resources, especially sensitive and special status wildlife species and their natural habitats.

- Policy OCS-8.1: Work to implement the Western Riverside County Multiple Species Habitat Conservation Plan in coordination with the Regional Conservation Authority.

- Policy OCS-8.5: Recognize the impacts new development will have on the city's natural resources and identify ways to reduce these impacts.

- Policy OCS-8.8: Implement and follow MSHCP goals and policies when making discretionary actions pursuant to Section 13 of the Implementing Agreement.

4.3.3 BASIS FOR DETERMINING SIGNIFICANCE

Section IV of Appendix G to the CEQA Guidelines addresses typical adverse effects to biological resources, and includes the following threshold questions to evaluate the Project's impacts on biological resources (OPR, 2018):

a. *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;*

b. *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;*

c. *Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;*

d. *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;*

e. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or*

f. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.*

4.3.4 IMPACT ANALYSIS

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

Special-Status Plants

During the field surveys conducted within the Project's Study Area by GLA, two special-status plants were identified at the Project site: paniculate tarplant (*Deinandra paniculata*) and Parry's spineflower (*Chorizanthe parryi* var. *parryi*).

The paniculate tarplant was detected throughout the ruderal areas on the northeastern portion of the Project site. The paniculate tarplant is not a Covered Species under the Western Riverside County MSHCP, and is assigned by CNPS as a List 4.2 species, which indicates the plant species is a plant of limited distribution, and is fairly endangered in California. Its classification by CNPS is likely driven by its distribution in California being limited to portions of counties with characteristically high levels of development. It occurs on lands with mild topography (e.g., valley floor) and hence is characteristically prone to areas that have been subject to development. For some CNPS Rank 4 species, impacts would be judged potentially significant under CEQA. However, the paniculate tarplant is a species that is extremely tolerant of discing and other forms of weed abatement, and in some circumstances, will "disappear" when such routine disturbances are halted. Moreover,

the paniculate tarplant species is a common and widespread species in the French Valley region of western Riverside County. The paniculate tarplant occurs in a variety of habitats, including coastal scrub, and valley and foothill grasslands. (GLA, 2019a, pp. 31-32, 50) Because of this species' commonness to western Riverside County, and the relatively small size of the population that would be impacted, the Project would result in less-than-significant impacts to the paniculate tarplant species.

Parry's spineflower was detected within the cactus scrub area mapped in the eastern portion of the property. Parry's spineflower is designated as a Covered Species by the Western Riverside County MSHCP and does not have any additional conservation requirements. Furthermore, Parry's spineflower is designated by the CNPS as a List 1B.1 species. Because the Parry's spineflower species is a fully-covered species under the Western Riverside County MSHCP, the Project's consistency with the MSHCP through the payment of fees pursuant to Riverside County Ordinance No. 810, as adopted by the City of Menifee, provides the necessary mitigation under CEQA. (GLA, 2019a, pp. 32, 50) Impacts to Parry's spineflower would be less than significant.

Narrow Endemic Plant Species

The Project site is located within the NEPSSA. GLA conducted focused surveys for the Narrow Endemic Plant target species as determined by the corresponding MSHCP survey area and found no target species observed on-site. Accordingly, the Project would have a less-than-significant impact on Narrow Endemic Plant species. (GLA, 2019a, p. 32)

Special-Status Mammals

The Project site has some potential to support several special-status mammals, including the San Diego black-tailed jackrabbit, Dulzura pocket mouse, LAPM, northwestern San Diego pocket mouse, and SKR. Impacts to the SKR are covered pursuant to the SKR HCP. The jackrabbit and pocket mice are designated as Covered Species Adequately Conserved under the MSHCP without additional survey/conservation requirements. (GLA, 2019a, p. 42)

Special-Status Wildlife

As discussed in EIR Subsection 4.3.1.E.1 above, GLA detected a family group (breeding pair plus juveniles) of burrowing owls in the northeastern portion of the Project site during focused surveys. The burrowing owl is a state species of special concern (SSC) and is a covered but not yet adequately conserved species under the Western Riverside County MSHCP. The area where the burrowing owls were detected contains scattered rock outcrops where the property has not been maintained over the years by farming/discing. Due to the relative lack of disturbance, the area supports ground squirrels resulting in numerous suitable burrows. At least two occupied burrows were mapped, including what was presumed to be the nest burrow (based on the relative abundance of diagnostic sign), and a second burrow containing owl sign. Additional satellite escape burrows were noted when the owls flushed from their primary burrows. The remainder of the Project site is generally unsuitable to support breeding burrowing owls due to the lack of burrows resulting from regular discing and historic farming operations, although the site represents general foraging habitat for burrowing owls. (GLA, 2019a, p. 40)

Pursuant to Objective 5 of the MSHCP species-specific objectives for burrowing owls, projects located outside of the MSHCP Criteria Area are required to avoid 90 percent of lands with long-term conservation value for burrowing owls if the site supports three or more pairs and contains 35 or more acres of suitable habitat. Because the Project site supports just the one pair of burrowing owls, the Project is not required to avoid

burrowing owl habitat on-site. Pursuant to MSHCP Objective 6, the burrowing owls must be relocated outside of the nesting season. Through compliance with the MSHCP, impacts to burrowing owls would be reduced to below a level of significance. However, a significant impact could occur if construction activities were to occur during the nesting season, and also would occur if the Project were to directly impact any burrowing owl individuals. (GLA, 2019a, p. 51)

The Coastal California Gnatcatcher was heard vocalizing within Riversidean sage scrub vegetation located outside of the Project's proposed development footprint, but within the Project's open space. This species is Federally listed as Threatened and is designated as a California Species of Special Concern. This species is also designated as a Covered Species Adequately Conserved under the Western Riverside County MSHCP. A small portion of degraded sage scrub vegetation is within the Project's off-site with the potential to be used by the gnatcatcher. Otherwise, the Project's development footprint does not contain suitable habitat for the gnatcatcher, and the Project's on-site grading is not expected to impact habitat occupied by the gnatcatcher. Additionally, impacts to gnatcatcher-occupied habitat is covered and mitigated by the MSHCP. Accordingly, impacts to the coastal California gnatcatcher would be less than significant. (GLA, 2019a, p. 40)

GLA did not detect any Listed Fairy Shrimp within the Project's Study Area during any of the field surveys, but determined that two species: Riverside fairy shrimp (*Streptocephalus woottoni*) and Vernal Pool fairy shrimp (*Branchinecta lynchi*) have a low potential of occurring on the Project site due to lack of suitable habitat, and because the Project site is well outside of the species distribution range. Impacts would be less than significant. (GLA, 2019a, p. 41)

Special-Status Reptiles

Portions of the Project site have the potential to support special-status reptiles, including the coastal whiptail, coast horned lizard, coast patch-nosed snake, red diamond rattlesnake, and silvery legless lizard. Areas with the potential to support these species include the ruderal/grassland areas in the northeastern portion of the development footprint, and the Project's open space, which includes Riversidean sage scrub and ruderal/grassland habitat. (GLA, 2019a, p. 42) However, due to the limited potential habitat to be impacted by the Project, the loss of habitat for these species would be less than significant. Furthermore, impacts of these species would be covered through compliance with the Western Riverside MSHCP. (GLA, 2019a, p. 51)

Special-Status Birds

The Project has the potential to provide foraging habitat for several other special-status birds, including the loggerhead shrike and a few special-status raptors (ferruginous hawk, golden eagle, and white-tailed kite). However, the development footprint does not contain breeding habitat for these species or other special-status birds. Each of these birds are designated as Covered Species Adequately Conserved under the MSHCP without additional survey/conservation requirements. Accordingly, no impacts to special-status birds would occur. (GLA, 2019a, p. 42)

Nesting Birds & Raptors

The Project has the potential to impact active native bird nests if vegetation is removed during the nesting season (February 1 to August 31). Impacts to nesting native migratory birds are prohibited by the MBTA and California Fish and Game Code. Thus, impacts would be potentially significant and require mitigation. (GLA, 2019a, p. 51)

The Project site also provides suitable foraging habitat for a number of raptor species, including special-status raptors, all of which are designated as Covered Species Adequately Conserved under the Western Riverside County MSHCP without additional survey or conservation requirements. Because the special-status raptors determined to be present within the Project's Study Area are fully covered species under the Western Riverside County MSHCP, potential impacts to raptors would be fully mitigated through the Project's consistency with the MSHCP. (GLA, 2019a, p. 42)

Implementation of City Regulations and Design Requirements CRDR 4.3-1 through CRDR 4.3-3, would require payment of fees and compliance with the MSHCP. In addition, Mitigation Measure MM 4.3-2, would ensure that pre-construction surveys are conducted to determine the presence of burrowing owl on-site or within the off-site improvement areas, and to implement appropriate avoidance/relocation measures to preclude significant impacts to this species. With implementation of the required mitigation, Project impacts with respect to burrowing owl would be reduced to less-than-significant levels. Implementation of Mitigation Measure MM 4.3-2 would preclude potential impacts to nesting birds protected by the MBTA. Compliance with the required mitigation would ensure that the Project's impacts to species identified as a candidate, sensitive, or special status species are mitigated to less-than-significant levels.

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

Table 4.3-6, *Summary of Vegetation/Land Use Impacts*, provides a summary of vegetation community impacts and avoidance/preservation. The Project would permanently impact approximately 0.96 acre of native vegetation types, including 0.55 acre of cactus scrub, 0.41 acre of Riversidean sage scrub, and 0.11 acre of the disturbed emergent wetland. In addition, the Project would impact a 0.12-acre vernal pool. The impacts to the upland habitats, (i.e. cactus scrub and Riversidean sage scrub) would be minimal in acreage and is considered less than significant.

Table 4.3-6 Summary of Vegetation/Land Use Impacts

VEGETATION/LAND USE TYPE	ON-SITE IMPACTS	OFF-SITE IMPACTS	AVOIDED	TOTAL
Agriculture	299.26	0.01	0	299.27
Cactus Scrub	0.55	0	0	0.55
Disturbed/Developed	16.29	4.90	0.10	21.29
Riversidean Sage Scrub	0.15	0.26	1.41	1.82
Ruderal	8.30	0.86	4.56	13.72
Seasonal Pools	0.28	0	0	0.28
Total:	**324.94**	**6.03**	**6.07**	**336.94**

(GLA, 2019a, Table 5-1)

Furthermore, impacts to the upland habitats are covered through compliance with the biological requirements of the MSHCP and don't require mitigation. The emergent wetland consists predominantly of southern cattails growing in the concrete-lined drainage ditch, and that are intermittently present as a result of regular storm scour and maintenance. Impacts to the emergent vegetation would be less than significant and would not require mitigation as a special-status vegetation community. However, the impacts to the emergent vegetation would require mitigation by the regulatory agencies (Corps, Regional Board, and CDFW) during the permitting

process and pursuant to the MSHCP DBESP process. The vernal pool is disturbed and supports a minimal amount of vernal pool flora, but given the sensitivity of vernal pools in general, the loss of the vernal pool may be potentially significant. Furthermore, as with the emergent wetland, the loss of the vernal pool would be subject to the MSHCP DBESP process. (GLA, 2019a, p. 47)

Table 4.3-7, *Summary of MSHCP Riparian/Riverine Area Impacts*, summarizes the Project's impacts to MSHCP riparian/riverine areas. Implementation of the Project would impact 0.68 acre of on-site MSHCP riparian/riverine areas, of which 0.11 acre consists of emergent wetland associated with the drainage ditch and may potentially impact to 0.02 acre of non-wetland/non-riparian waters associated with potential off-site improvements. In addition, the Project would impact one MSHCP vernal pool (0.12 acre). The impact to 0.68 acre of MSHCP riparian/riverine resources and potential impact to 0.02 acre of MSHCP riparian/riverine resources would be subject to the DBESP process, including mitigation to offset the loss of functions and values. Approval of the impacts and mitigation through the DBESP process is required to ensure that the Project would not conflict with the MSHCP. A DBESP was prepared for the Project's impacts and is included as *Technical Appendix C3* to this EIR.

Table 4.3-7 Summary of MSHCP Riparian/Riverine Area Impacts

Drainage	**Vegetation**	**Acreage**
A	Agriculture	0.30
	Emergent Wetland	0.11
B	Agriculture	0.07
C	Agriculture	0.11
	Disturbed/Developed	0.01
D	Agriculture	0.08
Off-Site Drainage	Disturbed	0.02
Total		**0.70**

(GLA, 2019c, Table 4-1)

The DBESP noted that most of the MSHCP features in the Project area are devoid of riparian vegetation and disappear in the Project area, thus the Project's impacts would have no potential to affect downstream riparian resources. The hydrological functions and values of the impacted resources a minimal based on routine disturbances and low flows. Water does not maintain long enough to support nutrient retention and transformation. The features would support sediment trapping and transport to a limited extent. The approximately 0.11 acre of emergent marsh (included in the 0.68-acre on-site total) is associated with the artificially constructed ditch that receives flows from the storm drain at the southern end of the Project site. The first part of the ditch concrete-lined and is intermittently vegetated with a predominance of southern cattails, as a result of scour and maintenance of the storm drain. The ditch does not provide habitat for any of the species listed in Section 6.1.2. None of the plant species identified in Section 6.1.2 of the MSHCP were detected within the Project area, and nearly all would not be expected to occur due to a lack of suitable habitat. Of the animal species, none of the bird species have the potential to occur within the riverine habitat that would be impacted by the Project. (GLA, 2019c, pp. 10-12)

In addition to the on-site drainage features discussed above, the Project may include impacts to another 0.02 acre of non-wetland/non-riparian waters associated with potential off-site improvements. A small, unvegetated drainage feature is located off-site to the southeast of the Project boundary that currently flows to the west, crossing under an unimproved portion of Antelope Road before spreading into an off-site field east of Chatham Lane and south of Chambers Avenue. The Underwood development project proposed to the east of the Project

intends to improve the portion of Antelope Road that crosses the off-site drainage feature. The Underwood project improvements would temporarily impact the drainage feature to replace the stream crossing, but post-development the flows would continue to the west. The City of Menifee would require the Project to collect the runoff from the off-site drainage feature and place the flows into the Project's storm drain system. However, it has not yet been determined how the Project will intercept the flows. It is possible that the water could be intercepted just east of Chatham Lane and south of Chambers Avenue, which may not result in additional impacts to jurisdictional waters if the improvements do not result in a discharge of dredge or fill material into the OHWM of the drainage feature, and do not modify the bed, bank, and channel associated with the drainage feature. However, another option may be to intercept the flows at the Antelope Road crossing, which may result in up to 0.02 acre of impacts to the drainage feature. As a result of this additional impacts, the Legado off-site improvements may increase the overall amount of jurisdictional waters impacts from 0.68 acre to 0.70 acre but would not increase the impacts to wetland/riparian habitat. (GLA, 2019d; GLA, 2019c, p. 7)

Prior to implementation of mitigation in accordance with the DBESP, impacts to 0.68 acre of MSHCP riparian/riverine resources, potential impact to 0.02 acre of MSHCP riparian/riverine resources associated with potential off-site improvements, and 0.12 acre of on-site vernal pool areas would be significant.

Additionally, the Project site contains an artificially-created drainage ditch that drains runoff from an adjacent residential development. Because the drainage ditch is artificially-created, it would not be considered an MSHCP riparian/riverine feature. Impacts to the feature would not be subject to the DBESP process. (GLA, 2019a, p. 51)

Implementation of City Regulations and Design Requirements CRDR 4.3-1 through CRDR 4.3-3, would require payment of fees and compliance with the MSHCP. In addition, Mitigation Measure MM 4.3-1, requires implementation of the Project's DBESP (see *Technical Appendix C3*,) requires the mitigation of 0.68 acre of on-site and 0.02 acre of potential off-site MSHCP riparian/riverine areas at a 3:1 (mitigation: impact) ratio, and provides acceptable mitigation methods. The DBESP determined that Mitigation Measure MM 4.3-1 would result in a biologically equivalent or superior condition within the MSHCP Plan Area compared with the existing on-site MSHCP riparian/riverine resources, and Project impacts to 0.68 acre of on-site MSHCP riparian/riverine areas, potential impact to 0.02 acre of MSHCP riparian/riverine resources associated with potential off-site improvements, and 0.12 acre of on-site vernal pool areas would be reduced to less-than-significant levels. Implementation of Mitigation Measure MM 4.3-4 would ensure that Project impacts to 0.68 acre of riparian/riverine resources and the 0.12-acre vernal pool would be mitigated at a minimum 3:1 ratio (mitigation:impact) through off-site mitigation by targeting in-lieu fee mitigation with a local Resource Conservation District (RCD) or other approved mitigation bank. The Project intends to mitigate through the Riverpark Mitigation Bank. However, if mitigation credits are not yet available at the Mitigation Bank, then the Project Applicant would pursue alternate mitigation opportunities on conservation lands managed by the RCA. With implementation of the required mitigation, Project impacts with respect to riparian/riverine resources would be reduced to less-than-significant levels.

Threshold c: ***Would the Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?***

As discussed in EIR Subsection 4.3.1.I, GLA conducted a jurisdictional delineation within the Project's Study Area, the results of which are detailed in Appendix D of *Technical Appendix C1*. The results of the jurisdictional delineation concluded that the Project would impact 0.68 acre of on-site ACOE, RWQCB, and

CDFW jurisdiction of which approximately 0.11 acre consists of wetland/riparian habitat. As mentioned in Threshold b, jurisdictional areas on-site include four (4) drainage features (Drainage A, Drainage B, Drainage C, and Drainage D). Additionally, the Addendum to the Biological Technical Report and Jurisdictional Delineation Report concluded that the Project may impact an additional 0.02 acre of off-site ACOE, RWQCB, and CDFW jurisdiction, none of which consists of wetland/riparian habitat.

Drainage A contains approximately 0.41 acre of ACOE/RWQCB jurisdiction, of which 0.11 acre consists of jurisdictional wetlands. The drainage feature consists of a naturally ephemeral reach, as well as an artificially wet reach that supports the emergent wetland vegetation. The ephemeral portion originates in the southwest portion of the property, in part as runoff from Chambers Avenue. The drainage extends west for approximately 1,100 linear feet until the OHWM disappears in the agricultural field. The OWHM of this portion of Drainage A is approximately one-foot wide. The historic extent of this feature presumably carried ordinary flows further west where they would terminate in the west-central portion of the property. However, a constructed drainage ditch now conveys flows that enter the property from a storm drain at the northern terminus of Sherman Road, and which extend north to bisect the historic east-west ephemeral drainage channel. The drainage ditch extends for approximately 500 feet north into the property before flows diverge to the west where they assume the general direction of historic flows from the ephemeral portion of Drainage A. The USGS Romoland quadrangle map show two historic blue-line streams that at one time converged just south of where the flows enter the property through a storm drain outlet. The existing drainage ditch is an apparent diversion of the historic flows, which are now greatly supplemented from storm runoff and nuisance flows from an adjacent residential development and other adjacent developments. Vegetation associated with the wetland portion of drainage ditch includes southern cattail (*Typha domingensis*), Olney's bulrush (*Schoenoplectus americanus*), umbrella sedge (*Cyperus eragrostis*), rabbitsfoot grass (*Polypogon monspeliensis*), smooth cocklebur (*Xanthium strumarium*), and duck weed (*Lemna* sp.). Accordingly, a significant impact to state- and federally-protected wetlands on-site as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means, would occur and mitigation would be required. (GLA, 2019a, pp. 44-45)

Drainage B contains approximately 0.07 acre of ACOE/RWQCB jurisdiction, none of which consists of jurisdictional wetlands. Drainage B is also an ephemeral feature, and traverses from the eastern boundary in a westward direction for approximately 3,100 linear feet until an OHWM is no longer visible near the central portion of the property. Drainage B also exhibits a one-foot-wide OHWM. Vegetation associated with Drainage B is similar to that associated with Drainage C. (GLA, 2019a, p. 45)

Drainage C contains approximately 0.12 acre of ACOE/RWQCB jurisdiction, none of which consists of jurisdictional wetlands. Drainage C is an ephemeral feature that only exhibits flows during and immediately after storm events, supporting a limited OHWM for varying distances. The drainage enters the property at the eastern boundary and extends westward for approximately 3,900 linear feet until an OHWM is no longer visible near the northern central portion of the Property. Drainage C exhibits a one-foot-wide OHWM. Vegetation adjacent to Drainage C consists of Russian thistle (*Salsola tragus*), rattlesnake weed (*Chamaesyce albomarginata*), dove weed (*Eremocarpus setigerus*), vinegar weed (*Trichostema lanceolatum*), cultivated barley (*Hordeum vulgare*), field bindweed (*Convolvulus arvensis*), summer mustard (*Hirschfeldia incana*), and fascicled tarweed (*Hemizonia fasciculata*). (GLA, 2019a, p. 45)

Drainage D contains approximately 0.08 acre of Corps/RWQCB jurisdiction, none of which consists of jurisdictional wetlands. Drainage D consists of an ephemeral feature that is three-feet wide and receives runoff from the western terminus of Chambers Avenue. The drainage only exhibits flows during and immediately after storm events, supporting a limited bed/bank for varying distances before the flows continue along another

paved portion of Chambers Avenue before crossing Encanto Road offsite into a ditch that flows north along Encanto Road and I-215. (GLA, 2019a, p. 46)

The Project site also contains four depression features that exhibit evidence of seasonal ponding. Features 1, 3, and 4 consist of disturbed depression features, two of which are tire track features, that support upland vegetation and that do not support vernal pool indicator plant species, or other wetland plant species. However, Feature 2 supports a moderate cover of woolly marbles, which is a vernal pool indicator plant species. As such, Feature 2 is classified as a MSHCP vernal pool. Feature 2 was monitored during the 2018-2019 rainy season and exhibited approximately 0.12 acre of surface ponding. Accordingly, Feature 2 is considered an MSHCP vernal pool; thus, impacts to Feature 2 would be subject to the DBESP process, including mitigation to offset the loss of functions and values. Approval of the impacts and mitigation through the DBESP process is required to ensure that the Project will not conflict with the MSHCP. (GLA, 2019a, p. 47)

In addition to the on-site drainage features discussed above, the Project may include impacts to another 0.02 acre of non-wetland/non-riparian waters associated with potential off-site improvements. A small, unvegetated drainage feature is located off-site to the southeast of the Project boundary that currently flows to the west, crossing under an unimproved portion of Antelope Road before spreading into an off-site field east of Chatham Lane and south of Chambers Avenue. The Underwood development project proposed to the east of the Project intends to improve the portion of Antelope Road that crosses the off-site drainage feature. The Underwood project improvements would temporarily impact the drainage feature to replace the stream crossing, but post-development the flows would continue to the west. The City of Menifee would require the Project to collect the runoff from the off-site drainage feature and place the flows into the Project's storm drain system. However, it has not yet been determined how the Project will intercept the flows. It is possible that the water could be intercepted just east of Chatham Lane and south of Chambers Avenue, which may not result in additional impacts to jurisdictional waters if the improvements do not result in a discharge of dredge or fill material into the OHWM of the drainage feature, and do not modify the bed, bank, and channel associated with the drainage feature. However, another option may be to intercept the flows at the Antelope Road crossing, which may result in up to 0.02 acre of impacts to the drainage feature. As a result of this additional impacts, the Legado off-site improvements may increase the overall amount of jurisdictional waters impacts from 0.68 acre to 0.70 acre but would not increase the impacts to wetland/riparian habitat. (GLA, 2019d)

Implementation of Mitigation Measure MM 4.3-4 would ensure that Project impacts to 0.68 acre of on-site federally protected wetland habitat, of which 0.11 acre consists of wetland/riparian habitat and potential Project impacts to 0.02 acre of potential off-site wetland/riparian habitat would be mitigated at a 3:1 ratio (mitigation:impact) through off-site mitigation by targeting in-lieu fee mitigation with a local RCD or other approved mitigation bank. The Project intends to mitigate through the Riverpark Mitigation Bank. However, if mitigation credits are not yet available at the Mitigation Bank, then the Project Applicant would pursue alternate mitigation opportunities on conservation lands managed by the RCA. With implementation of the required mitigation, Project impacts with respect to state- and federally-protected wetlands would be reduced to less-than-significant levels.

Threshold d:	***Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?***

The Project site lacks migratory wildlife corridors and wildlife nursery sites, and does not occur within any MSHCP Cores or Linkages. Accordingly, the Project would not interfere or impact (1) the movement of native

resident or migratory fish or wildlife species or (2) established native resident or migratory wildlife corridors, or (3) impede the use of native wildlife nursery sites. No impact would occur. (GLA, 2019a, p. 3)

Threshold e: ***Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?***

EIR Section 4.10, *Land Use & Planning*, provides an extensive analysis of the Project's consistency with all applicable local and regional policies, and concludes that the Project would not result in any significant conflicts with any policy, including policies related to the protection of biological resources. The Project would be subject to mandatory compliance with the City's Tree Preservation Ordinance No. 2015-167 (Municipal Code Chapter 9.86), which provides guidelines for tree removal and tree preservation. Implementation of the Project would remove existing trees on the Project site and would include planting of new trees throughout the Project site. The Project would fully comply with the requirements of Ordinance No. 2015-167 and would not result in a conflict with the City's Tree Preservation Ordinance. In addition, other than mandatory compliance with CEQA and the required payment of Western Riverside County MSHCP fees pursuant to Riverside County Ordinance No. 810, as adopted by the City of Menifee, and payment of SKR fees pursuant to Riverside County Ordinance No. 663, as adopted by the City of Menifee, the City of Menifee does not have any ordinances in place protecting biological resources, such as a tree preservation ordinance, that would be applicable to the Project. Additionally, the analysis under Threshold (f) demonstrates that the Project would be fully consistent with the MSHCP. There are no other local policies or ordinances related to the protection of biological resources that would be applicable to the Project. Therefore, the Project would not conflict with any local policies or ordinances protecting biological resources, and no impact would occur.

Threshold f: ***Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?***

The Project site is located within the Sun City/Menifee Area Plan of the Western Riverside County MSHCP, but is not targeted for conservation under the MSHCP (refer to Figure 4.3-5, *MSHCP Overlay Map*). The Western Riverside County MSHCP is a comprehensive habitat conservation/planning program for western Riverside County that is intended to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. The MSHCP provides coverage (including take authorization for listed species) for special-status plant and animal species, as well as mitigation for impacts to special-status species and associated native habitats. (GLA, 2019a, p. 2)

The Project site is also not located within the MSHCP Core or Linkage areas (refer to Figure 4.3-5). As such, the Project has not been identified by the MSHCP for Reserve Assembly and is not subject to the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process. Accordingly, the Project would not conflict with MSHCP Reserve Assembly requirements. (GLA, 2019a, p. 52)

The Project site has the potential to support SKR; however, the Project site is not located within the SKR HCP conservation area. Moreover, mandatory payment fees pursuant to Riverside County Ordinance No. 663, as adopted by the City of Menifee, would reduce impacts to SKR to less than significant. (GLA, 2019a, p. 51)

Although habitat conservation is not required on the Project site pursuant to the MSHCP, all projects must demonstrate compliance with applicable MSHCP requirements pursuant to the following sections of the MSHCP: Section 6.1.2, "Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools;" Section 6.1.3, "Protection of Narrow Endemic Plant Species;" Section 6.1.4, "Guidelines Pertaining to the

Urban/Wildland Interface;" and Section 6.3.2, "Additional Survey Needs and Procedures." Provided below is a discussion of the Project's conformance to these sections of the MSHCP. (GLA, 2019a, p. 54)

❑ MSHCP Consistency Analysis

Project Compliance with MSHCP Section 6.1.2

As described in EIR Subsection 4.3.1.F, GLA determined that the Project would impact 0.68 acre of on-site MSHCP riparian/riverine areas, potentially impact 0.02 acre of potential off-site MSHCP riparian/riverine areas, and 0.12 acre of on-site vernal pool areas that would require a DBESP analysis pursuant to *Volume I, Section 6.1.2* of the MSHCP. The riverine areas do not contain riparian habitat with the potential to support riparian birds, including the least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*); however, impacts to riparian/riverine areas must be mitigated such that the resulting project, with mitigation, is biologically equivalent or superior to the existing site conditions. As such, a DBESP is required, which represents a potentially significant impact. (GLA, 2019a, p. 54; GLA, 2019c, p. 7)

In compliance with MSHCP *Section 6.1.2*, a DBESP has been prepared for the Project's impacts to riparian/riverine areas within the Study Area, which is contained as *Technical Appendix C3*. As previously noted, the Project would impact 0.68 acre of on-site and potentially impact 0.02 acre of potential off-site MSHCP riparian/riverine features that have no potential to support wildlife typical of riparian areas. The DBESP identified a minimum 3:1 mitigation ratio through off-site mitigation, targeting in-lieu fee mitigation with a local Resource Conservation District (RCD), or other approved mitigation bank, which would reduce impacts to less-than-significant levels. The Project intends to mitigate through the Riverpark Mitigation Bank. However, if mitigation credits are not yet available at the Mitigation Bank, then the Project Applicant would pursue alternate mitigation opportunities on conservation lands managed by the RCA. (GLA, 2019c, pp. 7-11) Nonetheless, because compensatory mitigation would be required, the Project would result in a potentially significant impact due to a conflict with MSHCP *Section 6.1.2* with respect to riparian/riverine resources prior to implementation of the DBESP mitigation requirements.

Project Compliance with MSHCP Section 6.1.3

The Project site is located within the Western Riverside County MSHCP NEPSSA for the following target species: Munz's onion, San Diego ambrosia, many-stemmed dudleya, spreading navarretia, California Orcutt grass, and Wright's trichocoronis. The Project site does not contain suitable habitat for the NEPSSA target species. Accordingly, the Project would not conflict with *Section 6.1.3* of the MSHCP. (GLA, 2019a, p. 54)

Project Compliance with MSHCP Section 6.1.4

The Western Riverside County MSHCP Urban/Wildland Interface Guidelines (*Section 6.1.4*) are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area. The *Section 6.1.4* guidelines are implemented in conjunction with review of individual public and private development projects in proximity to the MSHCP Conservation Area and address the following:

- Drainage;
- Toxics;
- Lighting;
- Noise;
- Invasive species;
- Barriers;

- Grading/Land Development.

The Project is not located adjacent to the MSHCP Conservation Area; therefore, the Project is not subject to the Urban/Wildland Interface Guidelines. The Project would not conflict with *Section 6.1.4* of the MSHCP and impacts would be less than significant. (GLA, 2019a, pp. 54-55)

Project Compliance with MSHCP Section 6.3.2

The Project site is located within the MSHCP Burrowing Owl Survey Area and supports a breeding pair of burrowing owls. However, the Project site is not located within the MSHCP Criteria Area. Refer to Figure 4.3-2 for the results of the focused surveys. Using guidance provided by MSHCP *Section 6.3.2*, conservation of the Project site or a portion thereof is not required based on the results of GLA's burrowing owl survey. However, due to the fact that the Project site contains suitable habitat for burrowing owls, and a pair with juveniles were detected during the focused surveys that was conducted by GLA, the proposed development of the site would result in a significant impact to the burrowing owl and suitable habitat for the species. Mitigation of the Project's impacts to burrowing owl and suitable habitat for burrowing owl is required in order to ensure consistency with MSHCP *Section 6.3.2*. (GLA, 2019a, p. 55)

❑ Conclusion

As indicated above, the Project would be fully consistent with the MSHCP. No additional approved local, regional, or state conservation plans are applicable to the Project. Accordingly, the Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan, and impacts would be less than significant. Although impacts due to a conflict with the MSHCP would be less than significant, mitigation measures are nonetheless identified herein to ensure compliance with the various provisions of the MSHCP discussed above.

Implementation of City Regulations and Design Requirements CRDR 4.3-1 through CRDR 4.3-3, would require payment of fees and compliance with the MSHCP. In addition, Mitigation Measure MM 4.3-1, requires implementation of the Project's DBESP (see *Technical Appendix C3*,) requires the mitigation of 0.68 acre of MSHCP riparian/riverine areas, 0.02 acre of potential off-site MSHCP riparian/riverine areas, and 0.12 acre of on-site vernal pool areas at a 3:1 (mitigation: impact) ratio, and provides acceptable mitigation methods in accordance with MSHCP requirements. The DBESP determined that Mitigation Measure MM 4.3-1 would result in a biologically equivalent or superior condition within the MSHCP Plan Area compared with the existing on-site MSHCP riparian/riverine resources and vernal pool resources. Thus, the Project would be consistent with the MSHCP and impacts would be reduced to less-than-significant levels. Implementation of Mitigation Measure MM 4.3-2 would ensure that pre-construction surveys are conducted to determine the presence of burrowing owl on-site or within the off-site improvement areas, and to implement avoidance/relocation measures in accordance with MSHCP requirements. Mandatory compliance with the Applicable City Regulations and Design Requirements would ensure that the Project Applicant contributes fees in accordance with County Ordinance No. 810, as adopted by the City of Menifee, which would provide funding for the establishment of the MSHCP Reserve System, and County Ordinance No. 663, as adopted by the City of Menifee, which would provide funding pursuant to the SKR HCP. Implementation of Mitigation Measures MM 4.3-4, MM 4.3-5, and MM 4.3-6 would ensure that the Project's impacts to jurisdictional areas are appropriately permitted in accordance with the Clean Water Act, and mitigated in accordance with MSHCP requirements for riparian/riverine areas. With implementation of the required mitigation, Project impacts with respect to consistency with the Western Riverside County MSHCP would be reduced to less-than-significant levels.

4.3.5 CUMULATIVE IMPACT ANALYSIS

This cumulative impact analysis considers development of the Project in conjunction with other development projects located within the purview of the Western Riverside County MSHCP. This Study Area for cumulatively-considerable impacts to biological resources is appropriate because the MSHCP encompasses a large area surrounding the Project site, and provides for the long-term protection of sensitive plant, animal, and plant communities throughout the MSHCP area. Additionally, most cumulative development projects within the Project vicinity would be subject to the provisions of the MSHCP, and the general range of habitats, species, climate, etc. are fairly consistent throughout the MSHCP.

As discussed under Threshold a, the Project contains paniculate tarplant throughout the ruderal areas on the northeastern portion of the Project site; however, impacts to this on-site population were evaluated as less than significant because of this species' commonness to western Riverside County, and the relatively small size of the population that would be impacted by the Project. The Project also contains Parry's spineflower in the eastern portion of the Project site; however, impacts to this on-site population were evaluated as less than significant due to the fact that Parry's spineflower is a fully-covered species under the Western Riverside County MSHCP and the Project's consistency with the MSHCP through the payment of fees pursuant to Riverside County Ordinance No. 810, as adopted by the City of Menifee, provides the necessary mitigation under CEQA. Because the impacts to Parry's spineflower would be authorized under the MSHCP, cumulatively-considerable impacts to this species would be less than significant.

The Project also would result in the removal of burrowing owl habitat, potential habitat for the SKR, the vernal pool, and jurisdictional waters; however, impacts to burrowing owl habitat, the vernal pool, and jurisdictional features would be fully mitigated through compliance with the MSHCP and payment of MSHCP fees, and impacts the SKR would be fully mitigated through payment of SKR fees pursuant to Riverside County Ordinance No. 663, as adopted by the City of Menifee. Other cumulative developments in the region also would be required to comply with the MSHCP and SKR HCP; thus, cumulatively-considerable impacts would not occur. Additionally, although the Coastal California gnatcatcher was identified within the Project's proposed open space and could forage within areas planned for development, impacts to foraging habitat for this species are fully covered by the MSHCP; thus, cumulatively-considerable impacts would not occur. Potential impacts to special status reptiles, including the coastal whiptail, coast horned lizard, coast patch-nosed snake, red diamond rattlesnake, and silvery legless lizard, also would be less-than-cumulatively considerable due to the limited potential habitat to be impacted by the Project and their covered status under the MSHCP. Additionally, the Project site does not contain suitable nesting habitat for special-status birds; accordingly, impacts to special-status birds would be less-than-cumulatively considerable. The Project does, however, have the potential to result in impacts to nesting birds and raptors during the breeding season; this is evaluated as a cumulatively-considerable impact for which mitigation would be required.

The Project would impact 0.68 acre of on-site and potentially impact 0.02 acre of potential off-site MSHCP riparian/riverine features. Impacts to these features would result in a direct and cumulatively-considerable impact under CEQA and would trigger a DBESP under the MSHCP to identify appropriate mitigation to provide for biologically equivalent or superior habitat. The DBESP concluded that the 0.68 acre of MSHCP features disappear in the Project area, and would have no potential to affect downstream riparian resources. The DBESP determined impacts to the 0.68 acre of on-site and potential impact to 0.02 acre of off-site MSHCP riparian/riverine features and the 0.12-acre vernal pool would be significant prior to mitigation. The Project site also contains a man-made drainage ditch that drains runoff from an adjacent residential development. The ditch is an artificially-created feature; therefore, it would be excluded from the MSHCP designation of riparian/riverine areas.

As discussed under Threshold c, the results of the jurisdictional delineation concluded that the Project would impact 0.68 acre of on-site ACOE, RWQCB, and CDFW jurisdiction, of which 0.11 acre consists of wetland habitat and may potentially impact 0.02 acre of off-site ACOE, RWQCB, and CDFW jurisdiction. These resources are considered state- and federally-protected wetlands, impacts to which would be cumulatively-considerable. Mitigation in the form of compensatory mitigation would be required to reduce these impacts to less-than-significant levels. Accordingly, the Project would have a substantial adverse effect on state- and federally protected wetlands through direct removal, filling, hydrological interruption, or other means, and cumulatively-considerable impacts would occur. The Project also contains two depression features that exhibit evidence of seasonal ponding. Both ponds do not support a predominance of wetland vegetation, and would not be considered vernal pools; therefore, impacts regarding these two depression features would not be cumulatively considerable.

The Project site lacks migratory wildlife corridors and wildlife nursery sites, and does not occur within MSHCP Cores or Linkages. Accordingly, the Project would not result in a cumulatively-considerable impact on the movement of any species or on established native resident or migratory wildlife corridors. Additionally, the Project would not have a cumulatively-considerable impact on the use of native wildlife nursery sites. No impact would occur.

The Project would not conflict with any local policies or ordinances protecting biological resources; accordingly, a cumulatively-considerable impact due to a conflict with such local policies or ordinances would not occur.

As discussed under Threshold f, above, the Project is not located within or adjacent to a Western Riverside County MSHCP conservation area. The analysis in Threshold f concludes that the Project would be fully consistent with the MSHCP, although mitigation measures would be required to address potential impacts to the burrowing owl, and to address the Project's impacts to riparian/riverine resources. With implementation of the required mitigation and payment of fees, the Project would be fully consistent with the MSHCP and the SKR HCP. Additionally, the Project would be subject to payment of fees pursuant to the SKR HCP. Other cumulative developments in the Project vicinity would similarly be required to demonstrate compliance with the MSHCP and SKR HCP, and must implement mitigation measures if necessary to ensure compliance with the MSHCP. Because the Project and other cumulative developments would be required to comply with the MSHCP, cumulatively-considerable impacts would be less than significant.

4.3.6 Significance of Impacts Before Mitigation

Threshold a: Significant Direct and Cumulatively-Considerable Impact. The Project would result in significant direct and cumulatively-considerable impacts to biological resources. Specifically, the Project would result in the removal of burrowing owl habitat, which requires mitigation to ensure impacts do not occur to nesting burrowing owls. Additionally, the Project also has the potential to impact active native bird nests protected by the MBTA if vegetation is removed during the nesting season (February 1 to August 31).

Threshold b: Significant Direct and Cumulatively-Considerable Impact. The Project would impact 0.68 acre of MSHCP riparian/riverine features and a 0.12-acre vernal pool and may potentially impact 0.02 acre of off-site MSHCP riparian/riverine features. Additionally, the Project contains a man-made drainage ditch that drains runoff from an adjacent residential development. Impacts regarding riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service would be evaluated as significant on both a direct and cumulatively-considerable basis.

Threshold c: Significant Direct and Cumulatively-Considerable Impact. Project implementation would result in direct impacts to 0.68 acre of ACOE, RWQCB, and CDFW jurisdictional waters, of which 0.11 acre consists of jurisdictional wetlands and may potentially impact 0.02 acre of off-site ACOE, RWQCB, and CDFW jurisdiction. Accordingly, the Project would have a substantial adverse effect on state- and federally-protected wetlands through direct removal, filling, hydrological interruption, or other means, and impacts are evaluated as significant on both a direct and cumulatively-considerable basis. The Project also contains two depression features that would not be considered vernal pools; therefore, impacts regarding the two depression features would be less than significant.

Threshold d: No Impact. The Project site lacks migratory wildlife corridors and wildlife nursery sites, and does not occur within MSHCP Cores or Linkages. Therefore, the Project would have no impact on native resident or migratory wildlife corridors or wildlife nursery sites.

Threshold e: No Impact. The Project would not conflict with any local policies or ordinances protecting biological resources. The Project would be required to comply with all applicable local policies and ordinances protecting biological resources, as applied to the Project by City Regulation and Design Requirements CRDR 4.3-1 through CRDR 4.3-4. Accordingly, no impact due to a conflict with such local policies or ordinances would occur.

Threshold f: Significant Direct and Cumulatively Considerable Impact. Project implementation would result in direct impacts to 0.68 acre of ACOE, RWQCB, and CDFW jurisdiction, and may potentially impact 0.02 acre of off-site ACOE, RWQCB, and CDFW jurisdiction including 0.68 acre of riverine habitat and potentially 0.02 acre of riverine habitat under the MSHCP and a 0.12-acre vernal pool, requiring mitigation. Additionally, the Project site contains suitable habitat for burrowing owls. During focused surveys, a pair of burrowing owls with juveniles was detected on-site. Impacts to nesting owls would represent a significant impact due to a conflict with MSHCP policies related to the burrowing owl, and mitigation is required. Impacts due to a conflict with the MSHCP's adjacency guidelines would be less than significant, although mitigation is nonetheless proposed to ensure all provisions of the MSHCP are complied with during construction and operation of the Project.

4.3.7 City Regulations, Design Requirements, and Mitigation

Applicable City Regulations and Design Requirements

The following are applicable regulations and design requirements within the City of Menifee. Although these requirements technically do not meet CEQA's definition for mitigation, they are imposed herein to ensure Project compliance with applicable City regulations and design requirements.

CRDR 4.3-1 The Project Applicant shall make payment of Western Riverside County MSHCP fees pursuant to Riverside County Ordinance No. 810, as adopted by the City of Menifee. Fees shall be paid in compliance with Ordinance No. 810.

CRDR 4.3-2 The Project Applicant shall make payment of Western Riverside County MSHCP fees pursuant to Riverside County Ordinance No. 663, as adopted by the City of Menifee. Fees shall be paid in compliance with Ordinance No. 663.

CRDR 4.3-3 To ensure compliance with the Western Riverside County MSHCP, the following shall be required:

- As part of its review of implementing discretionary applications (e.g., building permits), the City of Menifee shall assure that landscaping plans do not include the use of invasive plant species listed in Volume I, Table 6-2 of the MSHCP.
- The Project is required to comply with the provisions of the Project's NPDES permit, and the Project's Storm Water Pollution Prevention Program (SWPPP) during construction. Prior to approval of grading permits, the Project's construction contractor shall develop, obtain City approval, and implement a SWPPP to address runoff and potential water quality degradation during construction. Compliance with the NPDES permit and the SWPPP would identify and implement an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate discharge to surface water from storm water and non-storm water discharges during Project construction.
- All construction plans (i.e., grading permits, building permits, etc.) shall include the following note, compliance with which shall be assured by the construction contractor:

  "Nighttime construction is allowed only with special approval from the City of Menifee. During any nighttime construction activities, all lighting shall direct lighting away from the existing MSHCP conserved lands adjacent to the northwest corner of the Project site."
- Prior to issuance of grading or construction permits, the City of Menifee shall review plans to ensure that all lighting along the perimeter of the west boundary of the Project site, particularly street lamps, shall be downcast luminaries and shall be shielded and oriented in a manner that will prevent spillage or glare into the MSHCP conserved lands.

CRDR 4.3-4 The Project shall comply with the City of Menifee's Tree Preservation Ordinance No. 2015-167 (Municipal Code Chapter 9.86), which provides guidelines for tree removal and tree preservation. Compliance with Ordinance No. 2015-167 would ensure tree removal and tree plantings on-site occur in accordance with the requirements of Ordinance No. 2015-167.

Mitigation

MM 4.3-1 Prior to the issuance of grading permits, the Project Applicant shall provide evidence to the City of Menifee Planning Division that impacts to 0.68 acre of MSCHP riparian/riverine resources, potential impacts to 0.02 acre of off-site MSHCP riparian/riverine resources (if such impacts would occur), and the 0.12-acre on-site vernal pool are mitigated through compensatory preservation at a minimum 3:1 (mitigation: impact) ratio. Mitigation shall occur through one of the following methods: off-site mitigation, targeting in-lieu fee mitigation with a local Resource Conservation District; or payment to another approved mitigation bank. In the event that appropriate mitigation credits are unavailable from an authorized mitigation bank, anywhere locally at the time of purchase, the Project Applicant shall submit a revised DBESP that proposes an alternate mitigation strategy. The alternate mitigation strategy may include an applicant-responsible mitigation in the same watershed. The proposed alternate mitigation would require Wildlife Agency concurrence before impacts to the 0.68 acre of riparian/riverine resources and 0.12 acre of on-site vernal pool resources could occur. Additionally, if potential impacts to the 0.02 acre of off-site riparian/riverine resources were to occur, the proposed alternate mitigation would require Wildlife Agency concurrence before potential impacts to the 0.02 acre of riparian/riverine resources could occur. Evidence of compliance with this requirement shall be provided prior to the issuance of grading permits.

MM 4.3-2 In accordance with MSHCP Objective 6, prior to issuance of grading permits or other permits authorizing ground disturbance or discing, the Project Applicant shall retain a qualified biologist to perform a subsequent pre-grading burrowing owl survey. The subsequent pre-grading burrowing owl survey shall occur between dawn and 12 p.m. at all potentially suitable habitat sites within the Project's limits of disturbance within 30 days prior to Project commencement of any ground-disturbing activities at the Project site. If no owls and/or sign are detected at the time of the subsequent burrowing owl survey, then a pre-construction survey as detailed below shall be implemented. If only burrowing owl sign is detected, and it cannot be discerned whether the species is still occupying the site, either (a) additional visit(s) will be performed until it can be determined whether burrowing owl occupies the site or not or (b) assume occupation and implement a Burrowing Owl Management Plan (see below). If additional site visits determine the species is absent, then the pre-construction survey provided below shall only be required; alternatively, if the burrowing owl is confirmed present on-site during the subsequent pre-grading survey, then a Burrowing Owl Management Plan shall be prepared and implemented.

- Pre-Construction Survey: The pre-construction survey shall be required in the event the subsequent pre-grading surveys confirm the burrowing owl is absent from the Project site and off-site disturbance areas. The survey shall be performed by a qualified biologist that will survey the site for the presence/absence of burrowing owls within 30 days prior to commencement of ground-disturbing activities at the Project site. If burrowing owls are detected on-site during the pre-construction survey, the owls shall be relocated/excluded from the site outside of the breeding season following accepted protocols, and subject to the approval of the RCA and Wildlife Agencies (i.e., CDFW and/or USFWS).

- Burrowing Owl Management Plan: In the event that burrowing owl is determined to be present during the subsequent pre-grading survey, or in the event that an assumption is made that the burrowing owl occurs on-site, a burrowing owl management plan shall be prepared and implemented in coordination with the Western Riverside County Regional Conservation Authority (RCA) and CDFW that shall detail the acceptable protocol for relocation of owls from the Project site, passively and/or actively. Per the MSHCP, passive relocation may include use of one-way doors or collapse of burrows when owls are present outside of the nesting season; and active relocation may include translocation with translocation sites located in the MSHCP Conservation Area in consultation with the Wildlife Agencies. Per the requirements of the MSHCP translocation sites shall be identified, taking into consideration unoccupied Habitat areas, presence of burrowing mammals, existing colonies, and effects to other MSHCP Covered Species. Furthermore, a Biological Monitoring Work Plan will be submitted to the City of Menifee and approved prior to the issuance of a grading permit. The Work Plan will outline the details of the daily biological monitoring schedule, BMPs, and the timeline for completing the Burrowing Owl Relocation Plan. If additional site visits determine the species is absent, then the pre-construction survey (as discussed above) shall instead be implemented.

A copy of the results of the pre-construction survey (and all additional surveys), as well as copies of the Burrowing Owl Management Plan, if required, shall be provided to the City of Menifee Community Development Department for review and approval (in the case of the

Burrowing Owl Management Plan) prior to any vegetation clearing and ground disturbance activities.

MM 4.3-3 Vegetation clearing of each phase of Project construction shall be conducted outside of the nesting season (February 1 through August 31). If avoidance of the nesting season is not feasible, then a qualified biologist shall conduct a nesting bird survey within seven (7) days prior to any ground disturbance, including discing, demolition activities, and grading. The nesting bird survey shall be submitted to the City of Menifee for review and approval prior to any vegetation clearing and ground disturbing activities during nesting season. If active nests of native species are identified, the biologist shall establish suitable buffers around the nests, and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests. Typically established buffers are greater for raptors than songbirds and depend upon the species, the nesting stage, and type of construction activity proposed. The buffer should be 300 feet for raptors and 150 feet for songbirds, unless specifically determined by a qualified biologist familiar with the nesting phenology of the nesting species.

MM 4.3-4 Impacts to 0.68 acre of on-site ACOE, RWQCB, and CDFW jurisdiction and potential impacts to 0.02 acre of potential off-site ACOE, RWQCB, and CDFW jurisdiction (if such impacts would occur) shall be mitigated at a minimum 3:1 ratio through off-site mitigation, targeting in-lieu fee mitigation with a local Resource Conservation District (RCD), or other approved mitigation bank.

MM 4.3-5 Prior to the issuance of grading permits, the Project Applicant shall obtain a Section 404 Permit from the U.S. Army Corps of Engineers (ACOE) and a Section 401 Permit from the Regional Water Quality Control Board (RWQCB) for impacts to 0.68 acre of ACOE and RWQCB jurisdictional areas on-site and potential impacts to 0.02 acre of potential ACOE and RWQCB jurisdictional areas off-site (if such impacts would occur).

MM 4.3-6 Prior to the issuance of grading permits, the Project Applicant shall obtain a Section 1602 Streambed Alteration Agreement from the CDFW for impacts to 0.68 acre of CDFW jurisdictional areas on-site and potential impacts to 0.02 acre of potential CDFW jurisdictional areas off-site (if such impacts would occur).

4.3.8 Significance of Impacts After Mitigation

Threshold a: Less-Than-Significant Impact with Mitigation Incorporated. Implementation of City Regulations and Design Requirements CRDR 4.3-1 through CRDR 4.3-3, would require payment of fees and compliance with the MSHCP. In addition, Mitigation Measure MM 4.3-2, would ensure that pre-construction surveys are conducted to determine the presence of burrowing owl on-site or within the off-site improvement areas, and to implement appropriate avoidance/relocation measures to preclude significant impacts to this species. With implementation of the required mitigation, Project impacts with respect to burrowing owl would be reduced to less-than-significant levels. Implementation of Mitigation Measure MM 4.3-2 would preclude potential impacts to nesting birds protected by the MBTA. Compliance with the required mitigation would ensure that the Project's impacts to species identified as a candidate, sensitive, or special status species are mitigated to less-than-significant levels.

Threshold b: Less-Than-Significant Impact with Mitigation Incorporated. Implementation of City Regulations and Design Requirements CRDR 4.3-1 through CRDR 4.3-3, would require payment of fees and compliance with the MSHCP. In addition, Mitigation Measure MM 4.3-1, requires implementation of the Project's DBESP (see *Technical Appendix C3*,) requires the mitigation of 0.68 acre of MSHCP riparian/riverine areas, potential impacts to 0.02 acre of off-site MSHCP riparian/riverine areas, and 0.12 acre of on-site vernal pool areas at a 3:1 (mitigation: impact) ratio, and provides acceptable mitigation methods. The DBESP determined that Mitigation Measure MM 4.3-1 would result in a biologically equivalent or superior condition within the MSHCP Plan Area compared with the existing on-site and existing potential off-site MSHCP riparian/riverine resources and 0.12 acre of on-site vernal pool resources, and Project impacts to 0.68 acre of MSHCP riparian/riverine areas, potential impacts to 0.02 acre of off-site MSHCP riparian/riverine areas, and 0.12 acre of on-site vernal pool areas would be reduced to less-than-significant levels. Implementation of Mitigation Measure MM 4.3-4 would ensure that Project impacts to 0.68 acre of on-site riparian/riverine resources and potential impacts to 0.02 acre of off-site riparian/riverine areas would be mitigated at a minimum 3:1 ratio (mitigation:impact) through off-site mitigation by targeting in-lieu fee mitigation with a local Resource Conservation District (RCD) or other approved mitigation bank. The Project intends to mitigate through the Riverpark Mitigation Bank. However, if mitigation credits are not yet available at the Mitigation Bank, then the Project Applicant would pursue alternate mitigation opportunities on conservation lands managed by the RCA. With implementation of the required mitigation, Project impacts with respect to riparian/riverine resources would be reduced to less-than-significant levels.

Threshold c: Less-Than-Significant Impact with Mitigation Incorporated. Implementation of Mitigation Measure MM 4.3-4 would ensure that Project impacts to 0.68 acre of on-site federally protected wetland habitat and potential impacts to 0.02 acre of off-site federally protected wetland habitat would be mitigated at a 3:1 ratio (mitigation:impact) through off-site mitigation by targeting in-lieu fee mitigation with a local RCD or other approved mitigation bank. The Project intends to mitigate through the Riverpark Mitigation Bank. However, if mitigation credits are not yet available at the Mitigation Bank, then the Project Applicant would pursue alternate mitigation opportunities on conservation lands managed by the RCA. With implementation of the required mitigation, Project impacts with respect to state- and federally-protected wetlands would be reduced to less-than-significant levels.

Threshold f: Less-Than-Significant Impact with Mitigation Incorporated. Implementation of City Regulations and Design Requirements CRDR 4.3-1 through CRDR 4.3-3, would require payment of fees and compliance with the MSHCP. In addition, Mitigation Measure MM 4.3-1, requires implementation of the Project's DBESP (see *Technical Appendix C3*,) requires the mitigation of 0.68 acre of MSHCP riparian/riverine areas, potential impacts to 0.02 acre of off-site MSHCP riparian/riverine areas, and 0.12 acre of on-site vernal pool areas at a 3:1 (mitigation: impact) ratio, and provides acceptable mitigation methods in accordance with MSHCP requirements. The DBESP determined that Mitigation Measure MM 4.3-1 would result in a biologically equivalent or superior condition within the MSHCP Plan Area compared with the existing on-site MSHCP riparian/riverine and vernal pool resources. Thus, the Project would be consistent with the MSHCP and impacts would be reduced to less-than-significant levels. Implementation of Mitigation Measure MM 4.3-2 would ensure that pre-construction surveys are conducted to determine the presence of burrowing owl on-site or within the off-site improvement areas, and to implement avoidance/relocation measures in accordance with MSHCP requirements. Mandatory compliance with the Applicable City Regulations and Design Requirements would ensure that the Project Applicant contributes fees in accordance with County Ordinance No. 810, as adopted by the City of Menifee, which would provide funding for the establishment of the MSHCP Reserve System, and County Ordinance No. 663, as adopted by the City of Menifee, which would provide funding pursuant to the SKR HCP. Implementation of Mitigation Measures MM 4.3-4, MM 4.3-5, and MM 4.3-6 would ensure that the Project's impacts to jurisdictional areas are appropriately permitted in accordance with

the Clean Water Act, and mitigated in accordance with MSHCP requirements for riparian/riverine areas. With implementation of the required mitigation, Project impacts with respect to consistency with the Western Riverside County MSHCP would be reduced to less-than-significant levels.

4.4 CULTURAL RESOURCES

The analysis in this Subsection is based on a site-specific cultural resource assessment report titled "*Cultural Resources Assessment Update Fleming Ranch City of Menifee, County of Riverside, California*" (dated April 2018). The report was prepared by LSA Associates, Inc., (herein "LSA") and is included as *Technical Appendix D* to this EIR. LSA previously conducted a cultural resources assessment for the Project area in 2005, and conducted an updated cultural resources assessment in 2010. The current Cultural Resources Assessment Update is based partially on the two previous assessment reports. The conditions on the Project site have not changed since the preparation of the current Cultural Resources Assessment Update report (dated April 2018); therefore, the report reflects current conditions on-site with respect to the site's potential to contain significant cultural resources.

All references used in this Subsection are included in EIR Section 7.0, *References*. Confidential information has been redacted from *Technical Appendix D* for purposes of public review. In addition, much of the written and oral communication between Native American tribes, the City of Menifee, and LSA is considered confidential in respect to places that have traditional tribal cultural significance (Gov. Code § 65352.4), and although relied upon in part to inform the preparation of this EIR Subsection, those communications are treated as confidential and are not available for public review. Under existing law, environmental documents must not include information about the location of archeological sites or sacred lands or any other information that is exempt from public disclosure pursuant to the Public Records Act (Cal. Code Regs. § 15120(d)).

4.4.1 EXISTING CONDITIONS

A. Prehistoric and Historic Setting

1. Prehistoric Period Setting

The Project site is located within the City of Menifee in Riverside County, California. There are two primary prehistorical timelines for southern California are commonly used in archeological literature. The first timeline was advanced by Wallace in 1955 (and updated in 1978) and consists of four time periods based on cultural factors. The four time periods are as follows: Early Horizon (9000–6500 BC), Milling Stone Horizon (6500–2000 BC), Intermediate Horizon (2000 BC–AD 200), and Late Prehistoric Horizon (AD 500–historic). (LSA, 2018, p. 5)

The second timeline was advanced by Warren in 1984 and consists of four time periods based on ecological principals. Warren viewed cultural continuity and change in terms of various significant environmental shifts, defining the cultural ecological approach for archaeological research of the California deserts and coast. The four ecological horizons are as follows: Pinto (4000–3000 BC), Gypsum (1000 BC–AD 1), Saratoga Springs (AD 500–1000), and Protohistoric (AD 1500–historic). Many changes in settlement pattern and subsistence focus are viewed as cultural adaptations to a changing environment, beginning with the gradual environmental warming in the late Pleistocene, the desiccation of the desert lakes during the early Holocene, the short return to pluvial conditions during the middle Holocene, and the general warming and drying trend, with periodic reversals, that continues to this day. (LSA, 2018, p. 5)

The Project area is situated within the traditional boundaries of the Luiseño Tribe. Prior to European contact, the Luiseño territory spanned across the land from Agua Hedionda Creek in the southwest, Aliso Creek in the northwest, the Elsinore Valley and Palomar Mountain in the southeast, and the areas surrounding the Santa Ana River in the current cities of Riverside and Grand Terrace in the northeast. These territorial boundaries were somewhat fluid and changed through time. The Luiseño territory encompassed an extremely diverse

environment that included: coastal beaches; lagoons and marshes; inland river valleys and foothills; mountain groves of oaks; and evergreens. The Luiseño were first encountered by the Spanish missionaries in the late 18th century. (LSA, 2018, p. 5)

The Luiseño lived in small communities, which were the focus of family life. Patrilineally linked, extended families occupied each village. Luiseño villages were politically independent and were administered by a chief who inherited his position from his father. Luiseño villages generally were located in valley bottoms, along streams, or along coastal strands near mountain ranges sheltered in coves or canyons, near a water source, and in a location that was easily defended. (LSA, 2018, p. 5)

Luiseño subsistence was based primarily on seeds (e.g., acorns, grass seed, manzanita, sunflower, sage, chía, and pine nuts) that were dried and ground to be cooked into a mush. Their diet also included game animals (e.g., deer, rabbit, jackrabbit, wood rat, mice, antelope, and many types of birds). The Luiseño established seasonal camps along the coast and near bays and estuaries in order to gather shellfish and hunt waterfowl. The Luiseño also utilized fire for crop management and engaged in communal rabbit drives. (LSA, 2018, p. 5)

The first written accounts of the Luiseño are attributed to the mission fathers. Later documentation was authored by Sparkman (1908), Kroeber (1976), White (1963), Oxendine (1983), and others. (LSA, 2018, p. 6)

2. Historic Setting

In California, the historic era is generally divided into three periods: the Spanish Period (1769–1821), the Mexican Period (1821–1848), and the American Period (1848–present). One of the first non- Native Americans to travel through the area currently known as Riverside County was Juan Bautista de Anza, who led an expedition in 1774. In the late 1700s, three Spanish mission fathers (one each from the San Gabriel, San Juan Capistrano, and San Luis Rey Missions) began to colonize land and use the valley of Riverside County for growing grain and raising cattle. Beginning in 1834, the missions and mission lands were secularized and transferred as "grants" to Californians who were citizens of Mexico. When California became a territory of the United States in 1848, a steady flow of settlers began coming into the area now known as Riverside County, and the County was officially formed in May of 1893. (LSA, 2018, p. 6)

The community of Menifee had its beginnings around 1880, when S. Menifee Wilson located a gold quartz mine and named it the Menifee Quartz Lode. The area around the site later became known as Menifee and Menifee Valley, and the first Menifee post office was established on May 18, 1887. However, the post office was discontinued on November 30, 1896, re-established on April 4, 1900, and then permanently discontinued on July 10, 1900. After this date, mail was sent to Perris. Agriculture began to increase in importance, and the Santa Fe Railway built Menifee siding on their San Jacinto branch line at an unrecorded date. After that, the community of Menifee continued to grow as a farming and mining community. (LSA, 2018, p. 6)

In the 1960s, early development of Menifee as a City began with the concept of Sun City, which is currently centrally located in Menifee. The Menifee area grew again in 1989 with the addition of a master-planned community and, in 2008, residents of Menifee voted to incorporate Menifee into the County of Riverside. The City was officially established on October 1, 2008. (LSA, 2018, p. 6)

According to historic aerial photographs, the lands in the Project's vicinity (including the Project site) were used for agricultural activities as early as 1967. The Project site was utilized for dryland farming until 2016.

Topographic quadrangles show one intermittent stream directly south of the Project site, but the area around the stream was developed for residential buildings sometime between 1978 and 1996. (LSA, 2018, p. 9)

3. Tribal Cultural Resource Setting

The Pechanga Tribe identified that the Project site lies within a TCP and potential archaeological district during consultation. The TCP has a ceremonial complex within its boundaries, and Sites CA-RIV-9288, CA-RIV-9289 and P-33-028165, which are located within the Project's boundary (discussed in further detail in EIR Section 4.15, *Tribal Cultural Resources*), were identified as elements of this ceremonial complex. As discussed in further detail under the discussion of Thresholds b and c, the Pechanga Tribe identified that there is a high likelihood of finding subsurface resources within the Project boundaries, which would be elements of the ceremonial complex, and the City and the Tribe have consulted to mitigate the impacts to the TCP. Mitigation Measures, included in Subsection 4.4.7, below, would be applied and implemented to reduce the Project's impacts to Tribal Cultural Resources to less than significant.

B. Documented Resources On-Site

LSA conducted an updated institutional records search, an updated intensive pedestrian survey of the Project site and off-site improvement areas, and an additional field visit to identify the presence or absence of cultural resources. The records search results stated that four resources are "involved" in the Project area; however, LSA examined the site records for the four site resources and found that only two of those resources, multi-component resources CA-RIV-9288 and CA-RIV-9289, are located within the Project area. The other two resources noted are adjacent to and outside of the Project boundary. The record search also indicated that two historic homesteads – the Alva L. Reynolds Homestead of 1893 and the William Sargeant Homestead of 1890 – were noted to be within the Project site; however, topographic maps do not show evidence of either homestead being built on the Project site and the pedestrian field study conducted by LSA was negative for any evidence of homesteads. No correlations exist between the two homesteads and the two multicomponent resources were found on-site. During the pedestrian field study, LSA examined exposed sediment profiles on the hill in the northeastern section of the Project area for cultural stratigraphy, and rodent back dirt was checked for cultural remains. In addition, rock outcrops in the same area were examined for prehistoric milling features and rock art. None, however, were observed. No remnants of any homesteads were observed during the field survey. During the additional field visit, an additional resource site was identified (P-33-028165) within the Project area. A description of each site identified within the Project site is provided below. (LSA, 2018, pp. 8-13)

- **Site CA-RIV-9288:** The investigation of Site CA-RIV-9288 revealed that the site comprises historic trash scatters and a prehistoric milling slick. The historical artifacts suggest that the trash scatter was dumped on occasion between 1914 and 1945. The trash is assumed to be from farming activities. The prehistoric milling slick observed within the site was assumed to be used a few times. The assemblage was scattered in the northern portion of the Project site. Components of Site CA-RIV-9288 were determined not to be associated with the two historic Homesteads formerly located on-site, and the artifacts found on-site post-date the Reynolds and Sargeant Homesteads. Subsurface investigations did not reveal any deposits of prehistoric or historic artifacts, and Phase II testing determined that Site-CA-RIV-9288 was not eligible for the California Register. LSA determined that due to a lack of unique elements, minimal research potential, and based on the criteria listed in CEQA Guidelines § 150645, the site was evaluated as not CEQA significant. LSA determined that research potential for both the prehistoric and historic elements of the site were minimal, and that no further mitigation is required for the site. (LSA, 2018, pp. 8-13)

- **Site CA-RIV-9289:** The investigation of Site CA-RIV-9289 revealed that the site comprises historic trash scatters, a prehistoric milling slick, and a Native American ringing stone. The historical artifacts suggest that the trash scatter was dumped on occasion between 1914 and 1945. The trash is assumed to be from farming activities and other historic dumping activities. The prehistoric milling slick observed within the site was determined to be in good condition. The assemblage was scattered in the northern portion of the Project site. Components of Site CA-RIV-9288 were determined not to be associated with the two historic Homesteads formerly located on-site, and the artifacts found on-site post-date the Reynolds and Sargeant Homesteads. Subsurface investigations did not reveal any deposits of prehistoric or historic artifacts, and Phase II testing determined that Site-CA-RIV-9289 was not eligible for the California Register. LSA determined that due to a lack of unique elements, minimal research potential, and based on the criteria listed in CEQA Guidelines § 150645, the site was evaluated as not CEQA significant. LSA determined that research potential for both the prehistoric and historic elements of the site were minimal, and that no further mitigation is required for the site. (LSA, 2018, pp. 8-13)

- **Site P-33-028165:** The investigation of Site P-33-028165 revealed that the site comprises numerous polished, bowl-shaped carvings in a boulder, known as Cupules.

4.4.2 Applicable Regulatory Requirements

The following is a brief description of the federal, state, and local environmental laws and related regulations governing the protection of cultural and tribal cultural resources.

A. Federal Regulations

1. National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) was passed primarily to acknowledge the importance of protecting our nation's heritage. While Congress recognized that national goals for historic preservation could best be achieved by supporting the drive, enthusiasm, and wishes of local citizens and communities, it understood that the Federal Government must set an example through enlightened policies and practices. In the words of the Act, the Federal Government's role would be to "provide leadership" for preservation, "contribute to" and "give maximum encouragement" to preservation, and "foster conditions under which our modern society and our prehistoric and historic resources can exist in productive harmony." (ACHP, 2002)

NHPA and related legislation sought a partnership among the Federal Government and the States that would capitalize on the strengths of each. The Federal Government, led by the National Park Service (NPS) provides funding assistance; basic technical knowledge and tools; and a broad national perspective on America's heritage. The States, through State Historic Preservation Officers (SHPOs) appointed by the Governor of each State, would provide matching funds, a designated State office, and a statewide preservation program tailored to State and local needs and designed to support and promote State and local historic preservation interests and priorities. (ACHP, 2002)

An Advisory Council on Historic Preservation, the first and only Federal entity created solely to address historic preservation issues, was established as a cabinet-level body of Presidentially-appointed citizens, experts in the field, and Federal, State, and local government representatives, to ensure that private citizens, local communities, and other concerned parties would have a forum for influencing Federal policy, programs, and decisions as they impacted historic properties and their attendant values. (ACHP, 2002)

Section 106 of NHPA granted legal status to historic preservation in Federal planning, decision-making, and project execution. Section 106 requires all Federal agencies to take into account the effects of their actions on historic properties, and provide ACHP with a reasonable opportunity to comment on those actions and the manner in which Federal agencies are taking historic properties into account in their decisions. (ACHP, 2002)

A number of additional executive and legislative actions have been directed toward improving the ways in which all Federal agencies manage historic properties and consider historic and cultural values in their planning and assistance. Executive Order 11593 (1971) and, later, Section 110 of NHPA (1980, amended 1992), provided the broadest of these mandates, giving Federal agencies clear direction to identify and consider historic properties in Federal and federally assisted actions. The National Historic Preservation Amendments of 1992 further clarified Section 110 and directed Federal agencies to establish preservation programs commensurate with their missions and the effects of their authorized programs on historic properties. (ACHP, 2002)

2. National Register of Historic Places (NRHP)

The National Register of Historic Places is the official list of the Nation's historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the NPS's National Register of Historic Places (NRHP) is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archeological resources. (NPS, n.d.)

To be considered eligible, a property must meet the National Register Criteria for Evaluation. This involves examining the property's age, integrity, and significance, as follows:

- Age and Integrity. Is the property old enough to be considered historic (generally at least 50 years old) and does it still look much the way it did in the past?

- Significance. Is the property associated with events, activities, or developments that were important in the past? With the lives of people who were important in the past? With significant architectural history, landscape history, or engineering achievements? Does it have the potential to yield information through archeological investigation about our past? (NPS, n.d.)

Nominations can be submitted to a SHPO from property owners, historical societies, preservation organizations, governmental agencies, and other individuals or groups. The SHPO notifies affected property owners and local governments and solicits public comment. If the owner (or a majority of owners for a district nomination) objects, the property cannot be listed but may be forwarded to the NPS for a Determination of Eligibility (DOE). Listing in the National Register of Historic Places provides formal recognition of a property's historical, architectural, or archeological significance based on national standards used by every state. (NPS, n.d.)

Under Federal Law, the listing of a property in the National Register places no restrictions on what a non-federal owner may do with their property up to and including destruction unless the property is involved in a project that receives Federal assistance, usually funding or licensing/permitting. National Register listing does not lead to public acquisition or require public access. (NPS, n.d.)

3. National Historic Landmarks Program

National Historic Landmarks (NHLs) are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States. Today, just over 2,500 historic places bear this national distinction. Working with citizens throughout the nation, the National Historic Landmarks Program draws upon the expertise of National Park Service staff who guide the nomination process for new Landmarks and provide assistance to existing Landmarks. (NPS, 2017)

4. American Indian Religious Freedom Act

The American Indian Religious Freedom Act (AIRFA) requires each executive branch agency with statutory or administrative responsibility for the management of Federal lands shall, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and avoid adversely affecting the physical integrity of such sacred sites. Where appropriate, agencies also are required to maintain the confidentiality of sacred sites. Each executive branch agency with statutory or administrative responsibility for the management of Federal lands are required to implement procedures to ensure reasonable notice is provided of proposed actions or land management policies that may restrict future access to or ceremonial use of, or adversely affect the physical integrity of, sacred sites.

5. Native American Graves Protection and Repatriation Act (NAGPRA)

The Native American Graves Protection and Repatriation Act (NAGPRA; Public Law 101-601; 25 U.S.C. 3001-3013) describes the rights of Native American lineal descendants, Indian tribes, and Native Hawaiian organizations with respect to the treatment, repatriation, and disposition of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony, referred to collectively in the statute as cultural items, with which they can show a relationship of lineal descent or cultural affiliation. (NPS, 2016b)

One major purpose of this statute is to require that Federal agencies and museums receiving Federal funds inventory holdings of Native American human remains and funerary objects and provide written summaries of other cultural items. The agencies and museums must consult with Indian Tribes and Native Hawaiian organizations to attempt to reach agreements on the repatriation or other disposition of these remains and objects. Once lineal descent or cultural affiliation has been established, and in some cases, the right of possession also has been demonstrated, lineal descendants, affiliated Indian Tribes, or affiliated Native Hawaiian organizations normally make the final determination about the disposition of cultural items. Disposition may take many forms from reburial to long term curation, according to the wishes of the lineal descendant(s) or culturally affiliated Tribe(s). (NPS, 2016b)

The second major purpose of the statute is to provide greater protection for Native American burial sites and more careful control over the removal of Native American human remains, funerary objects, sacred objects, and items of cultural patrimony on Federal and tribal lands. NAGPRA requires that Indian tribes or Native Hawaiian organizations be consulted whenever archeological investigations encounter or are expected to encounter, Native American cultural items or when such items are unexpectedly discovered on Federal or tribal lands. Excavation or removal of any such items also must be done under procedures required by the Archaeological Resources Protection Act. This NAGPRA requirement is likely to encourage the in-situ preservation of archaeological sites, or at least the portions of them that contain burials or other kinds of cultural items. (NPS, 2016b)

Other provisions of NAGPRA: (1) stipulate that illegal trafficking in human remains and cultural items may result in criminal penalties; (2) authorizes the Secretary of the Interior to administer a grants program to assist museums and Indian Tribes in complying with certain requirements of the statute; (3) requires the Secretary of the Interior to establish a Review Committee to provide advice and assistance in carrying out key provisions of the statute; authorizes the Secretary of the Interior to penalize museums that fail to comply with the statute; and, (5) directs the Secretary to develop regulations in consultation with this Review Committee. (NPS, 2016b)

6. Federal Antiquities Act

The Antiquities Act is the first law to establish that archeological sites on public lands are important public resources. It obligates federal agencies that manage the public lands to preserve for present and future generations the historic, scientific, commemorative, and cultural values of the archaeological and historic sites and structures on these lands. It also authorizes the President to protect landmarks, structures, and objects of historic or scientific interest by designating them as National Monuments. (NPS, 2016a)

B. State Regulations

1. California Administrative Code, Title 14, Section 4308

Section 4308, *Archaeological Features*, of Title 14 of the California Administrative Code provides that: "No person shall remove, injure, disfigure, deface, or destroy any object of archaeological, or historical interest or value."

2. California Code of Regulations Title 14, Section 1427

California Code of Regulations Title 14, Section 1427 provides that: "No person shall collect or remove any object or thing of archeological or historical interest or value, nor shall any person injure, disfigure, deface or destroy the physical site, location or context in which the object or thing of archeological or historical interest or value is found."

3. California Register of Historic Resources

The State Historical Resources Commission has designed this program for use by state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The Register is the authoritative guide to the state's significant historical and archeological resources. The California Register 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. (OHP, n.d.)

In order for a resource to be included on the Register of Historic Resources, the resources must meet one of the following criteria:

- Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States (Criterion 1).
- Associated with the lives of persons important to local, California or national history (Criterion 2).
- Embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values (Criterion 3).

- Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation (Criterion 4). (OHP, n.d.)

For resources included on the Register of Historic Resources, environmental review may be required under CEQA if property is threatened by a project. Additionally, local building inspectors must grant code alternatives provided under State Historical Building Code. Further, the local assessor may enter a contract with the property owner for property tax reduction pursuant to the Mills Act. A property owner also may place his or her own plaque or marker at the site of the resource. (OHP, n.d.)

Consent of the owner is not required, but a resource cannot be listed over an owner's objections. The State Historical Resources Commission (SHRC) can, however, formally determine a property eligible for the California Register if the resource owner objects. (OHP, n.d.)

4. Traditional Tribal Cultural Places Act (Senate Bill 18, "SB 18")

Senate Bill 18 (SB 18) requires local (city and county) governments to consult with California Native American tribes to aid in the protection of traditional tribal cultural places ("cultural places") through local land use planning. SB 18 also requires the Governor's Office of Planning and Research (OPR) to include in the General Plan Guidelines advice to local governments for how to conduct these consultations. (OPR, 2005)

The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level land use decisions are made by a local government. (OPR, 2005)

SB 18 requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code § 65300 et seq.) and specific plans (defined in Government Code § 65450 et seq.). Although SB 18 does not specifically mention consultation or notice requirements for adoption or amendment of specific plans, existing state planning law requires local governments to use the same processes for adoption and amendment of specific plans as for general plans (see Government Code § 65453). Therefore, where SB 18 requires consultation and/or notice for a general plan adoption or amendment, the requirement extends also to a specific plan adoption or amendment. (OPR, 2005)

5. Assembly Bill 52 (AB 52)

The legislature added new requirements regarding tribal cultural resources in Assembly Bill 52 (AB 52). By including tribal cultural resources early in the CEQA process, the legislature intended to ensure that local and Tribal governments, public agencies, and project proponents would have information available, early in the project planning process, to identify and address potential adverse impacts to tribal cultural resources. By taking this proactive approach, the legislature also intended to reduce the potential for delays and conflicts in the environmental review process. (OPR, 2015)

The Public Resources Code now establishes that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." (Pub. Resources Code, § 21084.2.) To help determine whether a project may have such an effect, the Public Resources Code requires a lead agency to consult with any California Native American tribe

that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the determination of whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. (Pub. Resources Code, § 21080.3.1.) (OPR, 2015)

If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact. Public Resources Code § 20184.3 (b)(2) provides examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to tribal cultural resources. These rules apply to projects that have a notice of preparation for an environmental impact report or negative declaration or mitigated negative declaration filed on or after July 1, 2015. (OPR, 2015)

§ 21074 of the Public Resources Code defines "tribal cultural resources." In brief, in order to be considered a "tribal cultural resource," a resource must be either:

(1) listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or

(2) a resource that the lead agency chooses, in its discretion, to treat as a tribal cultural resource. (OPR, 2015)

In the latter instance, the lead agency must determine that the resource meets the criteria for listing in the state register of historic resources. In applying those criteria, a lead agency must consider the value of the resource to the tribe. (OPR, 2015)

6. State Health and Safety Code

California Health and Safety Code (HSC) § 7050.5(b) requires that excavation and disturbance activities must cease "In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery…" until the coroner can determine regarding the circumstances, manner, and cause of any death. The coroner is then required to make recommendations concerning the treatment and disposition of the human remains. Further, this section of the code makes it a misdemeanor to intentionally disturb, mutilate or remove interred human remains. § 7051 specifies that the removal of human remains from "internment or a place of storage while awaiting internment" with the intent to sell them or to dissect them with "malice or wantonness" is a public offense punishable by imprisonment in a state prison. Lastly, HSC §§ 8010-8011 establish the California Native American Graves Protection and Repatriation Act consistent with the federal law addressing the same. The Act stresses that "all California Indian human remains and cultural items are to be treated with dignity and respect." It encourages voluntary disclosure and return of remains and cultural items by publicly funded agencies and museums in California. It also outlines the need for aiding California Indian tribes, including non-federally recognized tribes, in filing repatriation claims.

7. California Code of Regulations Section 15064.5

The California Code of Regulations, Title 14, Chapter 3, § 15064.5 (the State CEQA Guidelines) establishes the procedure for determining the significance of impacts to archeological and historical resources, as well as classifying the type of resource. Cultural resources are aspects of the environment that require identification and assessment for potential significance. The evaluation of cultural resources under CEQA is based upon the definitions of resources provided in CEQA Guidelines § 15064.5, as follows:

- *A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4850 et seq.).*

- *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 an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall 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.*

- *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 an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4852) including the following:*

  - *Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;*
  - *Is associated with the lives of persons important in our past;*
  - *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*
  - *Has yielded, or may be likely to yield, information important in prehistory or history.*

- *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 an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.*

C. Local Regulations

1. City of Menifee General Plan – Open Space and Conservation Element OSC-5: Paleontological & Cultural Resources

The Open Space & Conservation Element of the City of Menifee General Plan includes the following goal and policies that relate to cultural resources. (Menifee, 2013a)

- Goal OSC-5: Archaeological, historical, and cultural resources are protected and integrated into the city's built environment.

- Policy OCS-5.1: Preserve and protect archaeological and historic resources and cultural sites, places, districts, structures, landforms, objects and native burial sites, traditional cultural landscapes and other

features, consistent with state law and any laws, regulations or policies which may be adopted by the city to implement this goal and associated policies.

- Policy OCS-5.3: Preserve sacred sites identified in consultation with the appropriate Native American tribes whose ancestral territories are within the city, such as Native American burial locations, by avoiding activities that would negatively impact the sites, while maintaining the confidentiality of the location and nature of the sacred site.

- Policy OCS-5.4: Establish clear and responsible policies and best practices to identify, evaluate, and protect previously unknown archaeological, historic, and cultural resources, following applicable CEQA and NEPA procedures and in consultation with the appropriate Native American tribes who have ancestral lands within the city.

- Policy OCS-5.5: Develop clear policies regarding the preservation and avoidance of cultural resources located within the city, in consultation with the appropriate Native American tribes who have ancestral lands within the city.

- Policy OCS-5.6: Develop strong government-to-government relationships and consultation protocols with the appropriate Native American tribes with ancestral territories within the city in order to ensure better identification, protection and preservation of cultural resources, while also developing appropriate educational programs, with tribal participation, for Menifee residents.

4.4.3 Basis for Determining Significance

Section V and Section XVII of Appendix G to the CEQA Guidelines addresses typical adverse effects to cultural resources, and includes the following threshold questions to evaluate the Project's impacts on cultural resources (OPR, 2018):

a. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5;

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5; or

c. Disturb any human remains, including those interred outside of formal cemeteries.

4.4.4 Impact Analysis

Threshold a: ***Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?***

Under existing conditions, the Project site consists of undeveloped land that was historically used for dryland farming and is now routinely disced for on-going fire abatement purposes. There are no structures present on the Project site. The Project site is relatively flat, except for an undisturbed hillside located in the northeastern corner of the Project site. Based on a review of historical aerial photographs provided in the Project's Phase I Environmental Site Assessment prepared by Petra Geosciences, Inc. (EIR *Technical Appendix G*), the Project site was used for dry farming from at least the year 1938 to sometime between/during 2016 (Petra, 2016, p. 3).

As discussed above under Subsection 4.4.1B, two historic homesteads – the Alva L. Reynolds Homestead of 1893 and the William Sargeant Homestead of 1890 – were noted to be within the Project site; however,

topographic maps do not show evidence of either homestead being built on the Project site and no remnants of any homesteads were identified during the field survey conducted by LSA. Two (2) historic sites were identified on-site: Site CA-RIV-9288, and Site CA-RIV-9289. Both sites were identified during field surveys conducted by LSA as historic trash scatters. No correlations exist between the two homesteads and the two multicomponent resources found on-site Due to a lack of unique elements, minimal research potential, and based on the criteria listed in CEQA Guidelines § 15064.5, LSA concluded that both of these site locations do not comprise significant historical resources. Furthermore, due to the lack of subsurface archeological deposits at these sites, it is unlikely that additional historic resources would be encountered during grading of the Project. (LSA, 2018, pp. 8-14)

Based on the foregoing analysis, the Project would not alter or destroy a historic site, nor cause a substantial change in the significance of a historical resource pursuant to CCR, Section 15064.5. Impacts would be less than significant and no mitigation is required.

Threshold b: ***Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?***

As discussed above under Subsection 4.4.1B, three (3) archeological sites were identified on-site: Site CA-RIV-9288, Site CA-RIV-9289, and Site P-33-028165. All three sites were identified during field surveys conducted by LSA. Site CA-RIV-9288 was found to contain a single milling feature; Site CA-RIV-9289 was found to contain a single milling feature and a Native American ringing stone, and Site P-33-028165 was found to contain polished cupules. Site P-33-028165 would be located within designated open space and would not be subject to any impacts with Project implementation. Accordingly, the Project would not cause a substantial adverse change in the significance of an archeological resource pursuant to CEQA Guidelines § 15064.5, and impacts would be less than significant. (LSA, 2018, pp. 8-14)

Additionally, there is a possibility that archaeological resources may be present beneath the site's subsurface, and may be impacted by future ground-disturbing construction activities associated with the Project. Due to the potential to discover elements of the prehistoric use of the area within the Project boundaries, a potentially significant impact to subsurface prehistoric resources would occur, and mitigation would be required. (LSA, 2018, pp. 13-14)

Implementation of Mitigation Measures MM 4.4-1 through MM 4.4-6 would ensure any prehistoric archeological resources that may be uncovered during grading, trenching, or other ground-disturbing activities are appropriately assessed, recorded and treated. Mitigation Measure MM 4.4-7 would be applied to the Project to ensure that existing prehistoric archeological resources on the Project site are preserved on-site in perpetuity. Implementation of the required mitigation would reduce the Project's potential impacts to both surface and to subsurface prehistoric archeological resources to less-than-significant.

Threshold c: ***Would the Project disturb any human remains, including those interred outside of formal cemeteries?***

The Project site does not contain human remains; however, prehistoric human remains are known to be buried less than a quarter-mile from the Project and according to Pechanga, the known cultural resources located on the Project are part of the ceremonial complex and are contributing elements to the Traditional Cultural Property (TCP) and possible archeological district. Field surveys conducted on the Project site by LSA did not identify the presence of any human remains within the Project's boundary and no human remains are known to exist beneath the surface of the site at this time. However, given the recent identification of human

remains within the immediate area of the Project, there is a high potential that human remains may be unearthed during grading and excavation activities associated with Project construction.

If human remains are unearthed during Project construction, the construction contractor would be required by law to comply with California Health and Safety Code, § 7050.5, "Disturbance of Human Remains." According to § 7050.5(b) and (c), if human remains are discovered, the County Coroner must be contacted and if the Coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, the Coroner is required to contact the Native American Heritage Commission (NAHC) by telephone within 24 hours. Pursuant to California Public Resources Code § 5097.98, whenever the NAHC receives notification of a discovery of Native American human remains from a county coroner, the NAHC is required to immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. According to Public Resources Code § 5097.94(k), the NAHC is authorized to mediate disputes arising between landowners and known descendants relating to the treatment and disposition of Native American human burials, skeletal remains, and items associated with Native American burials. (LSA, 2018, pp. 13-14)

Implementation of Mitigation Measure MM 4.4-9 would reduce the Project's impacts to less-than-significant.

4.4.5 Cumulative Impact Analysis

This cumulative impact analysis considers the development of the Project in conjunction with other development projects and planned development in the vicinity of the Project site.

As noted above under Threshold a, the Project site contains no structures that could be considered historical resources. Two historic sites were identified on the Project site; however, these historic sites are not unique and have minimal research potential. The two historic sites identified on the Project site are not considered CEQA significant historical resources. As such, the Project would result in a less-than-cumulatively-considerable impact to historic resources.

As noted above under Threshold b, the Project site contains three archeological sites; however, these archeological sites are determined to have minimal research potential. Therefore, the three archeological sites identified on the Project site are not considered significant archeological resources; however, they are significant tribal cultural resources. With implementation of the proposed mitigation measures, impacts would be less-than-cumulatively considerable. There is a high potential that archaeological resources meeting the CEQA definition of a significant resource may be buried beneath the surface and unearthed during the Project's construction activities due to recent identification of the significant cultural resources and sacred sites near the vicinity of the Project site. Impacts on such resources have the potential to be significant if they are not properly identified and treated. Other developments in the region also have the potential to adversely affect resources buried underneath the surface. Therefore, the Project's potential impacts on unearthed archeological resources during the Project's construction activities would be cumulatively considerable and require mitigation.

As discussed under Threshold c, the Project's potential impacts to buried human remains during the Project's construction activities would be cumulatively considerable and require mitigation.

4.4.6 Significance of Impacts Before Mitigation

Threshold a: Less-than-Significant Impact. The Project site would not alter or destroy a historic site, nor cause a substantial change in the significance of a historical resource pursuant to California Code of Regulations (CCR), § 15064.5. Impacts would be less than significant.

Threshold b: Significant Direct and Cumulatively Considerable Impact. The Project site would not cause a substantial change in the significance of any known archaeological resources as defined by CEQA Guidelines § 15064.5. However, there is a potential that archaeological resources may be buried beneath the surface and unearthed during the Project's construction activities. Potential impacts to subsurface archaeological resources would be significant on a direct and cumulatively-considerable basis.

Threshold c: Less-than-Significant Impact with Mitigation Incorporated. The Project site does not contain known human remains. However, there are known human remains identified within the vicinity of the Project. Potential impacts to buried human remains during grading and ground-disturbing activities would be significant on a direct and cumulatively-considerable basis.

4.4.7 City Regulations, Design Requirements, and Mitigation

The following are applicable regulations and design requirements within the City of Menifee. Although these requirements technically do not meet CEQA's definition for mitigation, they are imposed herein to ensure Project compliance with applicable City regulations and design requirements.

- Unless otherwise required by law, the site of any reburial of Native American human remains or associated grave goods shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, pursuant to the specific exemption set forth in California Government Code Section 6254 (r), parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code 6254 (r).

Mitigation

The following mitigation measures are required to reduce to below a level of significance the Project's potential impact on prehistoric archeological resources that have the potential to be present beneath the Project site and discovered during ground-disturbing construction activities.

MM 4.4-1 If during ground disturbance activities, unique cultural resources are discovered that were not assessed by the archaeological report(s) and/or environmental assessment conducted prior to Project approval, the following procedures shall be followed. Unique cultural resources are defined, for this condition only, as being multiple artifacts in close association with each other, but may include fewer artifacts if the area of the find is determined to be of significance due to its sacred or cultural importance as determined in consultation with the Native American Tribe(s).

i. All ground disturbance activities within 100 feet of the discovered cultural resources shall be halted until a meeting is convened between the Project

Applicant, the Project Archaeologist, the Tribal Representative(s), and the Community Development Director to discuss the significance of the find.

ii. At the meeting, the significance of the discoveries shall be discussed and after consultation with the Tribal Representative(s) and the Project Archaeologist, a decision shall be made, with the concurrence of the Community Development Director, as to the appropriate mitigation (documentation, recovery, avoidance, etc.) for the cultural resources.

iii. Further ground disturbance shall not resume within the area of the discovery until an agreement has been reached by all parties as to the appropriate mitigation. Work shall be allowed to continue outside of the buffer area and will be monitored by additional Tribal Monitors if needed.

iv. Treatment and avoidance of the newly discovered resources shall be consistent with the Cultural Resources Management Plan and Monitoring Agreements entered into with the appropriate tribes. This may include avoidance of the cultural resources through project design, in-place preservation of cultural resources located in native soils and/or re-burial on the Project property so they are not subject to further disturbance in perpetuity as identified in Non-Disclosure of Reburial Condition.

v. If the find is determined to be significant and avoidance of the site has not been achieved, a Phase III data recovery plan shall be prepared by the Project Archeologist, in consultation with the Tribe, and shall be submitted to the City for their review and approval prior to implementation of the said plan.

vi. Pursuant to Calif. Pub. Res. Code § 21083.2(b) avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the Project Applicant and the Tribe(s) cannot agree on the significance or the mitigation for the archaeological or cultural resources, these issues will be presented to the City Community Development Director for decision. The City Community Development Director shall make the determination based on the provisions of the California Environmental Quality Act with respect to archaeological resources, recommendations of the project archeologist and shall take into account the cultural and religious principles and practices of the Tribe. Notwithstanding any other rights available under the law, the decision of the City Community Development Director shall be appealable to the City Planning Commission and/or City Council."

Evidence of compliance with this mitigation measure, if a significant archaeological resource is found, shall be provided to City of Menifee upon the completion of a treatment plan and final report detailing the significance and treatment finding.

MM 4.4-2 In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries:

a) One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Menifee Community Development Department:

i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resources.

ii. Reburial of the resources on the Project property. The measures for reburial shall include, at least, the following: Measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed, with an exception that sacred items, burial goods, and Native American human remains are excluded. Any reburial process shall be culturally appropriate. Listing of contents and location of the reburial shall be included in the confidential Phase IV report. The Phase IV Report shall be filed with the City under a confidential cover and not subject to Public Records Request.

iii. If preservation in place or reburial is not feasible then the resources shall be curated in a culturally appropriate manner at a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence of curation in the form of a letter from the curation facility stating that subject archaeological materials have been received and that all fees have been paid, shall be provided by the landowner to the City. There shall be no destructive or invasive testing on sacred items, burial goods, and Native American human remains. Results concerning finds of any inadvertent discoveries shall be included in the Phase IV monitoring report.

Evidence of compliance with this mitigation measure, if a significant archaeological resource is found, shall be provided to City of Menifee upon the completion of a treatment plan and final report detailing the significance and treatment finding.

MM 4.4-3 Prior to issuance of a grading permit the Project Applicant shall retain a Riverside County qualified archaeologist to monitor all ground disturbing activities in an effort to identify any unknown archaeological resources.

The Project Archaeologist and the Tribal Monitor(s) shall manage and oversee monitoring for all initial ground disturbing activities and excavation of each portion of the Project site including clearing, grubbing, tree removals, mass or rough grading, trenching, stockpiling of materials, rock crushing, structure demolition and etc. The Project Archaeologist and the Tribal Monitor(s), shall have the authority to temporarily divert, redirect or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of cultural resources in coordination with any required special interest or Tribal Monitors.

The Project Applicant shall submit a fully executed copy of the contract to the Community Development Department to ensure compliance with this condition of approval. Upon verification, the Community Development Department shall clear this condition.

In addition, the Project Archaeologist, in consultation with the Consulting Tribe(s), the contractor, and the City, shall develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB 52 to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. A consulting tribe is defined as a tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB 52 consultation process, and has completed AB 52 consultation with the City as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB 52. Details in the Plan shall include:

a. Project grading and development scheduling;

b. The Project Archeologist and the Consulting Tribes(s) shall attend the pre-grading meeting with the City, the construction manager, and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Consulting Tribe(s) shall make themselves available to provide the training on an as-needed basis;

c. The protocols and stipulations that the contractor, City, Consulting Tribe(s), and Project Archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.

MM 4.4-4 Tribal Monitor(s) from the Pechanga Band of Luiseño Indians shall be required on-site during all ground-disturbing activities, including grading, stockpiling of materials, engineered fill, rock crushing, etc. The Project Applicant shall retain a qualified Tribal Monitor(s) from the Pechanga Band of Luiseño Indians. Prior to issuance of a grading permit, the Project Applicant shall submit a copy of a signed contract between the above-mentioned Tribe and the Project Applicant for the monitoring of the Project to the City of Menifee Community Development Department and to the Engineering Department. The Tribal Monitor(s) shall have the authority to temporarily divert, redirect or halt the ground-disturbance activities to allow recovery of cultural resources, in coordination with the Project Archaeologist.

MM 4.4-5 Tribal Monitor(s) from the Soboba Band of Luiseño Indians shall be required on-site during all ground-disturbing activities, including grading, stockpiling of materials, engineered fill, rock crushing, etc. The Project Applicant shall retain a qualified Tribal Monitor(s) from the

Soboba Band of Luiseño Indians. Prior to issuance of a grading permit, the Project Applicant shall submit a copy of a signed contract between the above-mentioned Tribe and the Project Applicant for the monitoring of the Project to the City of Menifee Community Development Department and to the Engineering Department. The Tribal Monitor(s) shall have the authority to temporarily divert, redirect or halt the ground-disturbance activities to allow recovery of cultural resources, in coordination with the Project Archaeologist.

MM 4.4-6 Prior to final inspection, the Project Applicant shall prompt the Project Archeologist to submit two (2) copies of the Phase III Data Recovery report (if required for the Project) and the Phase IV Cultural Resources Monitoring Report that complies with the Community Development Department's requirements for such reports. The Phase IV report shall include evidence of the required cultural/historical sensitivity training for the construction staff held during the pre-grade meeting. The Community Development Department shall review the reports to determine adequate mitigation compliance. Provided the reports are adequate, the Community Development Department shall clear this condition. Once the report(s) are determined to be adequate, two (2) copies shall be submitted to the Eastern Information Center (EIC) at the University of California Riverside (UCR) and one (1) copy shall be submitted to the Consulting Tribe(s) Cultural Resources Department(s).

MM 4.4-7 Prior to any grading in the associated areas, the Project Applicant shall meet with the Project Archaeologist and the Consulting Tribe(s) in order to assess CA-RIV 9288 and CA-RIV-9289 to determine the suitability for relocation to a permanent open space area. The Consulting Tribe(s) shall work with the Project Archaeologist, Project Applicant, and the grading contractor or appropriate personnel to ensure that every effort is made to relocate the Features safely and to discuss the most appropriate methods for relocation. Using professional archaeological methods, the milling slicks and ringing stone artifacts associated with Sites RIV-9288 and Site RIV-9289 shall be relocated to the planned open space area in the northeastern portion of the Project site. Furthermore, the rock art site associated with Site P-33-028165 shall be preserved in place within the planned open space area in the northeastern portion of the Project site. Before construction activities may resume in the affected area, any visible artifacts shall be recovered and recorded and the features recorded using professional archaeological methods. The current Department of Parks and Recreation forms for the sites shall be updated, detailing which features were relocated, the process taken, and updated maps using sub meter GIS technology to document the new location of each feature. The relocation information shall be included in a Phase IV Monitoring Report. The site record should clearly indicate that the Features are not in their original location and why they were relocated.

MM 4.4-8 Sites CA-RIV-9288 and CA-RIV-9289 will be impacted during grading and construction activities and the soils surrounding them will be disturbed. Prior to any grading in the associated areas, the Project Applicant, the Pechanga Tribe, and the City will formalize a written agreement to identify the area that will be subject to "Controlled Grading" during construction of the Project. The Pechanga Tribe, the Project Applicant, and the City will develop an exhibit that outlines the area subject to controlled grading, and that area will be highlighted on the rough grading plans, precise grading plans or other off-site improvement plans that may impact this site. "Controlled Grading" shall include, without limitation, the slow and deliberate excavation and removal of soils employing the smallest reasonable cuts in certain areas using light scrapers (for example Caterpillar 623 or 627), dozers (for example D6-D8), front end loaders, excavators, skip loaders, dump trucks, and motor graders. A controlled

grading plan will be monitored by the Project Archeologist and Pechanga Tribal Monitor(s) to ensure the systematic removal of the ground surface surrounding these features are monitored to allow for the identification of resources.

Results of all controlled grading activities shall be included in the Phase IV monitoring report.

MM 4.4-9 If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to Public Resource Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within the period specified by law (24 hours). Subsequently, the Native American Heritage Commission shall identify the "most likely descendant." The most likely descendant shall then make recommendations and engage in consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98. Evidence of compliance with this mitigation measure, if human remains are found, shall be provided to the City of Menifee upon the completion of a treatment plan and final report detailing the significance and treatment finding.

4.4.8 Significance of Impacts After Mitigation

Threshold b: Less-than-Significant Impact with Mitigation Incorporated. Implementation of Mitigation Measures MM 4.4-1 through MM 4.4-6, and MM 4.4-8 would ensure any prehistoric archeological resources that may be uncovered during grading, trenching, or other ground-disturbing activities are appropriately recorded and treated. Although Site RIV-9288, Site RIV-9289, and Site P-33-028165 do not meet the criteria to be considered significant prehistoric resources under CEQA, they have been determined to be significant Tribal Cultural Resources, Mitigation Measure MM 4.4-7 would nonetheless be applied to the Project ensure that existing prehistoric archeological resources on the Project site are preserved on-site. Implementation of the required mitigation would reduce the Project's potential impacts to surface and subsurface prehistoric archeological resources to less-than-significant levels.

Threshold c: Less-than-Significant Impact with Mitigation Incorporated. The Project site does not contain human remains. However, there are known human remains identified within the vicinity of the Project. In the event that human remains are discovered during Project grading or other ground-disturbing activities, the Project would be required to comply with the applicable provisions of California Health and Safety Code § 7050.5 and California Public Resources Code § 5097 et. seq. as applied to the Project as Mitigation Measure MM 4.4-9 and applicable regulatory requirements (i.e., the exemption in California Government Code 6254 (r) related to the withholding of public disclosure information related to reburial of Native American human remains or grave goods). Implementation of Mitigation Measure MM 4.4-9 would reduce the Project's impacts to less than significant.

4.5 ENERGY

This Subsection is based in part on the information contained in the Project's Energy Analysis Report (herein, "Energy Analysis"), dated August 16, 2019, and appended to this EIR as *Technical Appendix E* (Urban Crossroads, 2019e)

4.5.1 EXISTING CONDITIONS

A. Overview

The most recent data for California's estimated annual energy use is from 2016 and included (Urban Crossroads, 2019e, p. 10):

- Approximately 7,830 trillion British Thermal Unit (BTU) of energy was consumed;
- Approximately 2,115 billion cubic feet of natural gas; and
- Approximately 15.8 billion gallons of transportation fuel (for the year 2017).

The most recent data provided by the United States Energy Information Administration (EIA) is from 2016 and illustrates energy use in California by demand sector as follows (Urban Crossroads, 2019e, p. 10):

- Approximately 39.8 percent transportation;
- Approximately 23.7 percent industrial;
- Approximately 17.7 percent residential; and
- Approximately 18.9 percent commercial.

In 2017, the total system electric generation for California was 292,039 gigawatt-hours (GWh). California's massive electricity in-state generation system generated approximately 206,336 GWh which accounted for approximately 71% of the electricity it uses; the rest was imported from the Pacific Northwest (14%) and the U.S. Southwest (16%). Natural gas is the main source for electricity generation at 50% of the total in-state electric generation system power as shown in Table 4.5-1, *Total Electricity System Power (California 2017)*. (Urban Crossroads, 2019e, p. 10)

A summary of, and context for energy consumption and energy demands within the State is presented in "U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts" excerpted below (Urban Crossroads, 2019e, p. 11).

- California was the fourth-largest producer of crude oil among the 50 states in 2017, after Texas, North Dakota, and Alaska, and, as of January 2018, third in oil refining capacity after Texas and Louisiana. (Urban Crossroads, 2019e, p. 11)

- California is the largest consumer of jet fuel among the 50 states and accounted for one-fifth of the nation's jet fuel consumption in 2016. (Urban Crossroads, 2019e, p. 11)

- California's total energy consumption is second-highest in the nation, but, in 2016, the state's per capita energy consumption ranked 48th, due in part to its mild climate and its energy efficiency programs.

Table 4.5-1 Total Electricity System Power (California 2017)

Fuel Type	California In-State Generation (GWh)	Percent of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	California Power Mix (GWh)	Percent California Power Mix
Coal	302	0.15%	409	11,364	12,075	4.13%
Large Hydro	36,920	17.89%	4531	1,536	42,987	14.72%
Natural Gas	89,564	43.40%	46	8,705	98,315	33.67%
Nuclear	17,925	8.69%	0	8,594	26,519	9.08%
Oil	33	0.02%	0	0	33	0.01%
Other	409	0.20%	0	0	409	0.14%
Renewables	61,183	29.65%	12,502	10,999	84,684	29.00%
Biomass	5,827	2.82%	1,015	32	6,874	2.35%
Geothermal	11,745	5.69%	23	937	12,705	4.35%
Small Hydro	6,413	3.11%	1449	5	7,867	2.70%
Solar	24,331	11.79%	0	5,465	29,796	10.20%
Wind	12,867	6.24%	10,015	4,560	27,442	9.40%
Unspecified Sources of Power	N/A	N/A	22,385	4,632	27,017	9.25%
Total	**206,336**	**100%**	**39,873**	**45,830**	**292,039**	**100%**

Source: https://www.energy.ca.gov/almanac/electricity_data/total_system_power.html
(Urban Crossroads, 2019e, Table 2-1)

- In 2017, California ranked second in the nation in conventional hydroelectric generation and first as a producer of electricity from solar, geothermal, and biomass resources (Urban Crossroads, 2019e, p. 11)

- In 2017, solar photovoltaic (PV) and solar thermal installations provided about 16% of California's net electricity generation. (Urban Crossroads, 2019e, p. 11)

As indicated above, California is one of the nation's leading energy-producing states, and California per capita energy use is among the nation's most efficient. Given the nature of the proposed Project, the remainder of this discussion will focus on the three sources of energy that are most relevant to the Project – namely, electricity, natural gas, and transportation fuel for vehicle trips associated with uses planned for the Project. (Urban Crossroads, 2019e, pp. 11-12)

B. Electricity

The Southern California region's electricity reliability has been of concern for the past several years due to the planned retirement of aging facilities that depend upon once-through cooling technologies, as well as the June 2013 retirement of the San Onofre Nuclear Generating Station (San Onofre). While the once-through cooling phase-out has been ongoing since the May 2010 adoption of the State Water Resources Control Board's once-through cooling policy, the retirement of San Onofre complicated the situation. California ISO studies had revealed the extent to which the Southern California Air Basin (SCAB) and the San Diego Air Basin (SDAB) region were vulnerable to low-voltage and post-transient voltage instability concerns. A preliminary plan to address these issues were detailed in the 2013 Integrative Energy Policy Report (2013 IEPR) after a

collaborative process with other energy agencies, utilities, and air districts. If the resource development outlined in the preliminary plan continues as detailed, reliability in Southern California would likely be assured; however, tight resource margins have led energy agencies and the ARB to develop a contingency plan. This contingency plan was discussed at a public workshop in Los Angeles on August 20, 2014, and is detailed below. (Urban Crossroads, 2019e, p. 12)

Electricity is provided to the Project by Southern California Edison (SCE). SCE provides electric power to more than 14 million persons in 15 counties and in 180 incorporated cities, within a service area encompassing approximately 50,000 square miles. SCE derives electricity from varied energy resources including fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers. (Urban Crossroads, 2019e, p. 12)

California's electricity industry is an organization of traditional utilities, private generating companies, and state agencies, each with a variety of roles and responsibilities to ensure that electrical power is provided to consumers. The California Independent Service Operator ("ISO") is a nonprofit public benefit corporation and is the impartial operator of the State's wholesale power grid and is charged with maintaining grid reliability, and to direct uninterrupted electrical energy supplies to California's homes and communities. While utilities (such as SCE) still own transmission assets, the ISO routes electrical power along these assets, maximizing the use of the transmission system and its power generation resources. The ISO matches buyers and sellers of electricity to ensure that sufficient power is available to meet demand. To these ends, every five minutes the ISO forecasts electrical demands, accounts for operating reserves, and assigns the lowest cost power plant unit to meet demands while ensuring adequate system transmission capacities and capabilities. (Urban Crossroads, 2019e, p. 12)

Part of the ISO's charge is to plan and coordinate grid enhancements to ensure that electrical power is provided to California consumers. To this end, transmission owners (investor-owned utilities such as SCE) file annual transmission expansion/modification plans to accommodate the State's growing electrical needs. The ISO reviews and either approves or denies the proposed additions. In addition, and perhaps most importantly, the ISO works with other areas in the western United States electrical grid to ensure that adequate power supplies are available to the State. In this manner, continuing reliable and affordable electrical power is assured to existing and new consumers throughout the State. (Urban Crossroads, 2019e, pp. 12-13)

Table 4.5-2, *SCE 2017 Power Content Mix*, identifies SCE's specific proportional shares of electricity sources in 2017. As indicated in Table 4.5-2, the 2017 SCE Power Mix has renewable energy at 32% of the overall energy resources. Geothermal resources are at 8%, wind power is at 10%, large hydroelectric sources are at 8%, solar energy is at 13%, and coal is at 0%. Biomass and waste sources have decreased to 0% from 1% in 2016. Natural gas is at 20%, having increased from 19% in 2016. (Urban Crossroads, 2019e, p. 13)

C. Natural Gas

The usage associated with natural gas use was calculated using the CalEEMod model. The following summary of natural gas resources and service providers, delivery systems, and associated regulation is excerpted from information provided by the California Public Utilities Commission (CPUC). (Urban Crossroads, 2019e, p. 13)

Table 4.5-2 SCE 2017 Power Content Mix

Energy Resources	2017 SCE Power Mix
Eligible Renewable	**32%**
Biomass & waste	0%
Geothermal	8%
Small Hydroelectric	1%
Solar	13%
Wind	10%
Coal	**0%**
Large Hydroelectric	**8%**
Natural Gas	**20%**
Nuclear	**6%**
Other	**0%**
Unspecified Sources of power*	34%
Total	**100%**

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources

(Urban Crossroads, 2019e, Table 2-2)

"The California Public Utilities Commission (PUC) regulates natural gas utility service for approximately 10.8 million customers that receive natural gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller natural gas utilities. The CPUC also regulates independent storage operators: Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage. (Urban Crossroads, 2019e, p. 13)

The vast majority of California's natural gas customers are residential and small commercial customers, referred to as "core" customers, who accounted for approximately 32% of the natural gas delivered by California utilities in 2012. Large consumers, like electric generators and industrial customers, referred to as "noncore" customers, accounted for approximately 68% of the natural gas delivered by California utilities in 2012. (Urban Crossroads, 2019e, pp. 13-14)

The PUC regulates the California utilities' natural gas rates and natural gas services, including in-state transportation over the utilities' transmission and distribution pipeline systems, storage, procurement, metering, and billing. Most of the natural gas used in California comes from out-of-state natural gas basins. In 2012, California customers received 35% of their natural gas supply from basins located in the Southwest, 16% from Canada, 40% from the Rocky Mountains, and 9% from basins located within California. California gas utilities may soon also begin receiving biogas into their pipeline systems. (Urban Crossroads, 2019e, p. 14)

Natural gas from out-of-state production basins is delivered into California via the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California consumers are the Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Questar Southern Trails, and Mojave Pipeline. Another pipeline, the North Baja – Baja Norte Pipeline, takes gas off the El Paso Pipeline at the California/Arizona border and delivers that gas through

California into Mexico. While the Federal Energy Regulatory Commission (FERC) regulates the transportation of natural gas on the interstate pipelines, the PUC often participates in FERC regulatory proceedings to represent the interests of California natural gas consumers. (Urban Crossroads, 2019e, p. 14)

Most of the natural gas transported via the interstate pipelines, as well as some of the California-produced natural gas, is delivered into the PG&E and SoCalGas intrastate natural gas transmission pipeline systems (commonly referred to as California's "backbone" natural gas pipeline system). Natural gas on the utilities' backbone pipeline systems is then delivered into the local transmission and distribution pipeline systems or to natural gas storage fields. Some large noncore customers take natural gas directly off the high-pressure backbone pipeline systems, while core customers and other noncore customers take natural gas off the utilities' distribution pipeline systems. The PUC has regulatory jurisdiction over 150,000 miles of utility-owned natural gas pipelines, which transported 82% of the total amount of natural gas delivered to California's gas consumers in 2012. (Urban Crossroads, 2019e, p. 14)

SDG&E and Southwest Gas' southern division are wholesale customers of SoCalGas, and currently receive all of their natural gas from the SoCalGas system (Southwest Gas also provides natural gas distribution service in the Lake Tahoe area). Some other municipal wholesale customers are the cities of Palo Alto, Long Beach, and Vernon, which are not regulated by the CPUC. (Urban Crossroads, 2019e, p. 14)

Some of the natural gas delivered to California customers may be delivered directly to them without being transported over the regulated utility systems. For example, the Kern River/Mojave pipeline system can deliver natural gas directly to some large customers, "bypassing" the utilities' systems. Much of California-produced natural gas is also delivered directly to large consumers. (Urban Crossroads, 2019e, p. 14)

PG&E and SoCalGas own and operate several natural gas storage fields that are located in northern and southern California. These storage fields, and four independently owned storage utilities – Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage – help meet peak seasonal natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently. (A portion of the Gill Ranch facility is owned by PG&E). (Urban Crossroads, 2019e, p. 15)

California's regulated utilities do not own any natural gas production facilities. All of the natural gas sold by these utilities must be purchased from suppliers and/or marketers. The price of natural gas sold by suppliers and marketers was deregulated by the FERC in the mid-1980's and is determined by "market forces." However, the PUC decides whether California's utilities have taken reasonable steps in order to minimize the cost of natural gas purchased on behalf of their core customers." (Urban Crossroads, 2019e, p. 15)

As indicated in the preceding discussions, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the State in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available via existing delivery systems, thereby increasing the availability and reliability of resources in total. The PUC oversees utility purchases and transmission of natural gas to ensure reliable and affordable natural gas deliveries to existing and new consumers throughout the State. (Urban Crossroads, 2019e, p. 15)

D. Transportation Energy Resources

The Project would generate additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. In March 2018, the Department of Motor Vehicles (DMV) identified 35 million registered vehicles in California, and those vehicles (as noted previously) consume an estimated 19

billion gallons of fuel each year[1]. Gasoline (and other vehicle fuels) are commercially-provided commodities and would be available to the Project patrons and employees via commercial outlets. (Urban Crossroads, 2019e, p. 15)

California's on-road transportation system includes 170,000 miles of highways and major roadways, more than 27 million passenger vehicles and light trucks, and almost 8 million medium- and heavy-duty vehicles. While gasoline consumption has been declining since 2008 it is still by far the dominant fuel. Petroleum comprises about 92 percent of all transportation energy use, excluding fuel consumed for aviation and most marine vessels. Nearly 19 billion gallons of on-highway fuel are burned each year, including 15.1 billion gallons of gasoline (including ethanol) and 3.9 billion gallons of diesel fuel (including biodiesel and renewable diesel). In 2016, Californians also used 194 million therms of natural gas as a transportation fuel, or the equivalent of 155 million gallons of gasoline. (Urban Crossroads, 2019e, p. 15)

4.5.2 Applicable Environmental Regulations

The following is a brief description of the federal, state, and local environmental laws and regulations related to energy.

A. Federal Policies and Regulations

1. Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions. (Urban Crossroads, 2019e, p. 17)

2. The Transportation Equity Act for the 21st Century (TEA-21)

The Transportation Equity Act for the 21st Century (TEA-21) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety. (Urban Crossroads, 2019e, p. 17)

B. State Regulations

1. Integrated Energy Policy Report

Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002) requires the California Energy Commission to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's

[1] Fuel consumptions estimated utilizing information from EMFAC2014.

economy, and protect public health and safety (Public Resources Code § 25301a]). The Energy Commission prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report. (Urban Crossroads, 2019e, p. 18)

The 2016 Integrated Energy Policy Report (2016 IEPR) was published in February 2017 and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2016 IEPR focuses on a variety of topics such as including the environmental performance of the electricity generation system, landscape-scale planning, the response to the gas leak at the Aliso Canyon natural gas storage facility, transportation fuel supply reliability issues, updates on Southern California electricity reliability, methane leakage, climate adaptation activities for the energy sector, climate and sea-level rise scenarios, and the California Energy Demand Forecast. (Urban Crossroads, 2019e, p. 18)

2. State of California Energy Plan

The California Energy Commission (CEC) is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access. (Urban Crossroads, 2019e, p. 18)

3. California Code of Regulations Title 24, Part 6, Energy Efficiency Standards

California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted 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-efficient technologies and methods. Energy-efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2016 version of Title 24 was adopted by the California Energy Commission (CEC) and became effective on January 1, 2017. (Urban Crossroads, 2019e, p. 18)

C. Local Regulations

The City of Menifee General Plan Open Space and Conservation Element includes the following policies/actions related to energy conservation.

- Action OSC59: Evaluate the existing transportation network to identify areas where mobile source pollution can be reduced by making vehicular movement more efficient. Revise the transportation network as necessary. Possible improvements include installation of dedicated left and right turn lanes, construction of roundabouts, development of Intelligent Transportation systems such as synchronized signal timing, and adaptive traffic control systems, removal of unwarranted stop signs and construction of new and improved freeway on- and off-ramps.

- Action OSC72: Set and monitor performance goals and/or VMT reduction targets that are consistent with the targets set by the Southern California Association of Governments (SCAG) Sustainable Communities Strategy and Regional Transportation Plan and Western Riverside Council of Governments (WRCOG) Climate Action Plan (CAP).

- Action OSC73: Work with Riverside Transit Agency (RTA), and the Riverside County Transportation Commission (RCTC) to evaluate options to add transit to increase service in Menifee. Improvements include supporting the implementation of a regional Bus Rapid Transit system in Western Riverside County (with a stop in the City of Menifee) and expanded service or a dedicated shuttle to connect Sun City Core to the Menifee Valley Medical Center. Partner with RTA to increase the frequency and coverage of buses connecting Menifee to other cities and the nearby existing and proposed rail stations. Possible grant funding sources should be considered in the evaluation.

- Action OSC75: Create a program to incentivize new and existing commercial, industrial, public, school and medical facilities/developments to install shared vehicle parking, carpool parking, additional bike racks, and bus stop shelters. Components of the plan could include reduced permit fees, expedited processing, reduced parking requirements, etc.

- Action OSC76: Design and implement a public outreach campaign to reduce vehicle miles traveled within the City. Campaign components can include a ride-sharing board at City Hall and an on-line version through the City website, promotion of RTA's schedule, passes, and programs, the City's Bicycle Master Plan when Complete, as well as electric vehicles and their routes/street network.

4.5.3 Basis for Determining Significance

The proposed Project would result in a significant impact to energy if the Project or any Project-related component would:

a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The above-listed thresholds are derived directly from Section VI of Appendix G to the CEQA Guidelines and address typical adverse effects due to energy consumption (OPR, 2018).

4.5.4 Impact Analysis

A. Methodology for Calculating Project Energy Demands

Information from the CalEEMod 2016.3.2 outputs for the Project's Air Quality Impact Analysis (AQIA; *Technical Appendix B*) was utilized in the analysis, detailing Project-related construction equipment, transportation energy demands, and facility energy demands. These outputs can be referenced in Appendices 3.1 and 3.2 of the Project's Energy Analysis (*Technical Appendix E*). Additionally, the 2014 version of the Emissions FACtor model (EMFAC) developed by the California Air Resources Board (CARB) was used to calculate emission rates, fuel consumption, and vehicle miles traveled (VMT) for light-duty vehicles traveling to and from the Project site during the Project's construction and operational activities. Data from the EMFAC 2014 model outputs are included in Appendix 3.3 of the Project's Energy Analysis. (Urban Crossroads, 2019e, pp. 21, 24)

Threshold a: ***Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?***

A. Construction Energy Demands

1. Construction Equipment Electricity Usage Estimates

Based on the 2017 National Construction Estimator, the typical power cost per 1,000 square feet of building construction per month is estimated to be $2.32. The Project plans to develop 3,236,750 square feet of building space over the course of 80 months, based on 1,061 dwelling units at an average size of approximately 5,658 s.f., a total of 225,000 of shopping center uses, and a 10,000 s.f. community recreation center. As shown in Table 4.5-3, *Project Construction Power Cost*, the total power cost of the on-site electricity usage during the construction of the proposed Project is estimated to be approximately $600,470.80. Additionally, as of June 1, 2018, SCE's general service rate schedule (GS-1) for a commercial land uses is $0.07 per kWh of electricity. Additionally, SCE's domestic rate schedule (D) is $0.09 per kWh of electricity for residential land uses. As shown in Table 4.5-4, *Project Construction Electricity Usage*, the total electricity usage from on-site Project construction-related activities is estimated to be approximately 6,511,731.73 kWh. (Urban Crossroads, 2019e, p. 21)

Table 4.5-3 Project Construction Power Cost

Land Use	Power Cost (per 1,000 SF of building per month of construction)	Total Building Size (1,000 SF)	Construction Duration (months)	Project Construction Power Cost
Recreational Community Center	$2.32	10.000	80	$1,856.00
Regional Shopping Center	$2.32	225.000	80	$41,760.00
Single Family Residential	$2.32	3,001.750	80	$557,124.80
TOTAL PROJECT CONSTRUCTION POWER COST				***$600,740.80***

(Urban Crossroads, 2019e, Table 4-1)

Table 4.5-4 Project Construction Electricity Usage

Land Use	Cost per kWh	Project Construction Electricity Usage (kWh)
Recreational Community Center	$0.07	26,514
Regional Shopping Center	$0.07	596,571
Single Family Residential	$0.09	5,888,646
TOTAL PROJECT CONSTURCTION ELECTRICTY USAGE (kWh)		***6,511,731.73***

(Urban Crossroads, 2019e, Table 4-2)

2. Construction Equipment Fuel Estimates

Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction. Project construction activity timeline estimates, construction equipment schedules,

equipment power ratings, load factors, and associated fuel consumption estimates are presented in Table 4.5-5, *Construction Equipment Fuel Consumption Estimates*. Eight-hour daily use of all equipment is assumed. The aggregate fuel consumption rate for all equipment is estimated at 18.5 hp-hr-gal., obtained from California Air Resources Board (CARB) 2018 Emissions Factors Tables and cited fuel consumption rate factors presented in Table D-24 of the Moyer guidelines. For the purposes of this analysis, the calculations are based on all construction equipment being diesel-powered which is standard practice consistent with industry standards. Diesel fuel would be supplied by existing commercial fuel providers serving the City and region. (Urban Crossroads, 2019e, p. 22)

Table 4.5-5 Construction Equipment Fuel Consumption Estimates

Activity/Duration	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption (gal. diesel fuel)
Grading (180 days)	Crawler Tractors	212	2	8	0.43	1,459	14,191
	Excavators	158	2	8	0.38	961	9,347
	Graders	187	1	8	0.41	613	5,968
	Rubber Tired Dozers	247	1	8	0.40	790	7,690
	Scrapers	367	2	8	0.48	2,819	27,424
Building Construction (1,550 days)	Cranes	231	1	8	0.29	536	44,901
	Crawler Tractors	212	3	8	0.43	2,188	183,306
	Forklifts	89	3	8	0.20	427	35,792
	Generator Sets	84	1	8	0.74	497	41,664
	Welders	46	1	8	0.45	166	13,875
Architectural Coating (1,490 days)	Air Compressors	78	1	8	0.48	300	24,124
Grading (180 days)	Crawler Tractors	212	2	8	0.43	1,459	14,191
	Excavators	158	2	8	0.38	961	9,347
	Graders	187	1	8	0.41	613	5,968
	Rubber Tired Dozers	247	1	8	0.40	790	7,690
	Scrapers	367	2	8	0.48	2,819	27,424
Paving (330 days)	Pavers	130	2	8	0.42	874	15,583
	Paving Equipment	132	2	8	0.36	760	13,562
	Rollers	80	2	8	0.38	486	8,676
CONSTRUCTION FUEL DEMAND (GALLONS DIESEL FUEL)							***510,724***

(Urban Crossroads, 2019e, Table 4-3)

As presented in Table 4.5-5, Project construction activities would consume an estimated 510,724 gallons of diesel fuel. Project construction would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose. (Urban Crossroads, 2019e, p. 22)

3. Construction Worker Fuel Estimates

For purposes of analysis, it is assumed that all construction worker trips are from light-duty autos (LDA) along area roadways. With respect to estimated VMT, the construction worker trips would generate an estimated 18,220,944 VMT. Data regarding Project-related construction worker trips were based on CalEEMod 2016.3.2

model defaults utilized within the Project's Air Quality Impact Analysis ("AQIA," *Technical Appendix B*). (Urban Crossroads, 2019e, p. 24)

Vehicle fuel efficiencies for LDA were estimated using information generated within the 2014 version of the Emissions FACtor model (EMFAC) developed by the CARB. EMFAC 2014 is a mathematical model that was developed to calculate emission rates, fuel consumption, and VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by CARB to project changes in future emissions from on-road mobile sources. EMFAC 2014 was run for the LDA vehicle class within the California sub-area for a 2025 calendar year. Data from EMFAC 2014 is shown in Appendix 3.3 to the Project's Energy Analysis (*Technical Appendix E*). (Urban Crossroads, 2019e, p. 24)

As generated by EMFAC 2014, an aggregated fuel economy of LDAs ranging from model year 1974 to model year 2025 is estimated to have a fuel efficiency of 34.99 miles per gallon (mpg). Table 4.5-6, *Construction Worker Fuel Consumption Estimates*, provides an estimated annual fuel consumption resulting from the Project generated by LDAs related to construction worker trips. Based on Table 4-4, it is estimated that 520,801 gallons of fuel will be consumed related to construction worker trips during full construction of the proposed Project. Project construction worker trips would represent a "single-event" gasoline fuel demand and would not require on-going or permanent commitment of fuel resources for this purpose. (Urban Crossroads, 2019e, p. 24)

Table 4.5-6 Construction Worker Fuel Consumption Estimates

Construction Activity	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Grading (180 days)	20	14.7	52,920	34.99	1,513
Building Construction (1,550 days)	664	14.7	15,129,240	34.99	432,432
Architectural Coating (1,490 days)	133	14.7	2,913,099	34.99	83,264
Grading (180 days)	20	14.7	52,920	34.99	1,513
Paving (330 days)	15	14.7	72,765	34.99	2,080
TOTAL CONSTRUCTION WORKER FUEL CONSUMPTION					***520,801***

(Urban Crossroads, 2019e, Table 4-4)

4. Construction Vendor/Hauling Fuel Estimates

With respect to estimated VMT, the construction vendor/hauling trips would generate an estimated 2,481,240 VMT along area roadways. It is assumed that 50% of all vendor trips are from medium-heavy duty trucks (MHD) and 50% are from heavy-heavy duty trucks (HHD). These assumptions are consistent with the 2016.3.2 CalEEMod defaults utilized within the Project's AQIA (*Technical Appendix B*). Vehicle fuel efficiencies for MHD and HHD trucks were estimated using information generated within EMFAC 2014. For purposes of this analysis, EMFAC 2014 was run for the MHD and HHD vehicle class within the California

sub-area for a 2025 calendar year. Data from EMFAC 2014 is shown in Appendix 3.3 of the Project's Energy Analysis (*Technical Appendix E*). (Urban Crossroads, 2019e, pp. 24-25)

As generated by EMFAC 2014, an aggregated fuel economy of MHD trucks ranging from model year 1974 to model year 2025 is estimated to have a fuel efficiency of 8.67 mpg. Additionally, HHD trucks are estimated to have a fuel efficiency of 6.29 mpg. Based on Table 4.5-7, *Construction Vendor Fuel Consumption Estimate (MHD Trucks)*, it is estimated that 143,023 gallons of fuel will be consumed related to construction vendor trips (medium-heavy duty [MHD] trucks) during full construction of the proposed Project. Table 4.5-8, *Construction Vendor/Hauling Fuel Consumption Estimates (HHD Trucks)*, shows the estimated fuel economy of HHD (heavy-heavy duty) trucks accessing the Project site. Based on Table 4.5-8, fuel consumption from construction vendor (heavy-duty trucks) will total approximately 197,269 gallons. The total fuel consumption from construction vendor and hauling trips (medium and heavy-duty trucks) is 340,292 gallons. Project construction vendor trips would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose. (Urban Crossroads, 2019e, p. 25)

Table 4.5-7 Construction Vendor Fuel Consumption Estimate (MHD Trucks)

Construction Activity	Vendor Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Vendor					
Building Construction (1,550 days)	116	6.9	1,240,620	8.67	143,023
				PROJECT MEDIUM DUTY TRUCK TOTAL	***143,023***

(Urban Crossroads, 2019e, Table 4-5)

Table 4.5-8 Construction Vendor/Hauling Fuel Consumption Estimates (HHD Trucks)

Construction Activity	Vendor Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Vendor					
Building Construction (1,550 days)	116	6.9	1,240,620	6.29	197,269
				PROJECT HEAVY DUTY TRUCK TOTAL	***197,269***

(Urban Crossroads, 2019e, Table 4-6)

5. Construction Energy Efficiency/Conservation Measures

The equipment used for Project construction would conform to CARB regulations and California emissions standards. There are no unusual Project characteristics or construction processes that would require the use of equipment that would be more energy-intensive than is used for comparable activities, or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the Project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel. (Urban Crossroads, 2019e, p. 26)

The Project would utilize construction contractors which practice compliance with applicable CARB regulation regarding retrofitting, repowering, or replacement of diesel off-road construction equipment.

Additionally, CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants. Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy and the minimization or elimination of wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption. (Urban Crossroads, 2019e, p. 26)

Additionally, certain incidental construction-source energy efficiencies would likely accrue through the implementation of California regulations and best available control measures (BACM). More specifically, California Code of Regulations Title 13, Motor Vehicles, section 2449(d)(3), *Idling*, limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. To this end, grading plans shall reference the requirement that a sign shall be posted on-site stating that construction workers need to shut off engines at or before five minutes of idling. In this manner, construction equipment operators are informed that engines are to be turned off at or prior to five minutes of idling. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints. (Urban Crossroads, 2019e, p. 26)

Indirectly, construction energy efficiencies and energy conservation would be achieved for the proposed development through energy efficiencies realized from bulk purchase, transport and use of construction materials. (Urban Crossroads, 2019e, p. 26)

A full analysis related to the energy needed to form construction materials is not included in this analysis due to a lack of detailed Project-specific information on construction materials. At this time, an analysis of the energy needed to create Project-related construction materials would be extremely speculative and thus has not been prepared. (Urban Crossroads, 2019e, p. 26)

In general, the construction processes promote conservation and efficient use of energy by reducing raw materials demands, with related reduction in energy demands associated with raw materials extraction, transportation, processing, and refinement. Use of materials in bulk reduces energy demands associated with preparation and transport of construction materials as well as the transport and disposal of construction waste and solid waste in general, with corollary reduced demands on area landfill capacities and energy consumed by waste transport and landfill operations. (Urban Crossroads, 2019e, pp. 26-27)

6. Conclusion – Construction-Related Energy Consumption

The estimated power cost of on-site electricity usage during the construction of the proposed Project is assumed to be around $600,740.80. Additionally, based on the assumed power cost, it is estimated that the total electricity usage during construction, after full Project build-out, is calculated to be around 6,511,731.73 kWh. (Urban Crossroads, 2019e, p. 29)

Construction equipment used by the Project would result in a single event consumption of approximately 510,724 gallons of diesel fuel. Construction equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the Project's proposed construction process that are unusual or energy-intensive, and Project construction equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies. (Urban Crossroads, 2019e, p. 29)

CCR Title 13, Title 13, Motor Vehicles, section 2449(d)(3), *Idling*, limits idling times of construction vehicles to no more than 5 minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Best available control measures inform construction equipment operators of this requirement. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints. (Urban Crossroads, 2019e, p. 29)

Construction worker trips for full construction of the proposed Project would result in the estimated fuel consumption of 520,801 gallons of fuel. Additionally, fuel consumption from construction vendor trips (medium and heavy-duty trucks) will total approximately 340,292 gallons. Diesel fuel would be supplied by City and regional commercial vendors. Indirectly, construction energy efficiencies and energy conservation would be achieved through the use of bulk purchases, transport and use of construction materials. The 2018 IEPR released by the California Energy Commission has shown that fuel efficiencies are getting better within on and off-road vehicle engines due to more stringent government requirements. (Urban Crossroads, 2019e, p. 29)

Based on the preceding analysis, the Project's construction activities would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Construction activities associated with the Project would not be more energy-intensive than other similar construction operations throughout the region, and the Project would be subject to applicable regulations designed to reduce energy consumption. Accordingly, the Project's impacts due to construction-related energy consumption would be less than significant. (Urban Crossroads, 2019e, p. 29)

B. Operational Energy Demands

Energy consumption in support of or related to Project operations would include transportation energy demands (energy consumed by employee and patron vehicles accessing the Project site) and facilities energy demands (energy consumed by building operations and site maintenance activities). Each is discussed below.

1. Transportation Energy Demands

Energy that would be consumed by Project-generated traffic is a function of total VMT and estimated vehicle fuel economies of vehicles accessing the Project site.

Light-Duty Autos

With respect to estimated VMT, and based on the trip frequency and trip length methodologies cited in the Project's AQIA, the Project would generate an estimated 51,488,317 annual VMT along area roadways for all light-duty autos (LDAs) with full build-out of the Project. As generated by EMFAC 2014, an aggregated fuel economy of LDAs ranging from model year 1974 to model year 2025 is estimated to have a fuel efficiency of 34.99 mpg. Table 4.5-9, *Project-Generated LDA Vehicle Traffic Annual Fuel Consumption*, provides an estimated range of annual fuel consumption resulting from Project-generated LDAs. Based on Table 4.5-9, it is estimated that 1,471,668 gallons of fuel will be consumed from Project-generated LDA trips. (Urban Crossroads, 2019e, p. 27)

Table 4.5-9 Project-Generated LDA Vehicle Traffic Annual Fuel Consumption

Annual Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
51,488,317	34.99	1,471,668

(Urban Crossroads, 2019e, Table 4-7)

2. Facility Energy Demands

Project building operations and Project site maintenance activities would result in the consumption of natural gas and electricity. Natural gas would be supplied to the Project by SoCalGas; electricity would be supplied to the Project by SCE. Annual natural gas and electricity demands of the Project are summarized in Table 4.5-10, *Project Annual Operational Energy Demand Summary*. (Urban Crossroads, 2019e, p. 27)

Table 4.5-10 Project Annual Operational Energy Demand Summary

Natural Gas Demand	kBTU/year
Single Family Detached Residential	32,462,500
Commercial	499,500
Community Center	324,900
Sports Park	0
TOTAL PROJECT NATURAL GAS DEMAND	***33,286,900***
Electricity Demand	**kWh/year**
Single Family Detached Residential	9,248,190
Commercial	2,841,750
Community Center	101,500
Sports Park	0
TOTAL PROJECT ELECTRICITY DEMAND	***12,191,440***

(Urban Crossroads, 2019e, Table 4-8)

Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building such as in plug-in appliances. In California, the California Building Standards Code Title 24 governs energy consumed by the built environment, mechanical systems, and some types of fixed lighting. Non-building energy use or "plug-in" energy use can be further subdivided by specific end-use (refrigeration, cooking, appliances, etc.). (Urban Crossroads, 2019e, p. 27)

3. Operational Energy Efficiency/Conservation Measures

Energy efficiency/energy conservation attributes of the Project would be complemented by increasingly stringent state and federal regulatory actions addressing vehicle fuel economies and vehicle emissions standards; and enhanced building/utilities energy efficiencies mandated under California building codes (e.g., Title24, California Green Building Standards Code). (Urban Crossroads, 2019e, p. 28)

It should also be noted that the Project would not result in a substantial increase in demand or transmission service, resulting in the need for new or expanded sources of energy supply or new or expanded energy delivery systems or infrastructure because it would be served by the existing electric utility lines in the Project vicinity. (Urban Crossroads, 2019e, p. 28)

Project annual fuel consumption estimates presented previously in Table 4.5-9 are based on the 80-month construction period and represent likely potential maximums that would occur for the Project. Under subsequent future conditions, average fuel economies of vehicles accessing the Project site can be expected to improve as older, less fuel-efficient vehicles are removed from circulation, and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system. (Urban Crossroads, 2019e, p. 28)

The Project site can be expected to improve as older, less fuel-efficient vehicles are removed from circulation, and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system. (Urban Crossroads, 2019e, p. 28)

4. Conclusion – Construction-Related Energy Consumption

Annual vehicular trips and related VMT generated by the operation of the Project would result in an estimated 1,471,668 gallons of fuel consumption per year for LDAs for the year 2025. Fuel would be provided by current and future commercial vendors. Trip generation and VMT generated by the Project are consistent with other residential, commercial, and recreational uses of similar scale and configuration, as reflected respectively in the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Ed., 2017), and CalEEMod. That is, the Project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips and VMT, nor associated excess and wasteful vehicle energy consumption. (Urban Crossroads, 2019e, p. 29)

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of LDAs to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands. The Project would implement sidewalks, facilitating and encouraging pedestrian access. Facilitating pedestrian and bicycle access would reduce VMT and associated energy consumption. In compliance with the California Green Building Standards Code, the Project would promote the use of bicycles as an alternative mean of transportation by providing short-term and/or long-term bicycle parking accommodations. As supported by the preceding discussions, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary. (Urban Crossroads, 2019e, p. 30)

Project facility operational energy demands are estimated at 33,286,900 kBTU/year of natural gas; and 12,191,400 kWh/year of electricity. Natural gas would be supplied to the Project by SoCalGas and electricity would be supplied by SCE. The Project proposes a conventional warehouse uses reflecting contemporary energy-efficient/energy conserving designs and operational programs. Uses proposed by the Project are not inherently energy-intensive, and the Project energy demands in total would be comparable to, or less than, other warehouse projects of similar scale and configuration. (Urban Crossroads, 2019e, p. 30)

Additionally, the Project would implement the following Project design features, which are either required by the Legado Specific Plan or would be enforced as CRDRs:

- Pedestrian connections would be constructed at selected roads within the Project, providing pedestrian access to the various uses and activity centers within the Project. Facilitating pedestrian access encourages people to walk instead of drive. The Project would not impose barriers to pedestrian access and interconnectivity. Furthermore, the mix of uses within the Specific Plan as proposed by the Project acts to reduce travel distances and regional vehicle miles traveled (VMT) by consolidating trips and reducing requirements for multiple trips. (Urban Crossroads, 2019e, p. 1)

- The Project will create local "light" vehicle networks, such as neighborhood electric vehicle (NEV) networks. NEVs offer an alternative to traditional vehicle trips and can legally be used on roadways with speed limits of 35 miles per hour (MPH) or less (unless specifically restricted). To create an NEV network, the Project will implement the necessary infrastructure, including NEV parking, charging facilities, striping, signage and educational tools. (Urban Crossroads, 2019e, pp. 1-2)

- As per information provided by the Project Applicant, the Project is required to comply with SCAQMD Rule 445, which prohibits the use of wood burning stoves and fireplaces in new development. (Urban Crossroads, 2019e, p. 2)

- Three electric vehicle charging stations will be provided. (Urban Crossroads, 2019e, p. 2)

- The Project Applicant is required to design and construct the roof of the buildings to accommodate maximally sized photovoltaic (PV) solar arrays taking into consideration limitations imposed by other rooftop equipment, roof warranties, building and fire code requirements, and other physical or legal limitations. The Applicant must develop each Project building with the necessary electrical system and other infrastructure to accommodate maximally sized PV arrays in the future. The electrical system and infrastructure must be clearly labeled with noticeable and permanent signage which informs future tenants/purchasers of the existence of this infrastructure. (Urban Crossroads, 2019e, p. 2)

Implementation of these Project design features combined with the required Title 24 standards would ensure that the Project energy demands would not be considered inefficient, wasteful, or otherwise unnecessary. (Urban Crossroads, 2019e, p. 30)

C. Conclusion

As supported by the preceding analyses, Project construction and operation would not result in the inefficient, wasteful or unnecessary consumption of energy. Further, the energy demands of the Project can be accommodated within the context of available resources and energy delivery systems. The Project would therefore not cause or result in the need for additional energy-producing or transmission facilities. The Project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservation goals within the State of California. Impacts would be less than significant.

Threshold b: ***Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?***

Applicable regulations and requirements, including plans for renewable energy and energy efficiency, are discussed above in subsection 4.5.2. A summary of the Project's consistency with the regulations and requirements listed in subsection 4.5.2 is provided below.

Federal Regulations

- **Project Consistency with the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA):** Transportation and access to the Project site is provided primarily by the local and regional roadway systems. The Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be realized pursuant to the ISTEA because SCAG is not planning for intermodal facilities on or through the Project site. (Urban Crossroads, 2019e, p. 28)

- **Project Consistency with the Transportation Equity Act for the 21st Century (TEA-21):** The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access, acts to reduce vehicle miles traveled, takes advantage of existing infrastructure systems, and promotes land use compatibilities through collocation of similar uses. The Project supports the strong planning processes emphasized under TEA-21. The Project is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of TEA-21. (Urban Crossroads, 2019e, p. 28)

California Regulations

- **Project Consistency with the Integrated Energy Policy Report**: Electricity would be provided to the Project by SCE. SCE's Clean Power and Electrification Pathway (CPEP) white paper builds on existing state programs and policies. As such, the Project is consistent with, and would not otherwise interfere with, nor obstruct implementation of the goals presented in the 2018 IEPR. (Urban Crossroads, 2019e, p. 28)

- **Project Consistency with the State of California Energy Plan**: The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access, acts to reduce vehicle miles traveled, takes advantage of existing infrastructure systems, and promotes land use compatibilities. The Project, therefore, supports urban design and planning processes identified under the State of California Energy Plan, is consistent with, and would not otherwise interfere with, nor obstruct implementation of the State of California Energy Plan. (Urban Crossroads, 2019e, p. 28)

- **Project Consistency with California Code Title 24, Part 6, Energy Efficiency Standards**: The 2016 version of Title 24 was adopted by the California Energy Commission (CEC) and became effective on January 1, 2017 and is applicable to the Project. Additionally, by the time the Project is constructed, the Project likely would be subject to the 2019 building energy efficiency standards, which incorporate more stringent requirements than the 2016 version. The Project would not conflict with the incumbent Title 24 standards, as these requirements would be enforced by the City as part of the City's future review of building permit applications. (Urban Crossroads, 2019e, p. 28)

Additionally, the Project would implement the following Project design features, which are either required by the Legado Specific Plan or would be enforced as CRDRs:

- Pedestrian connections would be constructed at selected roads within the Project, providing pedestrian access to the various uses and activity centers within the Project. Facilitating pedestrian access encourages people to walk instead of drive. The Project would not impose barriers to pedestrian access and interconnectivity. Furthermore, the mix of uses within the Specific Plan as proposed by the Project

acts to reduce travel distances and regional vehicle miles traveled (VMT) by consolidating trips and reducing requirements for multiple trips. (Urban Crossroads, 2019e, p. 1)

- The Project will create local "light" vehicle networks, such as neighborhood electric vehicle (NEV) networks. NEVs offer an alternative to traditional vehicle trips and can legally be used on roadways with speed limits of 35 miles per hour (MPH) or less (unless specifically restricted). To create an NEV network, the Project will implement the necessary infrastructure, including NEV parking, charging facilities, striping, signage, and educational tools. (Urban Crossroads, 2019e, pp. 1-2)

- As per information provided by the Project Applicant, the Project is required to comply with SCAQMD Rule 445, which prohibits the use of wood burning stoves and fireplaces in new development. (Urban Crossroads, 2019e, p. 2)

- Three electric vehicle charging stations will be provided. (Urban Crossroads, 2019e, p. 2)

- The Project Applicant is required to design and construct the roof of the buildings to accommodate maximally sized photovoltaic (PV) solar arrays taking into consideration limitations imposed by other rooftop equipment, roof warranties, building and fire code requirements, and other physical or legal limitations. The Applicant must develop each Project building with the necessary electrical system and other infrastructure to accommodate maximally sized PV arrays in the future. The electrical system and infrastructure must be clearly labeled with noticeable and permanent signage which informs future tenants/purchasers of the existence of this infrastructure. (Urban Crossroads, 2019e, p. 2)

The Project's compliance with the above-listed regulatory requirements, Project design features, and CRDRs would lessen the Project's energy usage. Further, the proposed Project is subject to California Building Code requirements. New buildings must achieve the 2019 Building and Energy Efficiency Standards and the 2019 California Green Building Standards requirements. The Project would provide for, and promote, energy efficiencies beyond those required under other applicable federal and State of California standards and regulations, and in so doing would meet or exceed all California Building Standards Code Title 24 standards. Moreover, energy consumed by the Project's operation is calculated to be comparable to, or less than, energy consumed by other residential, commercial, and recreational uses of similar scale and intensity that are constructed and operating in California. On this basis, the Project would not result in the inefficient, wasteful, or unnecessary consumption of energy, and would not conflict with or obstruct any State or local plans for energy efficiency. Impacts would be less than significant. (Urban Crossroads, 2019e, p. 32)

4.5.5 Cumulative Impact Analysis

As indicated under the analysis of Threshold a., there are no components of the proposed Project's construction or operational phases that would result in the wasteful, inefficient, or unnecessary consumption of energy resources. The Project proposes residential, commercial retail, and recreational land uses, and these uses are not associated with the intensive use of energy resources. Although it is possible other cumulative developments could result in the wasteful, inefficient, or unnecessary consumption of energy resources, the Project's projected energy demand during construction and long-term operations would be less-than-cumulatively considerable with mandatory compliance with applicable regulations.

As indicated under the analysis of Threshold b., the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. As such, the Project has no potential to result in cumulatively-considerable impacts due to a conflict with or obstruction of such plans.

4.5.6 Significance of Impacts Before Mitigation

Threshold a.: Less-than-Significant Impact. Project construction and operations would not result in the inefficient, wasteful, or unnecessary consumption of energy. Further, the energy demands of the Project can be accommodated within the context of available resources and energy delivery systems. The Project would therefore not cause or result in the need for additional energy-producing or transmission facilities. The Project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservation goals within the State of California. As such, Project impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation, would be less than significant requiring no mitigation.

Threshold b.: Less-than-Significant Impact. The Project would implement energy-saving features and operational measures as discussed above under the analysis of Threshold b. Notably, the Project would comply with the California Green Building Standards Code (CALGreen; CCR, Title 24, Part 11) as implemented by the City of Menifee. The Project would provide for, and promote, energy efficiencies beyond those required under other applicable federal and State of California standards and regulations, and in so doing would meet or exceed all California Building Standards Code Title 24 standards. Moreover, energy consumed by the Project's operation is calculated to be comparable to, or less than, energy consumed by other residential, commercial, or recreational uses of similar scale and intensity that are constructed and operating in California. On this basis, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would be less than significant.

4.5.7 City Regulations, Design Requirements, and Mitigation

Applicable City Regulations and Design Requirements

The following are applicable regulations and design requirements within the City of Menifee. Although these requirements technically do not meet CEQA's definition for mitigation, they are imposed herein to ensure Project compliance with applicable City regulations and design requirements.

CRDR 4.5-1 In order to demonstrate compliance with California Code of Regulations Title 13, Motor Vehicles, section 2449(d)(3), *Idling*, signage shall be posted on site restricting idling of construction equipment to a maximum of five (5) minutes. This requirement shall be noted on the Project's grading plans.

The following CRDRs from EIR Subsection 4.2, *Air Quality*, also shall apply and would reduce the Project's energy consumption: CRDR 4.2-5, CRDR 4.2-6, and CRDR 4.2-7.

Additionally, the following CRDRs from EIR Subsection 4.7, *Greenhous Gas Emissions*, shall apply and would serve to reduce the Project's energy consumption: CRDR 4.7-1 and CRDR 4.7-2. Additionally, all regulatory requirements noted in EIR Subsection 4.7, *Greenhouse Gas Emissions,* shall apply.

Mitigation

Impacts would be less than significant; therefore, mitigation measures are not required. Notwithstanding, the following mitigation measures from EIR Subsection 4.2, *Air Quality*, shall apply, and would serve to reduce the Project's energy consumption: Mitigation Measures MM 4.2-1, MM 4.2-2, and MM 4.2-3. Additionally, the following mitigation measures from EIR Subsection 4.7, *Greenhous Gas Emissions*, shall apply, and would serve to reduce the Project's energy consumption: Mitigation Measures MM 4.7-1, MM 4.7-2, MM 4.7-3, MM 4.7-4, and MM 4.7-5.

4.6 GEOLOGY AND SOILS

This subsection assesses the existing surface and subsurface geologic conditions and features of the Project site and determines the potential for impacts associated with these features. The analysis in this subsection is based, in part, on information from the report titled "Preliminary Geotechnical Evaluation for Proposed Approximately 331 Acre "Fleming Ranch" Development, City of Menifee, Riverside County, California" (LGC, 2017a) by LGC Geotechnical, Inc. (herein, LGC), dated March 16, 2017 (revised November 30, 2017); and the report titled "Geotechnical Discussion Regarding Site Hydro-Collapse Potential, Proposed Approximately 386 Acre 'Fleming Ranch' Development, City of Menifee, Riverside County, California" (LGC, 2017b) by LGC, dated April 10, 2017. These reports are included as *Technical Appendix F1* and *Technical Appendix F2* to this EIR, respectively. The analysis in this Subsection is also based on a Project-specific Paleontological Resource Assessment Report titled "Paleontological Resources Assessment Fleming Ranch Project City of Menifee, County of Riverside, CA" (dated July, 2017). The report was prepared by LSA Associates, Inc. (LSA) and is included as *Technical Appendix F3* to this EIR.

4.6.1 EXISTING CONDITIONS

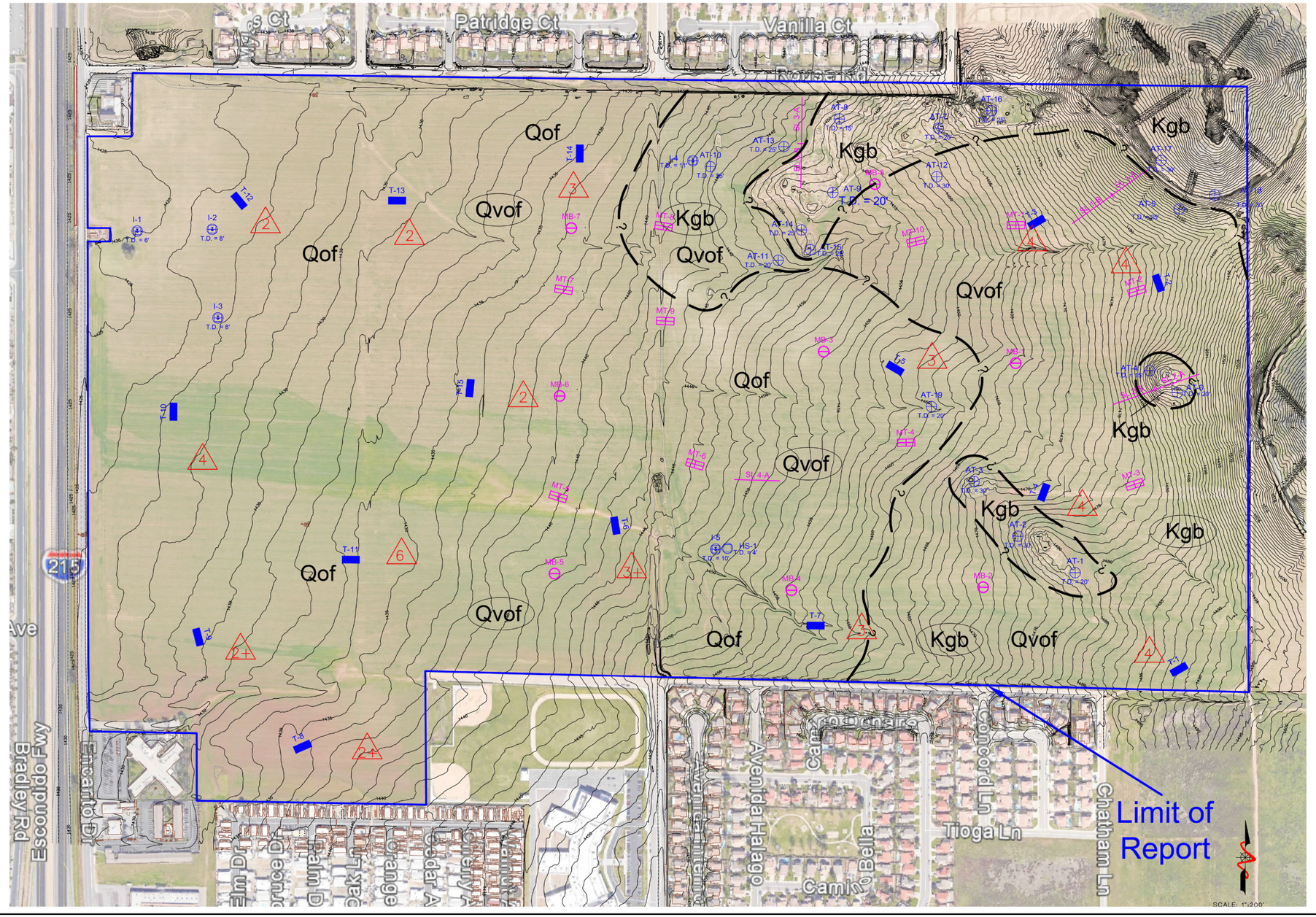
A. Regional Geology

The Project site is generally located in the west-central portion of the broad San Bernardino Basin. The San Bernardino Basin is bound to the north by the San Gabriel Mountains and to the west by the Santa Ana Mountains. Regional topography is dominated by the presence of the northwest-trending faults that define the mountains and hills of the southern California region. Structurally, the site is located on the west-central portion of the Perris block of the northern Peninsular Ranges of southern California. The Perris block is bound by the Elsinore Fault Zone to the west and the San Jacinto Fault Zone to the east. Despite the surrounding proximal fault systems, the low relief of the Perris block has remained near unchanged and undeformed for hundreds of thousands of years. (LGC, 2017a, p. 6)

B. Site Geologic Units

LGC reviewed published geologic literature related to the Project site, previous geotechnical investigations conducted for the Project site, and conducted a site investigation that consisted of geological mapping across the site. In addition, LGC conducted a review of current and historical aerial photographs of the Project site and adjacent areas, and advancements, cataloging, and sampling of 15 backhoe test pits and six exploratory hollow-stem borings. (LGC, 2017a, pp. 2-4)

The primary geologic units underlying the Project site are shown in Figure 4.6-1, *Geologic Map*. As shown in Figure 4.6-1, geologic units underlying the Project site include Quaternary old alluvial fan deposits, Quaternary very old alluvial fan deposits, Cretaceous gabbro metasedimentary rock, and Mesozoic metasedimentary rock (undifferentiated rock formations). The old and very old alluvial fan deposits consist of a well-indurated brownish coarse-grained conglomerate to sandy alluvium. Cretaceous gabbro is derived from Peninsular Ranges granitic batholith and likely intruded Mesozoic metasedimentary and metavolcanic rocks. The coarse-grained hornblende gabbro and hornblende-biotite granodiorite to tonalite (aka, "granitic rock") are exposed as weathered surficial boulders. It has been theorized that the granitic rock has isolated zones of much harder material than the weathered upper surface of the rock. Termed "corestones," they may be the hardened result of locally metamorphosed (via heat and pressure) granitic rock. (LGC, 2017a, p. 6)



LEGEND

- Qof — Quaternary Old Fan Deposits, Circled Where Buried
- Qvof — Quaternary Very Old Fan Deposits, Circled Where Buried
- Kgb — Cretaceous Gabbro (Rock), Circled Where Buried
- HS-1, T.D. = 4' — Hollow Stem Location by LGC Geotechnical
- I-5, T.D. = 10' — Infiltration Test Location by LGC Geotechnical
- T-7 — Backhoe Trench Location by LGC Geotechnical
- AT-19, T.D. = 20' — Airtrack Location by LGC Geotechnical
- MB-8 — Hollow Stem Boring Location Performed by Others
- MT-10 — Trench Location Performed by Others
- SL 3-B — Seismic Line Performed by Others
- Approximate Location of Geologic Contact, Dotted Where Buried, Queried Where Uncertain
- 4 — Approximate Depth of Estimated Remedial Removals, in Feet

Source(s): LGC Geologic (March 2017)

NOT TO SCALE

Figure 4.6-1

GEOLOGIC MAP

The field explorations conducted by LGC indicate the Project site is primarily underlain by stiff to very stiff soil horizons consisting of sandy clay to silt layers, and dense silty sand layers underlain by bedrock and/or older alluvial fan deposits. The "older" soils cap the shallow bedrock that underlies the northeastern portion of the Project site. The granitic bedrock forms the rocky hills at the northeastern portion of the Project site and becomes gradually deeper going west. The thickening westward wedge of older soils was observed to be locally incised by very old drainage pathways. There is potential that the current drainage pattern obscures the older incised drainage areas. (LGC, 2017a, p. 6)

C. *Site Topography*

Under existing conditions, the Project site is characterized by relatively level terrain, with elevations ranged from 1,654 feet above main sea level (amsl) along the knoll in the northeast corner of the site to 1,431 feet amsl near the western Project boundary. Please refer to EIR Figure 2-3 in Section 2.0, *Environmental Setting*, which depicts the Project site's existing topographic conditions. (Google Earth, 2016)

D. *Groundwater*

Groundwater was not encountered during LGC's subsurface evaluation, which had a maximum depth of approximately 11 feet below the existing ground surface. Previously groundwater was encountered at the Project site from 17 feet to 30 feet below existing grade during a geotechnical investigation conducted in 2005. The subsurface water was interpreted as perched or local groundwater derived from seasonal precipitation. LGC does not expect significant groundwater to be encountered during earthwork grading. (LGC, 2017a, p. 7)

Seasonal fluctuations of groundwater elevations should be expected over time. In general, groundwater levels fluctuate with the seasons and local zones of perched groundwater may be present due to local seepage caused by irrigation and/or recent precipitation. Local perched groundwater conditions or surface seepage may develop once Project development is completed. (LGC, 2017a, p. 7)

E. *Rippability*

Rippability is the ease with which soil or rock can be mechanically excavated. The rippability of the crystalline bedrock at the eastern portion of the Project site was characterized on-site by excavating air track borings. The locations of borings are presented on Figure 4.6-1. Based on frequently used guidelines to equate rock rippability to drill penetration rate (i.e., 0 to 20 seconds per foot [spf] generally indicates rippable material), 20 to 30 spf indicates marginally to nonrippable material, and greater than 30 spf indicates non-rippable rock. The majority of the near-surface bedrock is considered rippable to marginally rippable. Occasionally, corestones were encountered during the evaluation and appeared to be several feet in diameter. However, they are known in this area to sometimes be larger. Seismic line surveys indicated scattered large corestones are present at variable depths. Corestones are generally irreducible by conventional earthwork equipment and will require removal, extra handling, and/or splitting. (LGC, 2017a, p. 7)

Based on the site exploration and research conducted by LGC, it is anticipated that near-surface bedrock and alluvium encountered near the surface would be readily excavatable with conventional earthwork equipment utilizing 'standard-to-heavy ripping" techniques. In localized areas that expose bedrock corestones, "heavy ripping" techniques and/or splitting may be required. (LGC, 2017a, p. 7)

F. Faulting

The Project site is located in southern California, which is a tectonically active area. The Project site is not located within an Alquist-Priolo Earthquake Fault Zone and no faults were identified on-site during the site evaluation. The possibility of damage due to ground rupture is considered low since no active faults are known to cross the Project site. The closest active fault is the Temecula segment of the Elsinore Fault Zone which is an active right-lateral strike-slip fault located approximately 8.9 miles southwest of the Project site. Some additional major active nearby faults that could produce these secondary effects include the Cucamonga, Elsinore, San Jacinto, and San Andreas Fault Zones. (LGC, 2017a, pp. 8-9)

G. Seismic Hazards

The Project site is located in southern California, which is a tectonically active area. The type and magnitude of seismic hazards affecting a site are dependent upon the distance to the causative fault and the intensity and magnitude of the seismic event. The seismic hazard may be primary, such as surface rupture and/or ground shaking, or secondary, such as liquefaction and/or ground lurching. The State of California has mandated by the Alquist-Priolo Earthquake Fault Zoning Act to delineate Fault-Rupture Hazard Zones in California and by the Urban Seismic Hazards Mapping Act to delineate zones identified as being potentially susceptible to the secondary seismic hazards of liquefaction and earthquake-induced landslide. The Project site is not located in either of these special studies zones. Provided below is a discussion of the Project site's susceptibility to seismic hazards. (LGC, 2017a, p. 9)

1. Ground Shaking

Strong ground shaking could be expected at the site during moderate to severe earthquakes in the Project site's general region. This is common to virtually all of southern California. The intensity of ground shaking at a given location depends primarily upon earthquake magnitude, site distance from the source, and site response (soil type) characteristics. (LGC, 2017a, p. 10)

2. Surface Fault Rupture

Surface rupture is a break in the ground surface during, or as a consequence of, seismic activity. Fault rupture occurs most often along pre-existing fault traces. No faults have been mapped on-site, nor in the immediate site vicinity. Accordingly, the potential for surface rupture is low. (LGC, 2017a, p. 10)

3. Seismicity

The Project site is within the tectonically active southern California area and is approximately 8.9 miles from the Temecula segment of the active Elsinore fault zone. The potential exists for strong ground motion that may affect future improvements on-site. Non-critical structures (commercial, residential, and industrial) are usually designed according to the California Building Code (CBC) (2016) and that of the controlling local agency. However, liquefaction/seismic slope stability analyses, critical structures, water tanks, and unusual structural designs would likely require site-specific ground motion input.

4. 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 coexist: 1) shallow groundwater; 2) low-density non-cohesive (granular) soils, and 3) 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, depending on their plasticity or Liquid Limit compared to in-situ moisture content. Effects of liquefaction on level ground include settlement, sand boils, and bearing capacity failures below structures. Dynamic settlement of dry loose sands can occur as the sand particles tend to settle and densify as a result of a seismic event. (LGC, 2017a, p. 9)

The Project site is not located within a mapped zone for liquefaction potential. Liquefaction analysis was performed on the 50-foot borings B-4 and B-5 performed during a previous technical investigation based on the seismic criteria of the 2016 CBC and high groundwater depth. Due to the dense to very dense nature of soils, Project soils are not considered susceptible to liquefaction, including the silt layer encountered in boring B-4 at 30 and 35 feet. For more information on the liquefaction analysis performed for the Project, please refer to Appendix D of *Technical Appendix F1* to this EIR. (LGC, 2017a, p. 9)

5. Lateral Spreading

Lateral spreading is a type of liquefaction-induced ground failure associated with the lateral displacement of surficial blocks of sediment resulting from liquefaction in a subsurface layer. Once liquefaction transforms the subsurface layer into a fluid mass, gravity plus the earthquake inertial forces may cause the mass to move downslope towards a free face (such as a river channel or an embankment). Lateral spreading may cause large horizontal displacements and such movement typically damages pipelines, utilities, bridges, and structures. Due to the very low potential for liquefaction, the potential for lateral spreading is considered very low. (LGC, 2017a, p. 10)

H. Soils

1. Erosion Potential

Erosion is the process by which the upper layers of the surface (such as soils) are worn and removed by the movement of water or wind. Soils with characteristics such as low permeability and/or low cohesive strength are more susceptible to erosion than those soils having higher permeability and cohesive strength. Additionally, the slope gradient on which a given soil is located also contributes to the soil's resistance to erosive forces. Because water is able to flow faster down steeper gradients, the steeper the slope on which a given soil is located, the more readily it will erode.

Wind erosion can damage land and natural vegetation by removing soil from one place and depositing it in another. Wind erosion mostly affects dry, sandy soils in flat, bare areas, but it may occur wherever soil is loose, dry, and finely granulated. Under existing conditions, the Project site has the potential to contribute windblown or water-borne soil and sand because the Project site is undeveloped and portions of the Project site contain limited vegetative cover. As shown in Table 4.6-1, *Summary of Project Area Soils,* 56.5% of the Project site has a "slight" erosion susceptibility, 3.8% of the Project site has a "slight to moderate" erosion susceptibility, 35.9% of the Project site has a "moderate" erosion susceptibility, and 3.9% of the Project site has a "high" erosion susceptibility. High susceptibility areas occur in the northeastern corner of the Project site, including the knoll with the remaining areas comprising slight to moderate soil erosion susceptibility.

2. Expansive Soils

Expansive soils are soils that exhibit cyclic shrink and swell patterns in response to variations in moisture content. Based on expansion index testing of soil samples taken from the Project site, the site's soils range from a soil expansion potential of very low to low expansion potential, with potentially localized areas of medium expansion potential, as defined by the 2016 CBC, Section 1803.5.3. (LGC, 2017a, p. 11)

Table 4.6-1 Summary of Project Area Soils

Map Unit Symbol	Map Unit Name	Rate of Runoff	Erosion Susceptibility	Acres in AOI	Percent of AOI
YbC	Yokohl loam, 2 to 8 percent slopes	Medium	Slight	160.5	48.50%
PlB	Placentia fine sandy loam, 0 to 5 percent slopes	Medium	Moderate	69.7	21.10%
BkC2	Buchenau silt loam, 2 to 8 percent slopes, eroded	Medium	Moderate	28.5	8.60%
PoC	Porterville clay, 0 to 8 percent slopes	Slow	Slight	18.9	5.70%
MaB2	Madera fine sandy loam, 2 to 5 percent slopes, eroded	Medium	Moderate	12.0	3.60%
LaC2	Las Posas loam, 5 to 8 percent slopes, eroded	Rapid	High	7.1	2.20%
MaA	Madera fine sandy loam, 0 to 2 percent slopes	Slow	Slight	7.1	2.10%
CaC2	Cajalco fine sandy loam, 2 to 8 percent slopes, eroded	Slow to Medium	Slight to Moderate	6.1	1.80%
CkF2	Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded	Rapid	High	5.6	1.70%
EnC2	Exeter sandy loam, 2 to 8 percent slopes, eroded	Medium	Moderate	4.9	1.50%
LaC	Las Posas loam, 2 to 8 percent slopes	Medium	Slight to Moderate	3.5	1.10%
CbD2	Cajalco rocky fine sandy loam, 5 to 15 percent slopes, eroded	Slow to Medium	Slight to Moderate	3.0	0.90%
AkD	Arbuckle loam, 8 to 15 percent slopes	Medium	Moderate	2.2	0.70%
CaD2	Cajalco fine sandy loam, 8 to 15 percent slopes, eroded	Medium	Moderate	1.3	0.40%
FfC2	Fallbrook fine sandy loam, 2 to 8 percent slopes, eroded	Slow	Slight	0.7	0.20%
Total:		--	--	**331.0**	**100.00%**

AOI = Area of Interest (i.e., the 331.0-acre Project site).
(NRCS, n.d.)

3. Corrosivity

Corrosion is the gradual destruction of materials (usually metals) by chemical and/or electrochemical reaction with their environment. Corrosivity is a measure of how aggressive a material (in this case soil) is at corroding concrete and metal facilities. A soil with high corrosivity may cause corrosion of buried concrete and metal facilities. Corrosion testing of a near-surface bulk soil sample on the Project site indicated that the soils on the Project site exhibit very low indicators of corrosivity. (LGC, 2017a, p. 24)

4. Soil Types

Review of readily available published geologic literature found that the Project site contains 15 surface soil types, each of which is described below, summarized in Table 4.6-1, and shown graphically in Figure 4.6-2, *Soils Map*. (NRCS, n.d.; USDA, 1971)

❑ Yokohl Loam (two to eight percent slopes)

Yokohl loam (two to eight percent slopes) consists of well-drained soil on old alluvial fans and terraces. This soil is used for dryland grain and pasture and, if irrigated, for citrus farming. The Yokohl loam soil has a reddish-brown loam surface layer about 10 inches thick. The subsoil is reddish-brown and dark-brown clay about 16 inches thick. At a depth of about 26 inches is a hardpan of reddish-yellow coarse sand. Yokohl loam (two to eight percent slopes) is present across approximately 160.5 acres which encompasses 48.5% of the Project site. The yokohl loam is found mostly across the southeastern area of the Project site east of Sherman Road and is also present in the central portion of the Project site west of Sherman Road. (NRCS, n.d.; USDA, 1971, p. 69)

❑ Placentia Fine Sandy Loam (zero to five percent slopes)

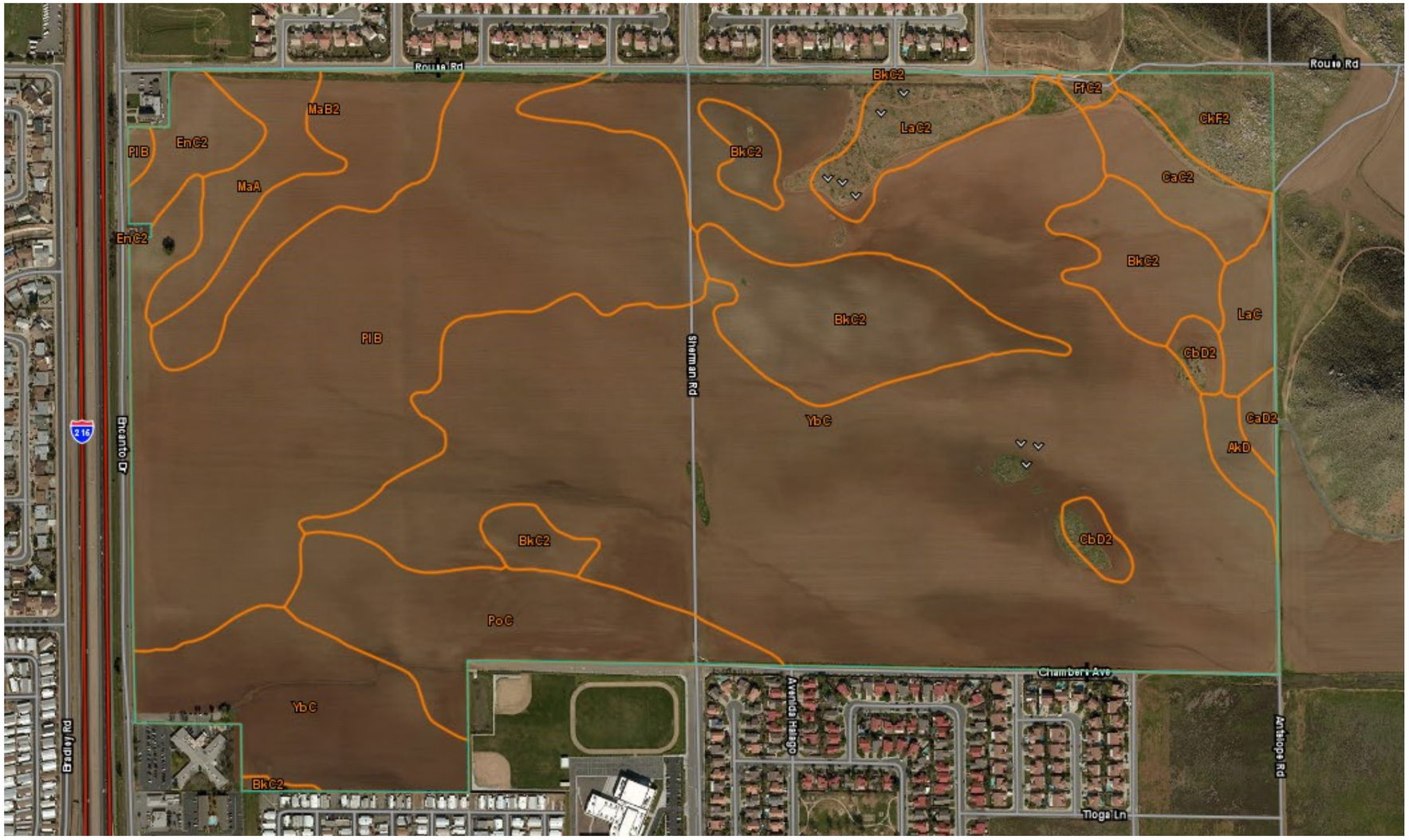
Placentia fine sandy loam (zero to five percent slopes) consists of moderately well-drained soil on alluvial fans and terraces. Placentia soils are used for dryland pasture and grain, for irrigated permanent pasture, and for non-farm purposes. Placentia soils have a brown and pale-brown fine sandy loam surface layer about 18 inches thick. The upper subsoil is brown heavy clay loam about 21 inches thick. The lower subsoil is brown sandy clay loam about 18 inches thick. The substratum is stratified sandy, gravelly, or cobbly alluvium of granitic origin. Placentia fine sandy loam (zero to five percent slopes) is present across approximately 69.7 acres of the 331.0-acre Project site which encompasses 21.10% of the Project site. The Placentia fine sandy loam is located in the area of the Project site west of Sherman Road. (NRCS, n.d.; USDA, 1971, p. 51)

❑ Buchenau Silt Loam (two to eight percent slopes)

Buchenau silt loam (two to eight percent slopes) consists of moderately-well-drained soil on alluvial fans. This soil developed in mixed alluvium and is underlain by a platy, calcareous hardpan. The Buchenau silt loam soil is used for dryland pasture, range grain, and for non-farm purposes. The Buchenau silt loam soil has a brown loam surface layer that is about 10 inches thick. The subsoil is yellowish-brown, brown, and pale-brown silt loam about 29 inches thick. The substratum is light brownish-gray loam, which overlies a cemented, platy hardpan at a depth of about 52 inches. Buchenau silt loam (two to eight percent slopes) is present across approximately 28.5 acres of the Project site and encompasses 8.6% of the site. The Buchenau silt loam is mostly located in areas west of Sherman Road, with a small area located in the central portion of the site west of Sherman Road. (NRCS, n.d.; USDA, 1971, p. 18)

LEGEND

Soil Unit Symbol	Soil Unit Name
YbC	Yokohl loam, 2 to 8 percent slopes
PlB	Placentia fine sandy loam, 0 to 5 percent slopes
BkC2	Buchenau silt loam, 2 to 8 percent slopes, eroded
PoC	Porterville clay, 0 to 8 percent slopes
MaB2	Madera fine sandy loam, 2 to 5 percent slopes, eroded
LaC2	Las Posas loam, 5 to 8 percent slopes, eroded
MaA	Madera fine sandy loam, 0 to 2 percent slopes
CaC2	Cajalco fine sandy loam, 2 to 8 percent slopes, eroded
CkF2	Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded
EnC2	Exeter sandy loam, 2 to 8 percent slopes, eroded
LaC	Las Posas loam, 2 to 8 percent slopes
CbD2	Cajalco rocky fine sandy loam, 5 to 15 percent slopes, eroded
AkD	Arbuckle loam, 8 to 15 percent slopes
CaD2	Cajalco rocky fine sandy loam, 8 to 15 percent slopes, eroded
FfC2	Fallbrook fine sandy loam, 2 to 8 percent slopes, eroded



Source(s): National Resources Conservation Service

NOT TO SCALE

Figure 4.6-2

SOILS MAP

❑ Porterville Clay (zero to eight percent slopes)

Porterville clay (zero to eight percent slopes) consists of well-drained soil on alluvial fans. This soil is used for dryland grain and pasture, for irrigated citrus, and for non-farm purposes. In a typical profile, the surface layer is dark reddish-brown clay about 15 inches thick. The next layer is reddish-brown clay about 10 inches thick. Underlying this, to a depth of several feet, is brown and yellowish-red clay. Porterville clay (zero to eight percent slopes) is present across approximately 18.9 acres of the Project site and encompasses approximately 5.7% of the site. The Porterville clay on the Project site is located within the southern area of the Project site. (NRCS, n.d.; USDA, 1971, p. 52)

❑ Madera Fine Sandy Loam (two to five percent slopes, eroded)

Madera fine sandy loam (two to five percent slopes, eroded) consists of moderately-well-drained soil on dissected terraces and old alluvial fans. This soil is used for dryland grain and pasture, and for homesites. Madera fine sandy loam has a surface layer that is yellowish-brown fine sandy loam between six to 12 inches thick. The subsoil is yellowish-brown clay. At a depth of about 26 inches is a yellowish-brown indurated hardpan. Madera fine sandy loam (two to five percent slopes, eroded) is present across approximately 12.0 acres of the Project site, which encompasses 3.60% of the site. The area of Madera fine sandy loam is located in the northwestern portion of the Project site. (NRCS, n.d.; USDA, 1971, p. 44)

❑ Las Posas Loam (five to eight percent slopes, eroded)

Las Posas loam (five to eight percent slopes, eroded) consists of well-drained soil developed on gabbro and other intrusive basic igneous rocks and is located on uplands. This soil is used for irrigated citrus and truck crops, and for dryland grain and pasture. Typically, the surface layer is reddish-brown loam and clay loam about 12 inches thick. The subsoil is dark-red clay and red heavy clay loam. At a depth of about 18-30 inches is yellowish-red weathered gabbro. Las Posas loam (five to eight percent slopes, eroded) is present across 7.1 acres of the Project site, which encompasses 2.20% of the site. The area of Las Posas loam is located in the northeastern area of the Project site. (NRCS, n.d.; USDA, 1971, pp. 42-43)

❑ Madera Fine Sandy Loam (zero to two percent slopes)

Madera fine sandy loam (zero to two percent slopes) consists of moderately-well-drained soil on old alluvial fans. This soil is used for dryland grain and pasture, for irrigated sugar beets and alfalfa, and for homesites. Madera fine sandy loam soil's 'A' horizon is pale brown to dark yellowish-brown in color. The 'Bt' horizon is yellowish-brown to dark brown. The indurated 'Cm' horizon is moderately to strongly alkaline, strongly effervescent in seams, and yellowish-brown to reddish-brown. Depth to the hardpan ranges from 18 to 36 inches. Silicates are the principal cementing agent, with lime in the seams. Madera fine sandy loam (zero to two percent slopes) is present across 7.1 acres of the Project site, which encompasses 2.10% of the site. The area of Madera fine sandy loam is located in the northwestern portion of the Project site. (NRCS, n.d.; USDA, 1971, p. 44)

❑ Cajalco Fine Sandy Loam (two to eight percent slopes, eroded)

Cajalco fine sandy loam (two to eight percent slopes, eroded) consists of well-drained soil developed in decomposing gabbro and other basic igneous rocks with rock outcrops occurring in some areas. This soil is used for dryland grain, pasture, and range, for irrigated citrus, and for non-farm purposes. The surface layer of Cajalco fine sandy loam is yellowish-brown fine sandy loam about 10 inches thick. The subsoil is brown fine sandy loam and loam. It grades to light yellowish-brown loam at a depth of about 18 inches. At a depth of about 30-36 inches is weathered gabbro. Cajalco fine sandy loam (two to eight percent slopes, eroded) is

present across 6.1 acres of the Project site, which encompasses 1.80% of the site. The area of Cajalco fine sandy loam is located in the northeastern area of the Project site. (NRCS, n.d.; USDA, 1971, p. 21)

❑ Cieneba Rocky Sandy Loam (15 to 50 percent slopes, eroded)

Cieneba rocky sandy loam (15 to 50 percent slopes, eroded) consists of somewhat excessively drained soil on uplands, and is a very hilly to very steep soil. Rock outcrops occupy two to 10 percent of the surface. This soil is used for range. The 'A' horizon is sandy loam to fine sandy loam. The 'Cl' horizon is light yellowish-brown to reddish-brown loamy sand to gravelly coarse sand. The 'C2' horizon is weathered granodiorite that has moderately thick clay films and thin coatings of silica in fractured planes. Depth to the granodiorite commonly ranges from 10 to 22 inches. Bedrock crops out in some places. Cieneba rocky sandy loam (15 to 50 percent slopes, eroded) is present across 5.6 acres of the Project site, which encompasses 1.70% of the site. The area of Cieneba rocky sandy loam is located in the northeastern corner of the Project site and encompasses the small knoll present in the northeastern corner of the Project site. (NRCS, n.d.; USDA, 1971, pp. 23-24)

❑ Exeter Sandy Loam (two to eight percent slopes, eroded)

Exeter sandy loam (two to eight percent slopes, eroded) consists of well-drained soil that lies in basins and on alluvial fans. Erosion on this soil is indicated by a 12- to 15-inch drop of irrigation pipelines across fields, by washing or deposition in dead furrows, by short gullies cut through the edges of fields, and by rills formed in summer-fallow fields after a rain. Deposition occurs in natural drains where the slope decreases. This soil is used for irrigated alfalfa, potatoes, and truck crops, for dryland pasture and grain, and for homesites. The surface layer is brown sandy loam about 16 inches thick. The subsoil is brown heavy loam. At a depth of about 37 inches is an indurated silica hardpan. The cementation of the hardpan decreases with depth. Exeter sandy loam (two to eight percent slopes, eroded) is present across 4.9 acres of the Project site, which encompasses 1.50% of the site. The Exeter sandy loam found on the Project site is located in the northwestern corner of the Project site. (NRCS, n.d.; USDA, 1971, pp. 30-31)

❑ Las Posas Loam (two to eight percept slopes)

Las Posas loam (two to eight percent slopes) consists of well-drained soil developed on gabbro and other intrusive basic igneous rocks and is located on uplands. This soil is used for irrigated citrus and truck crops and for dryland grain and pasture. Typically, the surface layer is reddish-brown loam and clay loam about 12 inches thick. The subsoil is dark-red clay and red heavy clay loam. At a depth of about 18-30 inches is yellowish-red weathered gabbro, with a few small areas that are 45-60 inches deep to weathered gabbro. Las Posas loam (two to eight percent slopes) is present across 3.5 acres of the Project site, which encompasses 1.10% of the site. The Las Posas loam found on the Project site is located along the Project's eastern boundary. (NRCS, n.d.; USDA, 1971, pp. 42-43)

❑ Cajalco Rocky Fine Sandy Loam (five to 15 percent slopes, eroded)

Cajalco fine sandy loam (five to 15 percent slopes, eroded) consists of well-drained soil developed in decomposing gabbro and other basic igneous rocks with rock outcrops occurring in some areas. Rock outcrops cover 2 to 10 percent of the surface. This soil is used for dryland pasture and range, for irrigated citrus, and for non-farm purposes. The surface layer is yellowish-brown fine sandy loam about 10 inches thick. The subsoil is brown fine sandy loam and loam. It grades to light yellowish-brown loam at a depth of about 18 inches. At a depth of about 18-24 inches is weathered gabbro. Cajalco rocky fine sandy loam (five to 15 percent slopes, eroded) is present across approximately 3.0 acres of the Project site, which encompasses 0.90% of the site. The Cajalco rocky fine sandy loam is located in a small area in the southeastern portion of the Project site, and is surrounded by Yokohl loam. (NRCS, n.d.; USDA, 1971, pp. 21-22)

❑ **Arbuckle Loam (eight to 15 percent slopes)**

Arbuckle loam (eight to 15 percent slopes) consists of well-drained soil, and occurs on alluvial fans and developed in alluvium from metasedimentary rocks. This soil is used for irrigated citrus and grain and for dryland pasture and range. In a typical profile, the surface layer is brown loam and pale-brown very fine sandy loam about 12 inches thick. The subsoil is brown loam and clay loam, and it extends to a depth of about 45 inches. The substratum is yellowish-brown very sandy loam. Arbuckle loam (eight to 15 percent slopes) is present across approximately 2.2 acres of the Project site, which encompasses 0.07% of the site. The Arbuckle loam is located along the Project's eastern boundary. (NRCS, n.d.; USDA, 1971, pp. 12-13)

❑ **Cajalco Fine Sandy Loam (eight to 15 percent slopes, eroded)**

Cajalco fine sandy loam (eight to 15 percent slopes, eroded) consists of well-drained soil developed in decomposing gabbro and other basic igneous rocks and occurs on uplands. Rock outcrops occur in some areas of this soil type. This soil is used for dryland pasture, grain, and range, for irrigated citrus, and for non-farm purposes. The 'A' horizon is yellowish-brown to dark-brown fine sandy loam to loam. The 'B' horizon ls brown to reddish-brown or yellowish-brown fine sandy loam or loam to clay loam. The 'C' horizon is mildly alkaline to slightly acid, light-gray to dark-brown, weathered gabbro. Seams and pockets of calcium carbonate are present. The depth to the weathered gabbro ranges from 18 to 46 inches. Cajalco fine sandy loam (eight to 15 percent slopes, eroded) is present across approximately 1.3 acres of the Project site, which encompasses 0.40% of the site. The Cajalco fine sandy loam is located along the Project's eastern boundary. (NRCS, n.d.; USDA, 1971, pp. 21-22)

❑ **Fallbrook Fine Sandy Loam (two to eight percent slopes, eroded)**

Fallbrook fine sandy loam (two to eight percent slopes, eroded) consists of well-drained soil that lies on uplands. This soil is used for dryland grain and pasture, for irrigated citrus and alfalfa, and for homesites. In a typical profile, the surface layer is fine sandy loam about 14 inches thick. The subsoil is reddish-brown sandy clay loam. At a depth of about 24 inches is weathered tonalite. Fallbrook fine sandy loam (two to eight percent slopes, eroded) is present across approximately 1.3 acres of the Project site, which encompasses 0.20% of the site. The Fallbrook fine sandy loam is located in the northeastern portion of the Project site. (NRCS, n.d.; USDA, 1971, pp. 32-33)

I. Paleontological Resources

1. Paleontological Setting

The Project area is located at the northern end of the northwest-southeast trending Peninsular Ranges Geomorphic Province, which extends from the Transverse Ranges north of the City of Los Angeles to the tip of Baja California and from the Channel Islands (i.e. Santa Barbara, San Nicolas, Santa Catalina, and San Clemente) in the west, east to the Colorado desert. The topography of this area can be described as mountains and valleys that roughly parallel the San Andreas Fault Zone. The Project area is located on the Perris Block, a structural block that is bound to the northeast by the San Jacinto Fault and to the southwest by the Elsinore Fault that extends from the southern reaches of the San Gabriel and San Bernardino Mountains to the southeast to Bachelor Mountain and Polly Butte. The geology of this region contains extensive pre-Cenozoic (more than 66 million years ago [Ma]) igneous and metamorphic rock covered by Cenozoic (less than 66 Ma) sedimentary deposits. (LSA, 2017, p. 10)

The majority of the Project area consists of late to middle Pleistocene (11,700-781,000 years ago) Old Alluvial Fan Deposits and middle to early Pleistocene (126,000 years ago-2.588 Ma) Very Old Alluvial Fan Deposits.

Small portions of the eastern half of the Project area also have rocks of the Peninsular Ranges Batholith, including Cretaceous (66.0–145.0 Ma) Granodiorite to Tonalite of the Domenigoni Valley Pluton, Cretaceous Gabbro, and Mesozoic (66.0–251.902 Ma) Intermixed Mesozoic Schist and Cretaceous Granitic Rocks. The geology of the Project area is described in detail below, and the locations of each geologic unit are graphically depicted in Figure 4.6-1. Dates for the geologic periods and epochs referenced below are derived from the International Chronostratigraphic Chart published by the International Commission on Stratigraphy. (LSA, 2017, p. 10)

- Old Alluvial Fan Deposits: Old Alluvial Fan Deposits accumulated during the late to middle Pleistocene (11,700-781,000 years ago) and consist of moderately consolidated, reddish-brown sand and gravel. These deposits show slight to moderate dissection by erosional gullies and may be capped by moderately to well-developed soils. These deposits eroded from higher elevations, carried by flooded streams and debris flows, and deposited in a fan or lope shape at the base of the hills and across the valleys. These deposits span the latest two North American Land Mammal Ages (NALMAs): the Rancholabrean (11,000–240,000 years ago) and the Irvingtonian (240,000 years ago–1.8 Ma). Fossils have been retrieved in similar Rancholabrean and Irvingtonian deposits from excavations for roads, real estate developments, and quarries, as well as scientific investigations within the Southern California area. Those fossils include mammoths, mastodons, horses, bison, camels, saber-toothed cats, coyotes, deer, and sloths, as well as smaller animals like rodents, rabbits, birds, reptiles, and fish. As such, these deposits are considered to have high paleontological sensitivity. (LSA, 2017, pp. 10, 12)

- Very Old Alluvial Fan Deposits: Very Old Alluvial Fan Deposits accumulated during the middle to early Pleistocene (126,000 years ago–2.588 Ma) and consist of mostly well-indurated, reddish-brown sand and gravel. These deposits are well dissected by erosional gullies and the surfaces show moderate to well-developed soils. Similar to Old Alluvial Fan Deposits, these deposits were eroded from higher elevations and carried by flooded streams and debris flows and deposited in a fan or lobe shape at the base of hills and across the valleys. These deposits formed during the span of three NALMAs: the Rancholabrean (11,000–240,000 years ago), the Irvingtonian (240,000 years ago–1.8 Ma) and the Blancan (1.8–4.75 Ma). Fossils have been retrieved from similar deposits from excavations of roads, real estate developments, and quarries, as well as scientific investigations within the Southern California area. These fossils include mammoths, mastodons, horses, camels, saber-toothed cats, coyotes, deer, peccaries, and sloths, as well as smaller animals like rodents, rabbits, birds, reptiles, and fish. As such, these deposits are considered to have high paleontological sensitivity. (LSA, 2017, p. 12)

- Granodiorite to Tonalite of the Domenigoni Valley Pluton: The Granodiorite to Tonalite of the Domenigoni Valley Pluton consists of relatively uniform, massive hornblende biotite granodiorite that grades into tonalite. These rocks are part of the Peninsular Ranges Batholith and formed during the Cretaceous period (66.0–145.0 Ma) as magma intruded the surrounding older rocks and cooled below the surface. Because they formed from magma below the surface, they will not contain fossils. Therefore, these rocks have no paleontological sensitivity. (LSA, 2017, p. 12)

- Gabbro: Gabbro is mainly composed of medium to very coarse-grained hornblende and typically weathers to a brownish color. These rocks are part of the Peninsular Ranges Batholith; however, they do not belong to a specific pluton, ring complex, or other suite of associated rocks. The Gabbro formed during the Cretaceous period (66.0–145.0 Ma) as magma intruded the surrounding older rocks and

cooled below the surface. Because they formed from magma below the surface, they will not contain fossils. Therefore, these rocks have no paleontological sensitivity. (LSA, 2017, p. 12)

- Intermixed Mesozoic Schist and Cretaceous Granitic Rocks: The Intermixed Mesozoic Schist and Cretaceous Granitic Rocks formed during the Mesozoic period (66-251.902 Ma) and contain a wide variety of schist and related metamorphic rocks that have been mixed with granitic rocks ranging in composition from monzogranite to quartz diorite. These intermixed rocks belong to the Peninsular Ranges Batholith and formed as sedimentary rocks were buried and subjected to intense heat and pressure during the Mesozoic, and were then intruded by granitic igneous rocks during the Cretaceous. Because the metamorphic rocks were subjected to intense heat and pressure below the surface, the potential for preserving identifiable paleontological resources in extremely low. Furthermore, the igneous rocks formed below the surface and will not contain fossils. Therefore, this geologic unit is considered to have no paleontological sensitivity. (LSA, 2017, pp. 12-13)

2. Paleontological Sensitivity

As discussed above and depicted on Figure 4.6-1, the following geology units, which encompass a majority of the Project site, are classified as having a "High" sensitivity for containing paleontological resources: Old Alluvial Fan Deposits and Very Old Alluvial Fan Deposits. Additionally, the following geology units, which are located intermittently in the eastern portion of the Project site, are classified as having no paleontological sensitivity: Granodiorite to Tonalite of the Domenigoni Valley Pluton; Gabbro; and intermixed Mesozoic Schist and Cretaceous Granitic Rocks.

3. Paleontological Records

As part of the Paleontological Resources Assessment, LSA obtained locality searches from the Natural History Museum of Los Angeles County (LACM) and the San Bernardino County Museum (SBCM). The LACM conducted a search of records within one mile of the current Project area. The records found no known fossil localities within the Project area; however, the museum has records of fossil localities nearby in the same or similar deposits as those mapped in the Project area. The nearest locality identified in LACM search, locality LACM 5168, produced a fossil specimen of horse (*Equus)* southwest of the Project area on the western margin of Menifee Valley, near Railroad Canyon Reservoir in older Quaternary alluvial fan deposits. In addition, further southwest of the Project area near Lake Elsinore, locality LACM 6059 produced a specimen of fossil camel (*Camelops*). (LSA, 2017, p. 13)

The locality search conducted by SBCM also noted numerous fossil localities in the area from sediments similar to those found in the Project area. At the Carbon Canyon Wastewater Facility in the City of Chino, east of State Route 71, locality SBCM 5.1.9 produced a giant ground sloth (*Glossotherium*) and locality 5.1.10 produced a camel (*Camelops*) fossils at depths of 11 to 15 feet below the surface. In Pleistocene deposits, locality SBCM 1.116.1 produced fossils of bison (*Bison* cf. *antiquus*), horse (*Equus*), and deer (*Odocoileus*) at a depth of 6 feet below the surface at the Los Serranos Creek site in the Puente Hills. West of the City of San Bernardino near Declezville, locality SBCM 5.1.11 produced a saber-toothed cat (*Smilodon*) fossil approximately 5 feet below the surface. Lastly, in eastern Pomona Valley along Interstate 15, locality SBCM 5.1.8 produced a mammoth (*Mammuthus*) at a depth of 5 feet below the surface. (LSA, 2017, p. 13)

4. Site Survey

LSA conducted a pedestrian field survey on May 1-3, 2017. Ground visibility was poor (10 percent to 25 percent) to good (75 percent to 90 percent) depending on location in the Project area. Topography of the Project

area was mostly flat, with a very slight slope to the east and a steep-sided hill in the northeastern portion. The majority of the Project area had been recently disturbed by mechanical plowing for weed abatement, except for a few small areas around rock outcrops and the side of the steep-sided hill. Modern trash was observed scattered throughout the Project area. Exposed sediment profiles on the hill to the northeast portion of the Project area, rodent backdirt, and rock outcrops were examined for paleontological resources and to note the sediments. Sediment consisted of yellow silty sand with outcrops of granite within the surrounding hillside. No paleontological resources were noted during the survey. (LSA, 2017, pp. 13-14)

4.6.2 Applicable Regulatory Requirements

The following is a brief description of the federal, state, and local environmental laws and related regulations governing issues related to geology and soils.

A. Federal Regulations

1. Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act (PRPA) was signed into law on March 30, 2009 (Public Law 111-11, Title VI, Subtitle D; 16 U.S.C. §§ 470aaa - 470aaa-11). PRPA directs the Department of Agriculture (U.S. Forest Service) and the Department of the Interior (National Park Service, Bureau of Land Management, Bureau of Reclamation, and Fish and Wildlife Service) to implement comprehensive paleontological resource management programs. Section 6310 of PRPA specifically states, "As soon as practical after the date of enactment of this Act, the Secretary shall issue such regulations as are appropriate to carry out this subtitle, providing opportunities for public notice and comment." (NPS, n.d.)

B. State Regulations

1. Alquist-Priolo Earthquake Fault Zoning Act (A-P Act)

The Alquist-Priolo Earthquake Fault Zoning Act (A-P Act) was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The A-P Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The A-P Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. (CGS, n.d.)

The A-P 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. ["Earthquake Fault Zones" were called "Special Studies Zones" prior to January 1, 1994.] The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within the zones. Projects include all land divisions and most structures for human occupancy. Single-family wood-frame and steel-frame dwellings up to two stories not part of a development of four units or more are exempt. However, local agencies can be more restrictive than state law requires. (CGS, n.d.)

Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings will not be constructed across active faults. An evaluation and written report of a specific site must be prepared by a licensed geologist. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (generally 50 feet). (CGS, n.d.)

2. Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) of 1990 (Public Resources Code, Chapter 7.8, § 2690-2699.6) directs the Department of Conservation, California Geological Survey to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of the SHMA is to minimize loss of life and property through the identification, evaluation, and mitigation of seismic hazards. (CGS, n.d.)

Staff geologists in the Seismic Hazard Zonation Program gather existing geological, geophysical, and geotechnical data from numerous sources to produce the Seismic Hazard Zone Maps. They integrate and interpret these data regionally in order to evaluate the severity of the seismic hazards and designate as Zones of Required Investigation (ZORI) those areas prone to liquefaction and earthquake-induced landslides. Cities and counties are then required to use the Seismic Hazard Zone Maps in their land use planning and building permit processes. (CGS, n.d.)

The SHMA requires site-specific geotechnical investigations to be conducted within the Zones of Required Investigation to identify and evaluate seismic hazards and formulate mitigation measures prior to permitting most developments designed for human occupancy. (CGS, n.d.)

3. Natural Hazards Disclosure Act

The Natural Hazards Disclosure Act, effective June 1, 1998 (as amended June 9, 1998), requires that sellers of real property and their agents provide prospective buyers with a "Natural Hazard Disclosure Statement" when the property being sold lies within one or more state-mapped hazard areas, including a Seismic Hazard Zone. (CGS, n.d.)

The law requires the State Geologist to establish regulatory zones (Zones of Required Investigation) and to issue appropriate maps (Seismic Hazard Zone maps). These maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling construction and development. Single-family frame dwellings up to two stories not part of a development of four or more units are exempt from the state requirements. However, local agencies can be more restrictive than state law requires. (CGS, n.d.)

Before a development permit can be issued or a subdivision approved, cities and counties must require a site-specific investigation to determine whether a significant hazard exists at the site and, if so, recommend measures to reduce the risk to an acceptable level. The investigation must be performed by state-licensed engineering geologists and/or civil engineers. (CGS, n.d.)

4. Building Earthquake Safety Act

In 1986, the California Legislature determined that buildings providing essential services should be capable of providing those services to the public after a disaster. Their intent in this regard was defined in legislation known as the Essential Services Buildings Seismic Safety Act of 1986 and includes requirements that such buildings shall be "…designed and constructed to minimize fire hazards and to resist…the forces generated by earthquakes, gravity, and winds." This enabling legislation can be found in the California Health and Safety Code, Chapter 2, § 16000 through 16022. In addition, the CBC defines how the intent of the act is to be implemented in Title 24, Part 1 of the California Building Standards Administrative Code, Chapter 4, Articles 1 through 3. (CGS, n.d.)

5. California Building Standards Code (Title 24)

California Code of Regulations (CCR) Title 24 is reserved for state regulations that govern the design and construction of buildings, associated facilities, and equipment. These regulations are also known as building standards (reference California Health and Safety Code § 18909). Health and Safety Code (state law) § 18902 gives CCR Title 24 the name California Building Standards Code (CBSC). (CBSC, 2010, p. 6)

The CBSC in CCR Title 24 is published by the California Building Standards Commission and it applies to all building occupancies (see Health and Safety Code §§ 18908 and 18938) throughout the State of California. Cities and counties are required by state law to enforce CCR Title 24 (reference Health and Safety Code §§ 17958, 17960, 18938(b), and 18948). Cities and counties may adopt ordinances making more restrictive requirements than provided by CCR Title 24, because of local climatic, geological, or topographical conditions. Such adoptions and a finding of need statement must be filed with the California Building Standards Commission (Reference Health and Safety Code §§ 17958.7 and 18941.5). (CBSC, 2010, pp. 6-7)

6. California Administrative Code, Title 14, Section 4308

Section 4308, *Archaeological Features*, of Title 14 of the California Administrative Code provides that: "No person shall remove, injure, disfigure, deface, or destroy any object of archaeological, or historical interest or value."

7. California Public Resources Code

Public Resources Code § 5097.5 states that "A person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands." Public Resources Code § 30244 states that, "Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required."

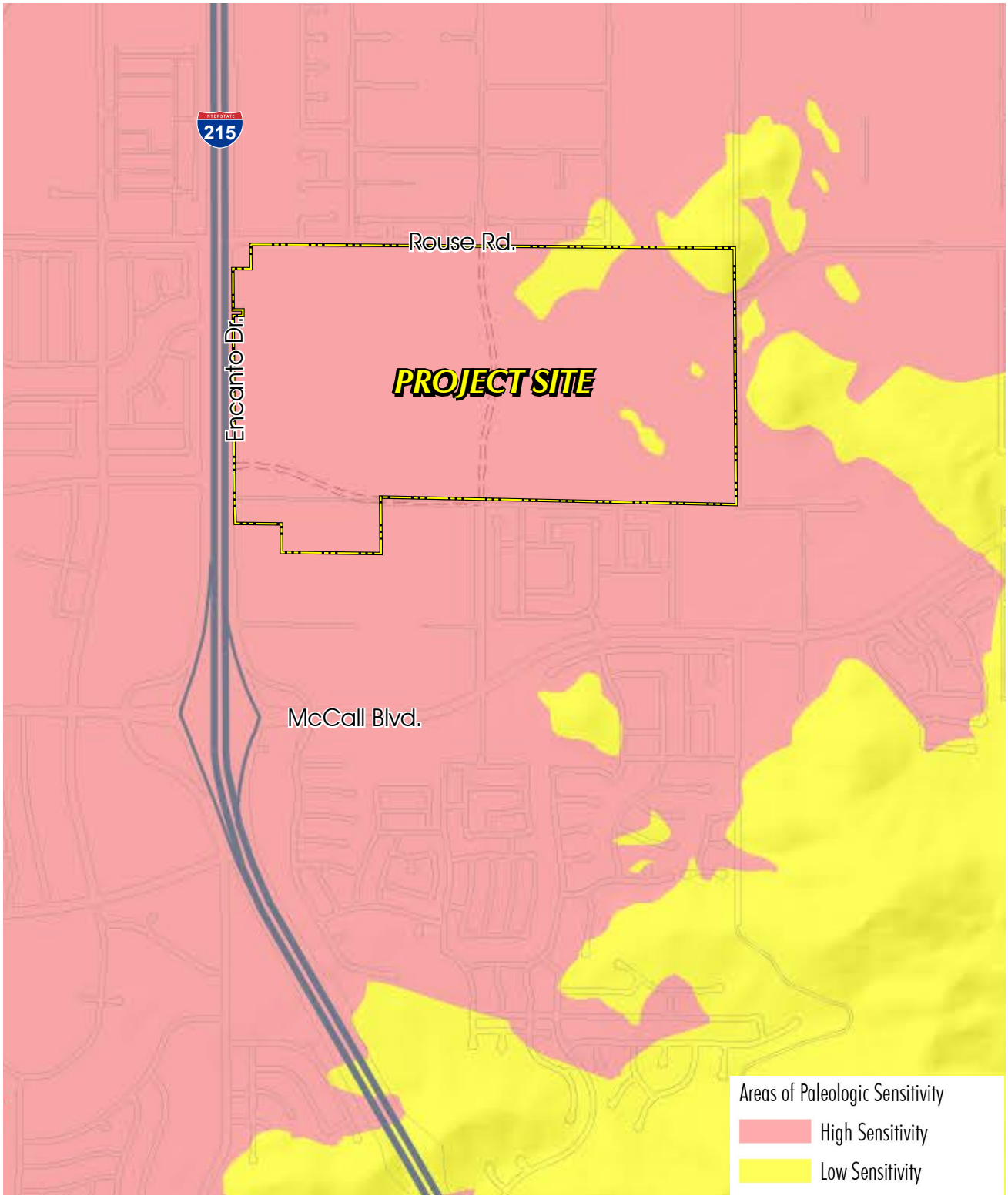
C. Local Regulations

1. City of Menifee Ordinance No. 2016-205 (Municipal Code Chapter 8.04)

This ordinance requires that all projects comply with CBCs and the International Building Codes. The City Department of Building and Safety provides technical expertise in reviewing and enforcing the Building and Fire Codes. These codes establish site-specific investigation requirements, construction standards, and inspection procedures to ensure that development does not pose a threat to the health, safety, and welfare of the public. Every three years, the County's Building and Fire Codes are adapted from the Uniform Building and Fire Codes. The Uniform Building and Fire Codes contain minimum baseline standards to guard against unsafe development.

2. City of Menifee General Plan Open Space & Conservation Element

The Open Space & Conservation Element of the City of Menifee General Plan identifies known paleontologically sensitive areas within the City. Figure 4.6-3, *Paleontological Resource Sensitivity,* depicts the City's General Plan Open Space & Conservation Element Paleontological sensitivity classifications within the City of Menifee, including the Project site.



Source(s): City of Menifee (2013)

Figure 4.6-3

NOT TO SCALE

PALEONTOLOGICAL RESOURCE SENSITIVITY

As depicted on Figure 4.6-3, the majority of the Project area has "High" sensitivity to paleontological resources, whereas, portions of the Project area to the northeast have "Low" sensitivity. Additionally, the Open Space & Conservation Element includes the following goal and policies that relate to paleontological resources. Although not explicitly mentioned, the "Background" portion of the General Plan Open Space & Conservation Element explicitly indicates that paleontological resources are included within the general term, "cultural resources." (Menifee, 2013a)

- Goal OSC-5: Archaeological, historical, and cultural resources are protected and integrated into the city's built environment.

- Policy OSC-5.1: Preserve and protect archaeological and historic resources and cultural sites, places, districts, structures, landforms, objects and native burial sites, traditional cultural landscapes and other features, consistent with state law and any laws, regulations or policies which may be adopted by the city to implement this goal and associated policies.

- Policy OSC-5.4: Establish clear and responsible policies and best practices to identify, evaluate, and protect previously unknown archaeological, historic, and cultural resources, following applicable CEQA and NEPA procedures and in consultation with the appropriate Native American tribes who have ancestral lands within the city.

- Policy OSC-5.5: Develop clear policies regarding the preservation and avoidance of cultural resources located within the city, in consultation with the appropriate Native American tribes who have ancestral lands within the city.

4.6.3 Basis for Determining Significance

Section VII of Appendix G to the CEQA Guidelines addresses typical adverse effects due to geological conditions and includes the following threshold questions to evaluate the Project's impacts resulting from geologic or soil conditions (OPR, 2018).

a. *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:*

   i) *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42.*

   ii) *Strong seismic ground shaking.*

   iii) *Seismic-related ground failure, including liquefaction*

   iv) *Landslides;*

b. *Result in substantial soil erosion or the loss of topsoil;*

c. *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;*

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water; or

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

As a general matter, CEQA does not require the analysis of the environment's impact on the Project (see the decision reached by the Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, Case No. S213478). Therefore, CEQA does not require that the potential geology impacts from the environment (unrelated to the Project) be analyzed with respect to their effect(s) on future residents of the Project. Thus, impacts to the Project from geological impacts are provided for information purposes only.

4.6.4 IMPACT ANALYSIS

Threshold a:	***Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:***
i)	***Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.***
ii)	***Strong seismic ground shaking?***
iii)	***Seismic-related ground failure, including liquefaction?***
iv)	***Landslides?***

Rupture of Known Earthquake Fault

There are no known active or potentially active faults on or trending toward the Project site, and the Project site is not located within a mapped Alquist-Priolo Earthquake Fault Zone. The nearest fault zone to the Project site is the Temecula segment of the Elsinore Fault Zone which occurs approximately 8.9 miles southwest of the Project site. The possibility of damage due to ground rupture is considered low since no active faults are known to cross the Project site. There are no other conditions on-site or in the surrounding area that provide evidence of any other faults that could impact the Project site. Accordingly, the Project would not be subject to rupture of a known earthquake fault as delineated on the Alquist-Priolo Earthquake Fault Zoning Map. Impacts would be less than significant. (LGC, 2017a, pp. 8-11)

Strong Seismic Ground Shaking

The Project site is located in a seismically active area of southern California and is expected to experience moderate to severe ground shaking during the lifetime of the Project. The ground-shaking risk is not considered substantially different than that of other similar properties in the Southern California area. The Project area is within a seismically active region containing major faults, including the Elsinore Fault Zone, located 8.9 miles from the Project site. Some additional major active nearby faults that could produce these ground-shaking effects include the Cucamonga, Elsinore, San Jacinto, and San Andreas Fault Zones, among others. The potential rupture of any of these faults could result in significant structural damage and human injury or casualty. The Project would be subject to mandatory compliance with the standards and requirements

detailed in CBC Title 24, and City of Menifee Building Code. The CBC and the Menifee Building Code have been designed to preclude significant adverse effects associated with strong seismic ground shaking. (LGC, 2017a, pp. 8-11,13)

However, a significant impact could occur if the Project did not comply with the site-specific recommendations of the Project's Geotechnical Study (*Technical Appendix F1*). The Project's Geotechnical Study includes recommendations that would reduce seismic risk to an "acceptable level" as defined by the California Code of Regulations. Accordingly, prior to mitigation implementing the Geotechnical Study recommendations, the Project has the potential to directly or indirectly cause substantial adverse effects, including risk of loss, injury, or death as a result of strong seismic ground shaking. This is evaluated as a significant impact for which mitigation is required. (LGC, 2017a, p. 13)

Seismic-Related Ground Failure

According to available mapping data and soil conditions encountered at the Project site, the Project is not expected to be subjected to a significant risk associated with seismic-related ground failure, including liquefaction. Due to the relatively dense nature of the soils on-site and depth to groundwater, the Project site's soils are not considered to be susceptible to liquefaction or seismic-related ground failure. (LGC, 2017a, p. 9) Additionally, because there are no known faults located on the Project site, there is no potential for the Project to directly or indirectly cause substantial adverse effects related to ground rupture or seismic-related ground failure. Additionally, the Project is required to be designed and constructed in accordance with the most recent applicable seismic safety guidelines, including the CBC and City of Menifee Building Code. Thus, implementation of the Project would result in less-than-significant impacts associated with seismic-related ground failure and/or liquefaction hazards.

However, a significant impact could occur if the Project did not comply with the site-specific recommendations of the Project's Geotechnical Study (*Technical Appendix F1*). The Project's Geotechnical Study includes recommendations that would reduce seismic risk to an "acceptable level" as defined by the California Code of Regulations. Accordingly, prior to mitigation implementing the Geotechnical Study recommendations, the Project has the potential to directly or indirectly cause substantial adverse effects, including risk of loss, injury, or death as a result of seismic-related ground failure. This is evaluated as a significant impact for which mitigation is required. (LGC, 2017a, p. 13)

Landslides

The Project site and surrounding areas generally exhibit relatively level topography, with exception of the knoll in the northeastern portion of the site and an off-site hillform located east of the Project site. These hillforms exhibit rock outcroppings, which generally would preclude the potential for substantial landslides that could affect future Project residents and structures. Thus, impacts would be less than significant. (Google Earth, 2016)

However, a significant impact could occur if the Project did not comply with the site-specific recommendations of the Project's Geotechnical Study (*Technical Appendix F1*). The Project's Geotechnical Study includes recommendations that would reduce the risk of landslides resulting from seismic activity to an "acceptable level" as defined by the California Code of Regulations. Accordingly, prior to mitigation implementing the Geotechnical Study recommendations, the Project has the potential to directly or indirectly cause substantial adverse effects, including risk of loss, injury, or death as a result of landslides. This is evaluated as a significant impact for which mitigation is required. (LGC, 2017a, p. 13)

Implementation of City Regulations and Design Requirements CRDR 4.6-1 and CRDR 4.6-2 would ensure the Project adheres to the California Building Code. Implementation of Mitigation Measure MM 4.6-1 would ensure that the Project implements the recommendations of the Project's Geotechnical Study (*Technical Appendix F1*), which would ensure measures are implemented to address potential impacts due to strong seismic ground shaking, seismic-related ground failure, and landslides. With implementation of the required mitigation, potential impacts including the risk of loss, injury, or death involving strong seismic ground shaking, seismic-related ground failure, and landslides would be reduced to less-than-significant levels.

Threshold b: Would the Project result in substantial soil erosion or the loss of topsoil?

Implementation of the Project has the potential to result in soil erosion. The analysis below summarizes the likelihood of the Project to result in substantial soil erosion during temporary construction activities and long-term operation. As shown in Table 4.6-1, 56.5% of the Project site has a "slight" erosion susceptibility, 3.8% of the Project site has a "slight to moderate" erosion susceptibility, 35.9% of the Project site has a "moderate" erosion susceptibility, and 3.9% of the Project site has a "high" erosion susceptibility. High susceptibility areas occur in the northeastern corner of the Project site, including the knoll with the remaining areas comprising slight to moderate soil erosion susceptibility.

Construction-Related Impacts

Under existing conditions, the Project site is not developed with buildings or other improvements. Exposed soils on-site are subject to erosion during rainfall events or high winds. This potential would increase during Project construction due to the removal of stabilizing vegetation and increased exposure of these erodible materials to wind and water.

Pursuant to the requirements of the State Water Resources Control Board, the Project Applicant is required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activities. The NPDES permit is required for all projects that include construction activities, such as clearing, grading, and/or excavation that disturb at least one acre of total land area. This NPDES Permit requires the Project Applicant to prepare and submit to the City for approval a Project-specific Storm Water Pollution Prevention Plan (SWPPP) for construction-related activities. The SWPPP would be continuously updated during Project construction to address impacts on water quality brought on by construction activities. The SWPPP must identify and implement an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate discharge to surface water from stormwater and non-stormwater discharges during construction activities. In addition, the Project would be subject to SCAQMD Rule 403, which addresses blowing dust from construction sites in order to reduce construction-related erosion impacts. Adherence to the requirements noted in the Project's required site-specific SWPPP and adherence to SCAQMD Rule 403 would ensure that potential construction-related impacts associated with water erosion would be reduced to below a level of significance.

Long-Term Operational Impacts

Following construction, wind and water erosion on the Project site would be minimized, as the disturbed areas would be landscaped or covered with impervious surfaces, and drainage would be controlled through a storm drain system. As discussed in detail in EIR Subsection 4.9, *Hydrology and Water Quality*, the Project would not substantially increase the rate or amount of runoff leaving the site as compared to existing conditions. Development of the Project would require the construction of stormwater facilities (such as water quality and detention basins) to reduce on-site runoff flows to pre-development conditions. As discussed in EIR Subsection 4.9, construction of detention basins and water quality basins on-site would ensure that post-

development rates and amounts of runoff are reduced compared to existing conditions. Accordingly, implementation of the Project would result in a decreased risk of siltation or erosion in stormwater discharged from the Project site. In addition, the Water Quality Management Plan (WQMP) for the Project requires post-construction measures to ensure on-going protection against erosion. Compliance with the WQMP would be required as a condition of Project approval, and long-term maintenance of on-site water quality features also would be required. Therefore, long-term operation of the Project would not result in substantial erosion or loss of topsoil, and impacts would be less than significant.

Threshold c:	***Would the Project 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?***

The Project site and surrounding areas generally exhibit relatively level topography, with exception of the knoll in the northeastern portion of the site and an off-site hillform located east of the Project site. These hillforms exhibit rock outcroppings, which generally would preclude the potential for substantial landslides that could affect future Project residents and structures. Thus, impacts would be less than significant.

Lateral spreading is a type of liquefaction-induced ground failure associated with the lateral displacement of surficial blocks of sediment resulting from liquefaction in a subsurface layer. Once liquefaction transforms the subsurface layer into a fluid mass, gravity plus the earthquake inertial forces may cause the mass to move downslope towards a free face (such as a river channel or an embankment). Lateral spreading may cause large horizontal displacements and such movement typically damages pipelines, utilities, bridges, and structures. Due to the low potential for liquefaction to occur on the Project site, the potential for lateral spreading is identified by LGC as being very low. Thus, impacts would be less than significant. (LGC, 2017a, p. 10)

The Project site is underlain with hard, granitic bedrock with limited thickness of sediments below the site. Subsidence due to grading activities proposed by the Project would be expected to be on the order of 0.1 to 0.2 feet. Although the potential for subsidence would be low, LGC indicated that the ground subsidence values contained in the Project's Geotechnical Study (*Technical Appendix F1*) are only estimates, and that actual ground subsidence factors are extremely difficult to predict. Thus, although the potential for ground subsidence is low, out of an abundance of caution, the potential to result in ground subsidence is considered significant. (LGC, 2017a, p. 17) The potential for ground subsidence on-site is an existing condition, and development of the Project site would not exacerbate the potential for ground subsidence to occur. Although the significant impact due to the potential to result in ground subsidence is the environment's impact on the Project, impacts are nonetheless identified as potentially significant requiring mitigation in the form of compliance with the recommendations of the Project's Geotechnical Study.

The Project site is not located within a mapped zone for liquefaction potential. Due to the dense to very dense nature of soils and lack of shallow groundwater, Project soils are not considered susceptible to liquefaction. Impacts would be less than significant. (LGC, 2017a, p. 9)

The Project site has a slight potential for hydro-collapse. Based on laboratory testing of the upper approximate 10 feet of representative site soils, LGC determined the Project site has a slight potential for hydro-collapse. Although there is only a slight potential, there is nonetheless a remote potential for such hazards to impact future development on-site in the event that the recommendations of the Project's Geotechnical Study are not incorporated into future construction plans for the site. Thus, impacts due to hydro-collapse would be potentially significant prior to mitigation. (LGC, 2017b) The potential for hydro-collapse on-site is an existing condition, and development of the Project site would not exacerbate the potential for hydro-collapse to occur

in a manner that could affect off-site properties. Although the significant impact due to the potential to result in hydro-collapse is the environment's impact on the Project, impacts are nonetheless identified as potentially significant requiring mitigation in the form of compliance with the recommendations of the Project's Geotechnical Study.

Based on the foregoing analysis, impacts due to unstable geologic units or soils that could potentially result in ground subsidence and hydro-collapse would be significant. Impacts due to landslides, lateral spreading, and liquefaction would be less than significant. However, the findings made by LGC with respect to landslides, lateral spreading, and liquefaction, assume that the recommendations of the Project's geotechnical study are implemented. Impacts could occur if the recommendations of the Project's Geotechnical Study are not adhered to. Accordingly, impacts due to the Project being located on an unstable soil potentially resulting in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse would be significant prior to mitigation. (LGC, 2017a, pp. 11-13) The potential for ground subsidence and hydro-collapse on-site are existing conditions on the Project site, and development of the Project site would not exacerbate the potential for ground subsidence or hydro-collapse. Notwithstanding, impacts are identified herein as potentially significant requiring mitigation in the form of compliance with the recommendations of the Project's Geotechnical Study.

Implementation of Mitigation Measure MM 4.6-1 would ensure that the Project implements the recommendations of the Project's Geotechnical Study (*Technical Appendix F1*), which would ensure measures are implemented to address potential impacts associated with landslides, lateral spreading, subsidence, liquefaction, and collapse. With implementation of the required mitigation, substantial adverse effects associated with landslides, lateral spreading, subsidence, liquefaction, and collapse would be reduced to less-than-significant levels.

Threshold d: ***Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?***

Based on testing of soil samples taken from the Project site by LGC, it was determined that the site's soils vary in expansion potential from very low to low with potentially localized areas of medium expansion potential. However, it is anticipated that the majority of materials will fall into the very low to low range. Nonetheless, there is a potential for the Project to result in substantial risks to life or property if the Project were to fail to implement the site-specific recommendations of the Project's Geotechnical Study (*Technical Appendix F1*) to attenuate areas that may be subject to soils with low or moderate expansive potential. This is evaluated as a potentially significant impact for which mitigation would be required. (LGC, 2017a, pp. 11, 13) The presence of expansive soils on-site is an existing condition, and development of the Project site would not exacerbate the potential for expansive soils to occur on the Project site. Although the significant impact due to the potential to result in expansive soils is the environment's impact on the Project, impacts are nonetheless identified as potentially significant requiring mitigation in the form of compliance with the recommendations of the Project's Geotechnical Study.

Implementation of Mitigation Measure MM 4.6-1 would ensure that the Project implements the recommendations of the Project's Geotechnical Study (*Technical Appendix F1*), which would ensure measures are implemented to address potential impacts due to the Project being located on expansive soil. With implementation of the required mitigation, potential substantial adverse effects due to the Project being located on expansive soil would be reduced to less-than-significant levels.

Threshold e:	***Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?***

The Project would connect to Eastern Municipal Water District (EMWD) facilities for wastewater treatment. As such, the Project would not involve the use of septic tanks or alternative waste water disposal systems and no septic systems occur on-site under existing conditions. Accordingly, no impact would occur.

Threshold f:	***Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.***

Under existing conditions, the Project site does not contain any visible paleontological resources or unique geologic features. According to the Project's Paleontological Resources Assessment, and as shown previously in Figure 4.6-1 and Figure 4.6-3, the majority of the Project area contains Old Alluvial Fan Deposits and Very Old Alluvial Fan Deposits, both of which have "High" paleontological sensitivity. A "High" paleontological sensitivity rating is given to rock units from which vertebrate or scientifically significant invertebrate, plant, or trace fossils have been recovered and are considered to have a high potential for containing additional scientifically significant paleontological resources. In addition, the eastern portions of the Project area contain rocks of the Peninsular Ranges Batholith, including Granodiorite to Tonalite of the Domenigoni Valley Pluton, Gabbro, and Intermixed Mesozoic Schist and Cretaceous Granitic Rocks, which have "No" paleontological sensitivity. A "No" paleontological sensitivity rating is given to rock units that have no potential to contain scientifically significant paleontological resources (e.g. high-grade metamorphic rocks and plutonic igneous rocks.) (LSA, 2017, pp. 7-13)

Excavations associated with the Project's construction would encroach into the highly sensitive Alluvial soils found on the majority of the Project area. Accordingly, the Project has the potential to impact scientifically-significant paleontological resources that may be buried beneath the site's surface within the areas of "High" paleontological sensitivity (LSA, 2017, p. 15). Therefore, the Project's potential to directly or indirectly destroy unique paleontological resources buried beneath the ground surface in areas of the Project with "High" paleontological sensitivity is a significant impact for which mitigation would be required.

Implementation of Regulatory Requirements would ensure compliance with CA Public Resources Codes that prohibit the removal, destruction, injury, and defacing of pre-historic resources. Implementation of Mitigation Measures MM 4.6-2 through MM 4.6-6 would ensure the proper identification and subsequent treatment of any paleontological resources that may be encountered during ground-disturbing activities associated with implementation of the Project. Therefore, with implementation of Mitigation Measures MM 4.6-2 through MM 4.6-6, the Project's direct and cumulative impacts to paleontological resources would be reduced to less-than-significant levels.

4.6.5 Cumulative Impact Analysis

With exception of erosion hazards and paleontological resources, potential geologic and soils effects are inherently restricted to the areas proposed for development and would not contribute to cumulative impacts associated with other existing, planned, or proposed development. That is, thresholds including fault rupture, seismic ground shaking, liquefaction, landslides, expansive soils and other geologic hazards would involve effects to (and not from) the proposed development, and are specific to on-site conditions. Accordingly, addressing these potential hazards for the proposed development would involve using measures to conform to existing requirements, and/or site-specific design and construction efforts that have no relationship to, or

impact on, off-site areas. Because of the site-specific nature of these potential hazards and the measures to address them, there would be no connection to similar potential issues or cumulative effects to or from other properties. Cumulatively-considerable impacts would be less than significant.

As discussed under Threshold b, during both near-term construction and long-term operation, measures would be incorporated into the Project's design to ensure that significant erosion hazards do not occur. Other developments within the cumulative study area would be required to comply with similar requirements, such as the need to obtain an NPDES permit and mandatory compliance with the resulting SWPPPs during construction activities and WQMPs for post-development Project operation. All projects in the cumulative study area also would be required to demonstrate that measures have been incorporated to ensure that development does not result in substantial increases in the amount or rate of runoff, which could in turn increase soil erosion. Therefore, because the Project would not result in significant erosion impacts, and because other projects within the cumulative study area would be subject to similar requirements to control erosion hazards during construction and long-term operation, cumulatively-considerable impacts associated with erosion and the loss of topsoil are evaluated as less than significant.

As discussed above under Threshold f, the Project has the potential to impact paleontological resources that may be buried beneath the ground surface of the Project site. As other developments in the Project region occur, it is possible that these projects may result in impacts to paleontological resources if found buried beneath the ground surface. Thus, the Project's potential impacts to subsurface paleontological resources would be cumulatively considerable and require mitigation.

4.6.6 Significance of Impacts Before Mitigation

Threshold a: Significant Direct Impact. The Project site is not located within a mapped Alquist-Priolo Earthquake Fault Zone or a County Fault Hazard Zone. Although the Project site is located in a seismically active area of southern California, this risk is not considered substantially different than that of other similar properties in the Southern California area. As a mandatory condition of Project approval, the Project would be required to construct proposed structures in accordance with the CBC (Title 24) and the City of Menifee Building Code in accordance with City Regulations and Design Requirements CRDR 4.6-1 and CRDR 4.6-2. The CBC and the City of Menifee Building Code have been designed to attenuate the risk to life or property to less than significant levels. Nonetheless, the Project's site-specific Geotechnical Study (*Technical Appendix F1*) identifies a number of design recommendations to attenuate the potential for seismic ground shaking hazards, seismic-related ground failure, and landslides. The Project's potential to directly or indirectly cause substantial adverse effects, including loss, injury, or death, as a result of strong seismic ground shaking, seismic-related ground failure, and landslides is evaluated as a potentially significant impact prior to mitigation.

Threshold b: Less-Than-Significant Impact. Soils on-site would be particularly prone to water and wind erosion during grading and site development. With application of City Regulations and Design Requirements CRDR 4.6-3 and CRDR 4.6-4, which include the preparation and implementation of a WQMP for post-development, a future SWPPP during construction, and compliance to applicable City ordinances, erosion impacts on- and off-site during construction would be reduced to less-than-significant levels. Following Project buildout, the site's potential for erosion would be minimized, as the disturbance areas would be landscaped or covered with impervious surfaces, and drainages would be controlled by a storm drain system. Additionally, the Project would be required to comply with a WQMP that identifies post-development measures to ensure on-going protection against erosion hazards. Accordingly, with the application of mandatory regulatory requirements, including the preparation and implementation of a WQMP for post-

development, a future SWPPP during construction, and compliance to applicable City ordinances, erosion impacts on- and off-site would be reduced to less-than-significant levels.

Threshold c: Significant Direct Impact. The Project site is relatively flat under existing conditions and does not contain any topographic features that could become unstable and subject to a landslide. In addition, impacts due to lateral spreading and liquefaction is considered low. However, there is a remote chance the Project could be subject to hazards associated with landslides, lateral spreading, or liquefaction. This is evaluated as a potentially significant impact prior to mitigation. Impacts due to subsidence would be low, however, due to the unpredictability of ground subsidence factors, impacts were considered significant. Additionally, the Project has a slight potential for hydro-collapse, and would be potentially significant prior to mitigation.

Threshold d: Significant Direct Impact. Based on testing of soil samples taken from the Project site by LGC, it was determined that the site's soils vary in expansion potential from very low to medium. However, it is anticipated that the majority of materials will fall into the very low to low range. Nonetheless, a potentially significant impact would occur if the Project were to fail to implement the recommendations of the Project's Geotechnical Study (*Technical Appendix F1*) to attenuate hazards associated with expansive soils.

Threshold e: No Impact. The Project would not install septic tanks or alternative wastewater disposal systems or eliminate any existing septic tanks or alternative wastewater disposal systems. Accordingly, no impact would occur associated with soil compatibility for wastewater disposal systems.

Threshold f: Significant Direct and Cumulatively Considerable Impact. The Project would not impact any known paleontological resources or unique geological features. However, the majority of the Project site contains sensitive Alluvial soils, which have "High" sensitivity for paleontological resources. Implementation of the Project has the potential to unearth and adversely impact paleontological resources that may be buried beneath the ground surface and discovered during Project-related grading and excavation activities within the areas containing Alluvial soils. This is a potentially significant direct and cumulatively-considerable impact on paleontological resources for which mitigation would be required.

4.6.7 City Regulations, Design Requirements, and Mitigation

The following are applicable regulations and design requirements within the City of Menifee. Although these requirements technically do not meet CEQA's definition for mitigation, they are imposed herein to ensure Project compliance with applicable regulatory requirements, City regulations and design requirements.

Regulatory Requirements

- The Project is required to comply with California Administrative Code, Title 14, Section 4308, which states that "[n]o person shall remove, injure, disfigure, deface, or destroy any object of archaeological, or historical interest or value." Compliance with the California Administrative Code would ensure that paleontological resources are not destroyed or removed from the Project site.

- The Project is required to comply with California Public Resources Code Section 5097.5, which requires that "[a] person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands." Compliance with California

Public Resources Code Section 50.97.5 would ensure that paleontological resources are not destroyed or removed from the Project site.

City Regulations and Design Requirements

CRDR 4.6-1 The Project is required to comply with the provisions of the California Building Code (California Code of Regulations, Title 24). Compliance with Title 24 would ensure Project implements building requirements in order to geological impacts that would have the potential to occur during operation of the Project.

CRDR 4.6-2 The Project is required to comply with the provisions of City of Menifee Ordinance No. 2016-205 (Municipal Code Chapter 8.04). Ordinance No. 2016-205 requires that all projects comply with California Building Codes and the International Building Codes. These codes establish site-specific investigation requirements, construction standards, and inspection procedures to ensure that development does not pose a threat to the health, safety, and welfare of the public. Compliance with City of Menifee Ordinance No. 2016-205 would ensure the Project complies with applicable Building Codes and would reduce geology impacts to proposed structures.

CRDR 4.6-3 The Project is required to comply with the provisions of the Project's NPDES permit, and the Project's SWPPP for construction activities. Compliance with the NPDES permit and the SWPPP would identify and implement an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate discharge to surface water from stormwater and non-stormwater discharges during construction of the Project.

CRDR 4.6-4 The Project is required to comply with the provisions of SCAQMD Rule 403, by addressing blowing dust from the Project's construction activities. Compliance with Rule 403 would ensure dust control measures are implemented on the Project site to reduce construction-related geology impacts.

Mitigation

MM 4.6-1 Prior to issuance of grading permits, the Director of Public Works and Engineering for the City of Menifee (or his/her designee) shall verify that all of the recommendations given in the Project's March 16, 2017 (revised November 30, 2017) "Preliminary Geotechnical Evaluation for Proposed Approximately 331 Acre "Fleming Ranch" Development, City of Menifee, Riverside County, California" by LGC, are incorporated into the construction and grading plans. The recommendations shall include, but not be limited to the following:

- Site Earthwork
  Earthwork on-site shall be performed in accordance with the following recommendations, future grading plan review report(s), the 2016 CBC/City of Menifee grading requirements, and the General Earthwork and Grading Specifications included in Appendix E of the Geotechnical Evaluation. In case of conflict, the following recommendations shall supersede those included in Appendix E of the Geotechnical Evaluation. The following recommendations shall be considered preliminary and may be revised within the future grading plan review report or based on the actual conditions encountered during site grading.

Site Preparation
Prior to grading of areas to receive structural fill or engineered improvements, the areas shall be cleared of existing asphalt, surface obstructions, and demolition debris. Vegetation and debris shall be removed and properly disposed of off-site. Holes resulting from the removal of buried obstructions, which extend below proposed finish grades, shall be replaced with suitable compacted fill material.

If cesspools or septic systems are encountered they shall be removed in their entirety. The resulting excavation shall be backfilled with properly compacted fill soils. As an alternative, cesspools may be backfilled with lean sand-cement slurry. Any encountered wells shall be properly abandoned in accordance with regulatory requirements. At the conclusion of the clearing operations, a representative of LGC Geotechnical shall observe and accept the site prior to further grading.

Removal Depths and Limits
In order to provide relatively uniform bearing conditions for the planned improvements, a minimum removal depth of approximately 2 to 6 feet below existing grade, or 1-foot below the deepest footing, whichever is deeper shall be adhered to. Where practical, the envelope for removals shall extend laterally a minimum distance of 5 feet beyond the edges of the proposed improvements. Refer to the Geotechnical Map, Sheet 1, for details.

For retaining walls, free-standing walls, and screen walls, removals shall extend at least 2 feet beneath the existing grade or 1-foot beneath the base of foundations, whichever is deeper. Within pavement and hardscape areas, removals shall extend to a depth of at least 2 feet below existing grades. Removals within areas of design cut (relative to pavement subgrade) shall be performed to a depth that is a minimum of 2 feet below existing grades or 1-foot below pavement subgrade, whichever is deeper. In general, the envelope for over-excavation shall extend laterally a minimum distance of 2 feet beyond the edges of the proposed improvements.

Local conditions may be encountered during excavation that could require additional removals beyond the above-noted minimums in order to obtain an acceptable subgrade. The actual depths and lateral extents of grading shall be determined by the Geotechnical Consultant, based on subsurface conditions encountered during grading. Several methods will be utilized in determining the suitability of the material observed in the removal bottom excavations. Visual observation of material, how it performs as the construction equipment passes over it, probing and occasional field density testing of the removal bottoms will be performed by our field technician and/or field geologist. When field density test data is utilized for approval of native material, an in-place relative compaction of 85 percent or greater and a degree of saturation of 85 percent or greater will be considered suitable. Removal areas shall be accurately staked in the field by the Project Surveyor.

Temporary Excavations
Temporary excavations shall be performed in accordance with Project plans, specifications, and all Occupational Safety and Health Administration (OSHA) requirements. Excavations shall be laid back or shored in accordance with OSHA requirements before personnel or equipment are allowed to enter.

During the field evaluation conducted by LGC, the majority of the site soils upper approximate 5 feet are anticipated to be OSHA Type "C" soils (refer to the attached boring logs included in the Geotechnical Evaluation). Soil conditions shall be regularly evaluated during construction to verify conditions are as anticipated. The Contractor shall be responsible for providing the "competent person" required by OSHA standards to evaluate soil conditions. Sandy soils are present and shall be considered susceptible to caving. Close coordination with the Geotechnical Consultant shall be maintained to facilitate construction while providing safe excavations. Excavation safety is the sole responsibility of the Contractor.

Vehicular traffic, stockpiles, and equipment storage shall be set back from the perimeter of excavations a distance equivalent to a 1:1 projection from the bottom of the excavation. Once an excavation has been initiated, it shall be backfilled as soon as practical. Prolonged exposure of temporary excavations may result in some localized instability. Excavations shall be planned so that they are not initiated without sufficient time to shore/fill them prior to weekends, holidays, or forecasted rain. It should be noted that any excavation that extends below a 1:1 (horizontal to vertical) projection of an existing foundation will remove existing support of the structure foundation. If requested, temporary shoring parameters shall be provided.

Removal Bottoms and Subgrade Preparation

Removal bottoms shall consist of dense alluvial fan deposit or competent bedrock. In general, removal bottom areas and any areas to receive compacted fill shall be scarified to a minimum depth of 6 inches, brought to a near-optimum moisture condition, and re-compacted per project recommendations. Removal bottoms and areas to receive fill shall be observed and accepted by the Geotechnical Consultant prior to subsequent fill placement.

Material for Fill

From a geotechnical perspective, the on-site soils are generally considered suitable for use as general compacted fill, provided they are screened of organic materials, construction debris and oversized material (8 inches in greatest dimension). Generation of oversize material should be anticipated. For fill depths less than 10 feet below proposed finish grade, oversize material shall be removed from site fills and/or crushed into smaller pieces (less than 8 inches in greatest dimension) and well-blended into fill soils. As an alternative, a deeper excavation may be performed in order to create an area with fill deeper than 10 feet for disposal of oversize material in accordance with Appendix E of the Geotechnical Evaluation. Additionally, oversize material may be placed in "non-structural" areas such as proposed passive park areas. Oversize material placed in nonstructural areas shall be clearly delineated as "non-structural" and potential long-term settlement shall be anticipated in these areas.

From a geotechnical viewpoint, any required import soils for general fill (i.e., non-retaining wall backfill) shall consist of clean, granular soils of "Very Low" to "Low" expansion potential (expansion index 50 or less based on ASTM D 4829), and generally free of organic materials, construction debris and material greater than 8 inches in maximum dimension. Import for required retaining wall backfill shall meet the criteria outlined in the

following paragraph. Source samples shall be provided to the Geotechnical Consultant for laboratory testing a minimum of four working days prior to planned importation.

Retaining wall backfill shall consist of sandy soils with a maximum of 35 percent fines (passing the No. 200 sieve) per American Society for Testing and Materials (ASTM) Test Method D1140 (or ASTM D6913/D422) and a "Very Low" expansion potential (EI of 20 or less per ASTM D4829). Soils shall also be screened of organic materials, construction debris, and material greater than 3 inches in maximum dimension. The site may contain soils that are not suitable for retaining wall backfill due to their fines content or due to oversize materials, therefore select grading and stockpiling or import may be required by the contractor for obtaining suitable retaining wall backfill soil.

Aggregate base (crushed aggregate base or crushed miscellaneous base) shall conform to the requirements of Section 200-2 of the Standard Specifications for Public Works Construction ("Greenbook") for untreated base materials (except processed miscellaneous base) or Caltrans Class 2 aggregate base.

Placement and Compaction of Fills

Material to be placed as fill shall be brought to near-optimum moisture content (generally between optimum and 2 percent above optimum moisture content) and recompacted to at least 90 percent relative compaction (per ASTM D1557). Significant moisture conditioning of on-site soils shall be required in order to achieve adequate compaction. The optimum lift thickness to produce a uniformly compacted fill will depend on the type and size of compaction equipment used. In general, fill shall be placed in uniform lifts not exceeding 8 inches in compacted thickness. Each lift shall be thoroughly compacted and accepted prior to subsequent lifts. Generally, placement and compaction of fill shall be performed in accordance with local grading ordinances and with observation and testing performed by the geotechnical consultant.

During backfill of excavations, the fill shall be properly benched into firm and competent soils of temporary backcut slopes as it is placed in lifts.

Aggregate base material shall be compacted to at least 95 percent relative compaction at or slightly above optimum moisture content per ASTM D1557. Subgrade below aggregate base shall be compacted to at least 90 percent relative compaction per ASTM D1557 at or slightly above optimum moisture content.

Trench and Retaining Wall Backfill and Compaction

The on-site soils may generally be suitable as trench backfill, provided the soils are screened of material greater than 6 inches in diameter, and organic matter. If trenches are shallow or the use of conventional equipment may result in damage to the utilities, sand having a Sand Equivalent (SE), per Caltrans Test Method (CTM) 217, of 30 or greater may be used to bed and shade the pipes. Sand backfill within the pipe bedding zone may be densified by jetting or flooding and then tamping to ensure adequate compaction. Subsequent trench backfill shall be compacted in uniform thin lifts by mechanical means to at least the recommended minimum relative compaction (per ASTM D1557).

Retaining wall backfill shall consist of sandy soils as outlined in preceding Section, *Material for Fill*. The limits of select sandy backfill shall extend at minimum ½ the height of the retaining wall or the width of the heel (if applicable), whichever is greater (Refer to Figure 2, of the Geotechnical Evaluation). Retaining wall backfill soils shall be compacted in relatively uniform thin lifts to at least 90 percent relative compaction (per ASTM D1557). Jetting or flooding of retaining wall backfill materials shall not be permitted.

A representative from LGC Geotechnical shall observe, probe, and test the backfill to verify compliance with the Project recommendations.

Shrinkage and Bulking
Volumetric changes in earth quantities will occur when excavated on-site earth materials are replaced as properly compacted fill. Table 3 of the Geotechnical Evaluation depicts an estimate of shrinkage and bulking factors for the various geologic units found on-site.

Subsidence due to earthwork equipment is expected to be on the order of 0.1 to 0.2 feet. It shall be stressed that these values are only estimates and that actual shrinkage factors are extremely difficult to predict. The effective shrinkage of on-site soils will depend primarily on the type of compaction equipment and method of compaction used on-site by the contractor. Additionally, the on-site geology is very complex; the above estimates are generalized groupings of similar lithologies and shall be expected to vary across the site and with depth. The above shrinkage estimates are intended as an aid for others in determining preliminary earthwork quantities. However, these estimates shall be used with some caution since they are not absolute values.

Contingencies shall be made for balancing earthwork quantities based on actual shrinkage and subsidence that occurs during grading. If importing/exporting a large volume of soils is not considered feasible or economical, a balance area shall be designated on-site that can fluctuate up or down based on the actual volume of soil. The balance area, if needed, shall be able to accommodate on the order of 5 percent (plus or minus) of the total grading volume be considered.

- Preliminary Foundation Recommendations
  Preliminary conventional and post-tensioned foundation measures are provided in the following sections. Please note that the following foundation measures are preliminary and must be confirmed by LGC Geotechnical at the completion of Project plans (i.e., foundation, grading and site layout plans) as well as completion of earthwork. At the completion of grading, if soils with a different expansion potential (EI greater than 50) are encountered, updated geotechnical foundation recommendations shall be provided.

  Provisional Conventional Foundation Design Parameters
  Conventional foundations may be designed in accordance with Wire Reinforcement Institute (WRI) procedure for slab-on-ground foundations per Section 1808 of the 2016 CBC to resist expansive soils. The following preliminary soil parameters may be used:

  - Effective Plasticity Index: 20
  - Climatic Rating: Cw = 15

- Reinforcement: Per structural designer.
- Minimum Perimeter Footing Depth: 15 inches below lowest adjacent grade.
- Moisture condition (presoak) slab subgrade to 100% of optimum moisture content to a minimum depth of 12 inches prior to trenching.

The recommended moisture content shall be maintained up to the time of concrete placement.

Provisional Post-Tensioned Foundation Design Parameters

The geotechnical parameters provided in Table 4 of the Geotechnical Evaluation may be used for post-tensioned slab foundations. These parameters have been determined in general accordance with the Post-Tensioning Institute (PTI) Standard Requirements for Design of Shallow Post-Tensioned Concrete Foundations on Expansive Soils referenced in Chapter 18 of the 2016 CBC. In utilizing these parameters, the Foundation Engineer shall design the foundation system in accordance with the allowable deflection criteria of applicable codes and the requirements of the structural designer/architect. Other types of stiff slabs may be used in place of the CBC post-tensioned slab design provided that, in the opinion of the Foundation Structural Designer, the alternative type of slab is at least as stiff and strong as that designed by the CBC/PTI method to resist expansive soils.

The design parameters are recommended based on the anticipated nature of the soil (with respect to expansion potential). Please note that implementation of the design parameters will not eliminate foundation movement (and related distress) should the moisture content of the subgrade soils fluctuate. It is the intent of these recommendations to help maintain the integrity of the proposed structures and reduce (not eliminate) movement, based upon the anticipated site soil conditions. Should future owners not properly maintain the areas surrounding the foundation, for example by overwatering, then highly expansive soils are anticipated at the maximum differential movement of the perimeter of the foundation to the center of the foundation to be on the order of a couple of inches. Soils of lower expansion potential are anticipated to show less movement.

Foundation Subgrade Preparation and Maintenance

Moisture conditioning of the subgrade soils shall be required prior to trenching the foundation. The recommendations specific to the anticipated site soil conditions are presented herein. The subgrade moisture condition of the building pad soils shall be maintained at near-optimum moisture content up to the time of concrete placement. This moisture content shall be maintained around the immediate perimeter of the slab during construction and up to occupancy of the homes.

The geotechnical parameters provided herein assume that if the areas adjacent to the foundation are planted and irrigated, these areas will be designed with proper drainage and adequately maintained so that ponding, which causes significant moisture changes below the foundation, does not occur. Mitigation Measures herein do not account for excessive irrigation and/or incorrect landscape design. Plants shall only be provided with sufficient irrigation for life and not overwatered to saturate subgrade soils. Sunken planters placed adjacent to the foundation, shall either be designed with an efficient drainage system or

liners to prevent moisture infiltration below the foundation. Some lifting of the perimeter foundation beam should be expected even with properly constructed planters.

In addition to the factors mentioned above, future homeowners shall be made aware of the potential negative influences of trees and/or other large vegetation. Roots that extend near the vicinity of foundations can cause distress to foundations. Future homeowners (and the owner's landscape architect) shall not plant trees/large shrubs closer to the foundations than a distance equal to half the mature height of the tree or 20 feet, whichever is more conservative unless specifically provided with root barriers to prevent root growth below the house foundation.

It is the homeowner's responsibility to perform periodic maintenance during hot and dry periods to ensure that adequate watering has been provided to keep soils from separating or pulling back from the foundation. Future homeowners shall be informed and educated regarding the importance of maintaining a constant level of soil-moisture. The homeowners shall be made aware of the potential negative consequences of both excessive watering, as well as allowing potentially expansive soils to become too dry. Expansive soils can undergo shrinkage during drying, and swelling during the rainy winter season or when irrigation is resumed. This can result in distress to building structures and hardscape improvements. The builder shall provide these recommendations to future homeowners.

Slab Underlayment Guidelines
Post-construction moisture migration shall be expected below the foundation. The Foundation Engineer/Architect shall determine whether the use of a capillary break (sand or gravel layer), in conjunction with the vapor retarder, is necessary or required by code. Sand layer thickness and location (above and/or below vapor retarder) shall also be determined by the Foundation Engineer/Architect.

- Soil Bearing and Lateral Resistance
  Provided the provisions of the earthwork-related provisions of the Mitigation Measure are implemented, an allowable soil bearing pressure of 2,000 pounds per square foot (psf) may be used for the design of footings having a minimum width of 12 inches and minimum embedment of 15 inches below lowest adjacent ground surface. This value may be increased by 400 psf for each additional foot of embedment and 400 psf for each additional foot of foundation width to a maximum value of 2,500 psf. These allowable bearing pressures are applicable for level (ground slope equal to or flatter than 5H:1V) conditions only. Bearing values indicated are for total dead loads and frequently applied live loads and may be increased by ⅓ for short duration loading (i.e., wind or seismic loads).

  In utilizing the above-mentioned allowable bearing capacity, and provided the earthwork-related provisions of the Mitigation Measure are implemented, foundation settlement due to static loads is anticipated to be 1 inch. Differential settlement may be taken as ½-inch over a horizontal span of 40 feet.

  Resistance to lateral loads can be provided by friction acting at the base of foundations and by passive earth pressure. For concrete/soil frictional resistance, an allowable coefficient of friction of 0.35 may be assumed with dead-load forces. An allowable passive lateral earth pressure of 270 psf per foot of depth (or pcf) to a maximum of 2,700 psf may be used

for the sides of footings poured against properly compacted fill. Allowable passive pressure may be increased to 360 pcf (maximum of 3,600 psf) for short duration seismic loading. This passive pressure is applicable for level (ground slope equal to or flatter than 5H:1V) conditions. Frictional resistance and passive pressure may be used in combination without reduction. The upper foot of passive resistance shall be neglected if finished grade will not be covered with concrete or asphalt. The provided allowable passive pressures are based on a factor of safety of 1.5 and 1.1 for static and seismic loading conditions, respectively.

- Foundation Setback from Top-of-Slope and Bottom-of-Slope
  Foundations shall have adequate setback from top and bottom of slopes. Per the 2016 CBC, the minimum top-of-slope setback shall be H/3, with a maximum required setback of 40 feet, where H is the total height of the slope. This distance is measured horizontally from the outside bottom edge of the footing to the slope face. As an alternative to moving the building footprint, setback requirements may be accomplished by deepened footings or deep foundations. The minimum bottom-of-slope setback shall be H/2, with a maximum required setback of 15 feet. Refer to Chapter 18 of the 2016 CBC.
- Lateral Earth Pressures for Retaining Walls
  The following lateral earth pressures may be used for the preliminary design of the subject site retaining walls up to approximately 6 feet in height.

  Lateral earth pressures for approved sandy soils which meet indicated Project requirements are provided below. Lateral earth pressures are provided as equivalent fluid unit weights, in psf per foot of depth (or pcf). These values do not contain an appreciable factor of safety; thus, the retaining wall designer shall apply the applicable factors of safety and/or load factors during design. A soil unit weight of 125 pcf may be assumed for calculating the actual weight of soil over the wall footing.

  The following lateral earth pressures are presented in Table 5 of the Geotechnical Evaluation for approved granular soils a maximum of 35 percent fines (passing the No. 200 sieve per ASTM D1140) and an Expansion Index of 20 or less per ASTM D4829. The retaining wall designer shall clearly indicate on the retaining wall plans the required sandy soil backfill. It should be noted that select grading and/or import will be required for the Project. The lateral earth pressures provided above may be increased by a factor of 1.5 for a 2:1 (horizontal to vertical) sloping backfill condition.

  If the wall can yield enough to mobilize the full shear strength of the soil, it can be designed for "active" pressure. If the wall cannot yield under the applied load, the earth pressure will be higher. This shall include 90-degree corners of retaining walls. Such walls shall be designed for "at-rest." The equivalent fluid pressure values assume free-draining conditions. If conditions other than those assumed above are anticipated, the equivalent fluid pressure values shall be provided on an individual-case basis by the Geotechnical Engineer.

  Surcharge loading effects from any adjacent structures shall be evaluated by the retaining wall designer. In general, structural loads within a 1:1 (horizontal to vertical) upward projection from the bottom of the proposed retaining wall footing will surcharge the proposed retaining wall. In addition to the recommended earth pressure, retaining walls

adjacent to streets shall be designed to resist a uniform lateral pressure of 100 psf due to normal street vehicle traffic, if applicable. The retaining wall designer shall contact the Geotechnical Engineer for any required geotechnical input in estimating surcharge loads.

If required, the retaining wall designer may use a seismic lateral earth pressure increment of 5 pcf. This increment shall be applied in addition to the provided static lateral earth pressure using a triangular distribution with the resultant acting at H/3 in relation to the base of the retaining structure (where H is the retained height). Per Section 1803.5.12 of the 2016 CBC, the seismic lateral earth pressure is applicable to structures assigned to Seismic Design Category D through F for retaining wall structures supporting more than 6 feet of backfill height. This seismic lateral earth pressure is estimated using the procedure outlined by the Structural Engineers Association of California.

Retaining wall structures shall be provided with appropriate drainage and appropriately waterproofed. To reduce, but not eliminate, saturation of near-surface (upper approximate 1-foot) soils in front of the retaining walls, the perforated subdrain pipe shall be located as low as possible behind the retaining wall. The outlet pipe shall be sloped to drain to a suitable outlet. In general, and where feasible, retaining wall outlet pipes shall not be connected to area drains. If subdrains are connected to area drains, special care and information shall be provided to homeowners to maintain these drains. Typical retaining wall drainage is illustrated in Figure 2 of the Geotechnical Evaluation. It shall be noted that the recommended subdrain does not provide protection against seepage through the face of the wall and/or efflorescence. Efflorescence is generally a white crystalline powder (discoloration) that results when water containing soluble salts migrates over a period of time through the face of a retaining wall and evaporates. If such seepage or efflorescence is undesirable, retaining walls shall be waterproofed to reduce this potential.

Soil bearing and lateral resistance (friction coefficient and passive resistance) are provided in Mitigation Section, *Soil Bearing and Lateral Resistance*. Earthwork considerations (temporary backcuts, backfill, compaction, etc.) for retaining walls are provided in Mitigation Section, *Site Earthwork*, and the subsequent earthwork related sub-sections.

- Control of Surface Water and Drainage Control

  From a geotechnical perspective, compacted finished grade soils adjacent to proposed residences shall be sloped away from the proposed residence and towards an approved drainage device or unobstructed swale, where feasible. Drainage swales, wherever feasible, shall not be constructed within 5 feet of buildings. Where lot and building geometry necessitates that the side yard drainage swales be routed closer than 5 feet to structural foundations, the use of area drains together with drainage swales shall be used, if feasible. Drainage swales used in conjunction with area drains shall be designed by the Project Civil Engineer so that a properly constructed and maintained system will prevent ponding within 5 feet of the foundation.

  Planters with open bottoms adjacent to buildings shall be avoided. Planters shall not be designed adjacent to buildings unless provisions for drainage, such as catch basins, liners, and/or area drains, are made. Overwatering must be avoided.

- Subsurface Water Infiltration
  Regulatory requirements mandate that storm water be infiltrated below grade rather than collected in a conventional storm drain system. Typically, a combination of methods are implemented to reduce surface water runoff and increase infiltration including; permeable pavements/pavers for roadways and walkways, directing surface water runoff to grass-lined swales, retention areas, and/or drywells, etc.

  It shall be noted that collecting and concentrating surface water for the purpose of intentionally infiltrating below grade conflicts with the geotechnical engineering objective of directing surface water away from slopes, structures and other improvements. The geotechnical stability and integrity of a site is reliant upon appropriately handling surface water. In general, surface water shall not be intentionally infiltrated into the subsurface soils. The developed Project site will consist of compacted fill over dense formational materials. As such, surface water shall not be intentionally infiltrated into subsurface soils on the Project site.

- Preliminary Asphalt Concrete Pavement Sections
  Preliminary testing of the Project site indicated an R-Value of 57. The following provisional minimum asphalt concrete (AC) street sections are provided in Table 6 of the Geotechnical Evaluation based on an assumed R-Value of 40 for Traffic Indices (TI) of 5.5 (or less) and 6.0. These mitigation measures shall be confirmed with R-Value testing of representative near-surface soils at the completion of grading and after underground utilities have been installed and backfilled. Final street sections shall be confirmed by the Project Civil Engineer based upon the final design Traffic Index. If requested, LGC Geotechnical will provide sections for alternate TI values.

  Due to anticipated construction traffic prior to the completion of the Project, if feasible, the total thickness (base course and capping course) of asphalt concrete shall be placed at essentially the same time. Construction traffic loading on only the base course of the asphalt concrete will increase the potential for pavement distress. It shall be noted that construction traffic such as concrete trucks will likely exceed traffic loading after completion of construction. An alternative (i.e., placement of the asphalt concrete capping course at the completion of construction) is to increase the total asphalt concrete thickness indicated above by 1-inch.

  The thicknesses indicated in this Mitigation Measure are for minimum thicknesses. Increasing the thickness of any or all of the above layers will reduce the likelihood of the pavement experiencing distress during its service life. The above measures are based on the assumption that proper maintenance and irrigation of the areas adjacent to the roadway will occur through the design life of the pavement. Failure to maintain a proper maintenance and/or irrigation program may jeopardize the integrity of the pavement.

  Earthwork recommendations regarding aggregate base and subgrade are provided in the previous Mitigation Section, *Site Earthwork*.

- Nonstructural Concrete Flatwork
  Nonstructural concrete flatwork (such as walkways, bicycle trails, patio slabs, etc.) have a potential for cracking due to changes in soil volume related to soil-moisture fluctuations. If feasible and desired, to reduce the potential for excessive cracking and lifting, concrete shall be designed in accordance with the minimum guidelines outlined in Table 7 of the Geotechnical Evaluation. These guidelines will reduce the potential for irregular cracking and promote cracking along construction joints, but will not eliminate all cracking or lifting. Thickening the concrete and/or adding additional reinforcement will further reduce cosmetic distress.

- Pre-Construction Documentation and Construction Monitoring
  A program of documentation and monitoring shall be drafted and considered before the onset of any earthwork. The documentation and monitoring shall include detailed documentation of the existing improvements, buildings, and utilities around the area of proposed grading, with particular attention to any distress that is already present prior to the start of work.

- Geotechnical Plan Review
  When available, grading and foundation plans shall be reviewed by LGC Geotechnical in order to verify the geotechnical Mitigation Measures are implemented. Updated recommendations and/or additional field work may be necessary. Grading, foundation, any other improvement plans, and final Project drawings shall be reviewed by LGC Geotechnical prior to construction to verify that the geotechnical recommendations, provided herein as Mitigation Measure MM 4.6-1, have been appropriately incorporated. Additional or modified geotechnical recommendations may be required based on the proposed design.

- Geotechnical Observation and Testing During Construction
  The recommendations provided in the Geotechnical Evaluation, incorporated herein as Mitigation Measure MM 4.6-1 are based on limited subsurface observations and geotechnical analysis. The interpolated subsurface conditions shall be verified in the field during construction by a representative of LGC Geotechnical. Geotechnical observation and/or testing shall be performed by LGC Geotechnical at the following stages:

  - During grading (removal bottoms, fill placement, etc);
  - During utility trench and retaining wall backfill and compaction;
  - After presoaking building pads and other concrete-flatwork subgrades, and prior to placement of aggregate base or concrete;
  - Preparation of pavement subgrade and placement of aggregate base;
  - After building and wall footing excavation and prior to placing reinforcement and/or concrete; and
  - When any unusual soil conditions are encountered during any construction operation subsequent to issuance of this report.

MM 4.6-2 Prior to the issuance of grading permits, the Project Applicant shall provide a Paleontological Resources Impact Mitigation Program (PRIMP). The following information shall be provided

at a minimum in the PRIMP, in addition to other industry standards and Society of Vertebrate Paleontology standards:

I) Description of the proposed site and planned grading operations;
II) Description of the level of monitoring required for all earth-moving activities;
III) Identification and qualifications of the qualified paleontological monitor to be employed for grading operations monitoring;
IV) Identification of personnel with authority and responsibility to temporarily halt or divert grading equipment to allow for recovery of large specimens;
V) Direction for any fossil discoveries to be immediately reported to the property owner who in turn will immediately notify the Community Development Department of the discovery;
VI) Means and methods to be employed by the paleontological monitor to quickly salvage fossils as they are unearthed to avoid construction delays;
VII) Sampling of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates;
VIII) Procedures and protocol for collecting and processing of samples and specimens;
IX) Fossil identification and curation procedures to be employed;
X) Identification of the permanent repository to receive any recovered fossil material;
XI) All pertinent exhibits, maps and references;
XII) Procedures for reporting of findings; and
XIII) Identification and acknowledgement of the developer for the content of the PRIMP as well as acceptance of financial responsibility for monitoring, reporting and curation fees. The property owner and/or applicant on whose land the paleontological fossils are discovered shall provide appropriate funding for monitoring, reporting, delivery and curating the fossils at the institution where the fossils will be placed, and will provide confirmation to the City that such funding has been paid to the institution.

All reports shall be signed by the Project Paleontologist and all other professionals responsible for the report's content (e.g. Professional Geologist), as appropriate. One original signed copy of the report(s) shall be submitted to the office of the Community Development Department along with a copy of this Mitigation Measure and the grading plan for appropriate case processing and tracking.

MM 4.6-3 Prior to the issuance of grading permits, the Project Applicant shall retain a qualified Project Paleontologist or Paleontological Monitor to manage and oversee mass grading and excavation activities in areas identified as having a "high" sensitivity to contain paleontological resources. Monitoring shall occur in accordance with the approved PRIMP required pursuant to Mitigation Measure MM 4.6-2. Monitoring shall be conducted full-time in areas of grading or excavation in undisturbed surficial exposures of Old and Very Old Alluvial Deposits, as shown on Figure 2 (Geology Map) of the Project's *Paleontological Resources Assessment* (*Technical Appendix F3*). Paleontological monitors shall be equipped to salvage fossils as they are unearthed to minimize construction delays and to remove samples of sediment that are likely to contain the remains of small fossil invertebrates and vertebrates. Ground-disturbing activities in rocks with no paleontological sensitivity (the Granodiorite to Tonalite of the Domenigoni Valley Pluton, Gabbro, or Intermixed Mesozoic Schist and Cretaceous Granitic Rocks) do not require paleontological monitoring. The Project Applicant shall provide written verification that a City of Menifee-certified Paleontologist or Paleontological Monitor has been

retained to manage and oversee mass grading and excavation activities in areas identified as having a "high" sensitivity to contain paleontological resources. This verification shall be presented in a letter from the Paleontologist or Paleontological Monitor to the City of Menifee Planning Division.

MM 4.6-4 In the event that a previously unidentified paleontological resource is discovered on the Project site, the Paleontological Monitor shall have the authority to temporarily redirect construction away from the area of the find in order to assess its significance. In the event that paleontological resources are encountered when a Paleontological Monitor is not present, work in the immediate area of the find shall be redirected and a Paleontologist shall be contacted to assess the find for significance. If determined to be significant, the fossil shall be collected from the field. Preparation of recovered specimens to a point of identification and permanent preservation, including screen-washing of sediments to recover small invertebrates and vertebrates, if indicated by the results of test sampling. Preparation of individual vertebrate fossils is often more time-consuming than for accumulations of invertebrate fossils. Any and all fossils encountered during Project grading activities will be deposited at a museum repository, such as the Western Science Center Museum on Searl Parkway in Hemet, Riverside County, California. All costs of the paleontological monitoring and mitigation program, including any one-time charges by the receiving institution, are the responsibility of the Project Applicant. Evidence of compliance with this mitigation measure, if a paleontological resource is found, shall be provided to the City of Menifee prior the issuance of any certificate of occupancy if such resources are found on-site.

MM 4.6-5 If any paleontological material is discovered on the property, all paleontological material collected during the grading monitoring program shall be prepared to the point of identification, identified to the lowest taxonomic level possible, cataloged, and curated into the permanent collections at the Western Science Center, or other approved museum repository. The collections and associated records shall be transferred, including title, to an appropriate curation facility, to be accompanied by payment of the fees necessary for permanent curation, Evidence of compliance with this mitigation measure shall be provided to the City of Menifee Planning Division in the form of a report of findings by the Project Paleontologist to document the results of the monitoring program and indicate the curation facility received the paleontological materials and that all fees have been paid.

MM 4.6-6 Prior to the issuance of the first certificate of occupancy, in the event any resources are found on-site during construction activities, a final monitoring and mitigation report of findings and significance documenting the field and analysis results, and interpreting the artifact and research data within the research context, shall be completed and submitted to the satisfaction of the City of Menifee. The report shall include (at a minimum) the following: lists of all fossils recovered and necessary maps and graphics to accurately record their original location. A letter documenting receipt and acceptance of all fossil collections by the receiving institution must be included in the final report. A final copy of the report shall be submitted to the City of Menifee Planning Division and the Project Applicant.

4.6.8 Significance of Impacts After Mitigation

Threshold a: Less-than-Significant Impact with Mitigation Incorporated. Implementation of City Regulations and Design Requirements CRDR 4.6-1 and CRDR 4.6-2 would ensure the Project adheres to the California

Building Code. Implementation of Mitigation Measure MM 4.6-1 would ensure that the Project implements the recommendations of the Project's Geotechnical Study (*Technical Appendix F1*), which would ensure measures are implemented to address potential impacts due to strong seismic ground shaking, seismic-related ground failure, and landslides. With implementation of the required mitigation, potential impacts including the risk of loss, injury, or death involving strong seismic ground shaking, seismic-related ground failure, and landslides would be reduced to less-than-significant levels.

Threshold c: Less-than-Significant Impact with Mitigation Incorporated. Implementation of Mitigation Measure MM 4.6-1 would ensure that the Project implements the recommendations of the Project's Geotechnical Study (*Technical Appendix F1*), which would ensure measures are implemented to address potential impacts associated with landslides, lateral spreading, subsidence, liquefaction, and collapse. With implementation of the required mitigation, substantial adverse effects associated with landslides, lateral spreading, subsidence, liquefaction, and collapse would be reduced to less-than-significant levels.

Threshold d: Less-than-Significant Impact with Mitigation Incorporated. Implementation of Mitigation Measure MM 4.6-1 would ensure that the Project implements the recommendations of the Project's Geotechnical Study (*Technical Appendix F1*), which would ensure measures are implemented to address potential impacts due to the Project being located on expansive soil. With implementation of the required mitigation, potential substantial adverse effects due to the Project being located on expansive soil would be reduced to less-than-significant levels.

Threshold f: Less-than-Significant Impact with Mitigation Incorporated. Implementation of Regulatory Requirements would ensure compliance with CA Public Resources Codes that prohibit the removal, destruction, injury, and defacing of pre-historic resources. Implementation of Mitigation Measures MM 4.6-2 through MM 4.6-6 would ensure the proper identification and subsequent treatment of any paleontological resources that may be encountered during ground-disturbing activities associated with implementation of the Project. Therefore, with implementation of Mitigation Measures MM 4.6-2 through MM 4.6-6, the Project's direct and cumulative impacts to paleontological resources would be reduced to less-than-significant levels.

4.7 GREENHOUSE GAS EMISSIONS

The analysis in this Subsection is based in part on a greenhouse gas (GHG) analysis prepared for the Project by Urban Crossroads, Inc., titled, "Legado Specific Plan Greenhouse Gas Analysis" (herein, "GHGA"), dated August 16, 2019, and appended to this EIR as *Technical Appendix G*. (Urban Crossroads, 2019b)

4.7.1 EXISTING CONDITIONS

A. Introduction to Global Climate Change

Global Climate Change (GCC) is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. GCC 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 GCC is occurring naturally or as a result of human activity. Some data suggests that GCC 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 GCC 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. (Urban Crossroads, 2019b, p. 11)

An individual project like the Project cannot generate enough greenhouse gas emissions to effect a discernible change in global climate. However, the Project may participate in the potential for GCC by its incremental contribution of greenhouse gasses combined with the cumulative increase of all other sources of greenhouse gases, which when taken together constitute potential influences on GCC. (Urban Crossroads, 2019b, p. 11)

Global Climate Change (GCC) refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation, and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO_2 (Carbon Dioxide), N_2O (Nitrous Oxide), CH_4 (Methane), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (F_6S). These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the Earth's atmosphere, but prevent radioactive heat from escaping, thus warming the Earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages. According to the California Air Resources Board (CARB), the climate change since the industrial revolution differs from previous climate changes in both rate and magnitude. (Urban Crossroads, 2019b, p. 8)

Gases that trap heat in the atmosphere are often referred to as greenhouse gases. Greenhouse gases are released into the atmosphere by both natural and anthropogenic (human) activity. Without the natural greenhouse gas effect, the Earth's average temperature would be approximately 61° Fahrenheit (F) cooler than it is currently. The cumulative accumulation of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature. (Urban Crossroads, 2019b, p. 8)

B. Greenhouse Gas Inventories

Global

Worldwide anthropogenic (human) 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). Human GHG emissions data for Annex I nations are available through 2017. For the Year 2017, the sum of these emissions totaled approximately 29,216,501 gigatonnes (Gg) CO_2e. The GHG emissions in more recent years may differ from the inventories presented in Table 4.7-1, *Top GHG Producer Countries and the European Union*; however, the data is representative of currently available inventory data. (Urban Crossroads, 2019b, p. 15)

Table 4.7-1 Top GHG Producer Countries and the European Union

Emitting Countries	GHG Emissions (Gg CO_2e)
China	11,911,710
United States	6,456,718
European Union (28-member countries)	4,323,163
India	3,079,810
Russian Federation	2,155,470
Japan	1,289,630
Total	**29,216,501**

Note: Gg – gigagram
(Urban Crossroads, 2019b, Table 2-2)

United States

As noted in Table 4.7-1, the United States, as a single country, was the number two producer of GHG emissions in 2017. The primary greenhouse gas emitted by human activities in the United States was CO_2, representing approximately 81.6 percent of total greenhouse gas emissions. Carbon dioxide from fossil fuel combustion, the largest source of US greenhouse gas emissions, accounted for approximately 93.5 percent of the CO_2 emissions. (Urban Crossroads, 2019b, p. 14)

State of California

California has significantly slowed the rate of growth of greenhouse gas emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls but is still a substantial contributor to the U.S. emissions inventory total. CARB compiles GHG inventories for the State of California. Based upon the 2018 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2016 greenhouse gas emissions inventory, California emitted 429.4 Million Metric Tons of CO_2e ($MMTCO_2e$) including emissions resulting from imported electrical power in 2015. (Urban Crossroads, 2019b, p. 15)

C. Greenhouse Gases

For the purposes of analysis, emissions of CO_2, CH_4, and NO_2 were evaluated because these gasses are the primary contributors to GCC from development projects. Although other substances such as fluorinated gases also contribute to GCC, sources of fluorinated gases are not well-defined and no accepted emissions factors or methodology exist to accurately calculate these gases. (Urban Crossroads, 2019b, p. 12)

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. (Urban Crossroads, 2019b, p. 14)

The atmospheric lifetime and GWP of selected greenhouse gases are summarized at Table 4.7-2, *Global Warming Potential and Atmospheric Lifetime of Select GHGs*. As shown in Table 4.7-2, GWP for the Second Assessment Report (SAR), the Intergovernmental Panel on Climate Change (IPCC)'s scientific and socio-economic assessment on climate change, range from 1 for carbon dioxide to 23,900 for sulfur hexafluoride and GWP for the IPCC's Fifth Assessment Report range from 1 for carbon dioxide to 23,500 for SF_6. (Urban Crossroads, 2019b, pp. 14-15)

Table 4.7-2 Global Warming Potential and Atmospheric Lifetime of Select GHGs

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)	
		Second Assessment	5th Assessment Report
CO_2	See*	1	1
CH_4	12 .4	21	28
N_2O	121	310	265
HFC-23	222	11,700	12,400
HFC-134a	13.4	1,300	1,300
HFC-152a	1.5	140	138
SF_6	3,200	23,900	23,500

*As per Appendix 8.A. of IPCC's 5th Assessment Report (AR5), no single lifetime can be given.
Source: Table 2.14 of the IPCC Fourth Assessment Report, 2007
(Urban Crossroads, 2019b, Table 2-1)

Provided below is a discussion of greenhouse gases.

- 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. (Urban Crossroads, 2019b, p. 12)

  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 would continue is unknown as there are also dynamics that hold the positive feedback loop in check. (Urban Crossroads, 2019b, p. 12)

As an example, when water vapor increases in the atmosphere, more of it would eventually condense into clouds, which are abler to reflect incoming solar radiation (thus allowing less energy to reach the Earth's surface and heat it up). There are no human 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. (Urban Crossroads, 2019b, p. 12)

- Carbon Dioxide: Carbon dioxide (CO_2) is an odorless and colorless GHG. Outdoor levels of carbon dioxide are not high enough to result in negative health effects. Carbon dioxide is emitted from natural and manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: the burning of coal, oil, natural gas, and wood. Carbon dioxide is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks. (Urban Crossroads, 2019b, p. 12)

  Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, CO_2 concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30 percent. Left unchecked, the concentration of carbon dioxide in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources. (Urban Crossroads, 2019b, pp. 12-13)

- Methane: Methane (CH_4) is an extremely effective absorber of radiation, although its atmospheric concentration is less than carbon dioxide and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs. Exposure to high levels of methane can cause asphyxiation, loss of consciousness, headache and dizziness, nausea and vomiting, weakness, loss of coordination, and an increased breathing rate. (Urban Crossroads, 2019b, p. 13)

  Methane has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropocentric sources include fossil-fuel combustion and biomass burning. (Urban Crossroads, 2019b, p. 13)

- Nitrous Oxide: Nitrous oxide (N_2O), also known as laughing gas, is a colorless greenhouse gas. Nitrous oxide can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's Lesions (brain damage). (Urban Crossroads, 2019b, p. 13)

  Concentrations of nitrous oxide also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb). Nitrous oxide is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is

used as an aerosol spray propellant, i.e., in whipped cream bottles. It is also used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. Nitrous oxide can be transported into the stratosphere, be deposited on the Earth's surface, and be converted to other compounds by chemical reaction. (Urban Crossroads, 2019b, p. 13)

- Chlorofluorocarbons: Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs are no longer being used; therefore, it is not likely that health effects would be experienced. Nonetheless, in confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation. (Urban Crossroads, 2019b, p. 13)

  CFCs have no natural source, but were first synthesized in 1928. They were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and was extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs would remain in the atmosphere for over 100 years. (Urban Crossroads, 2019b, p. 13)

- Hydrofluorocarbons: Hydrofluorocarbons (HFCs) are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all the greenhouse gases, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF_3), HFC-134a (CH_2FCF), and HFC-152a (CH_3CF_2). Prior to 1990, the only significant emissions were of HFC-23. HFC-134a emissions are increasing due to its use as a refrigerant. No health effects are known to result from exposure to HFCs, which are manmade for applications such as automobile air conditioners and refrigerants. (Urban Crossroads, 2019b, p. 14)

- Perfluorocarbons: Perfluorocarbons (PFCs) have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur about 60 kilometers above Earth's surface, are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). The U.S. EPA estimates that concentrations of CF_4 in the atmosphere are over 70 ppt. (Urban Crossroads, 2019b, p. 14)

  No health effects are known to result from exposure to PFCs. The two main sources of PFCs are primary aluminum production and semiconductor manufacture. (Urban Crossroads, 2019b, p. 14)

- Sulfur Hexafluoride: Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (23,900). The U.S. EPA indicates that concentrations in the 1990s were about 4 ppt. In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing. (Urban Crossroads, 2019b, p. 14)

  Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection. (Urban Crossroads, 2019b, p. 14)

- Nitrogen Trifluoride: Nitrogen trifluoride (NF_3) is a colorless gas with a distinctly moldy odor. NF_3 is used in industrial processes and is produced in the manufacture of semiconductors and LCD (Liquid Crystal Display) panels, and types of solar panels and chemical lasers. The World Resources Institute (WRI) indicates that NF3 has a 100-year GWP of 17,200. Long-term or repeated exposure may affect the liver and kidneys and may cause fluorosis. (Urban Crossroads, 2019b, p. 14)

- Carbon Dioxide Equivalent: Carbon dioxide equivalent (CO_2e) is a term used for describing the difference greenhouse gases in a common unit. CO_2e signifies the amount of CO_2 which would have the equivalent global warming potential. (Urban Crossroads, 2019b, p. 14)

D. Effects of Climate Change in California

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 difficult 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 more frequent if GHG emissions are not significantly reduced. (Urban Crossroads, 2019b, p. 16)

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. (Urban Crossroads, 2019b, p. 16)

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. (Urban Crossroads, 2019b, p. 17)

If temperatures continue to increase, 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. How much snowpack 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. (Urban Crossroads, 2019b, p. 17)

The State's water supplies are also at risk from rising sea levels. An influx of saltwater 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 fresh water supply. (Urban Crossroads, 2019b, p. 17)

Agriculture

Increased temperatures 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 needed. 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 O_3 pollution, which makes plants more susceptible to disease and pests and interferes with plant growth. (Urban Crossroads, 2019b, p. 17)

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. (Urban Crossroads, 2019b, p. 17)

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. (Urban Crossroads, 2019b, p. 17)

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. (Urban Crossroads, 2019b, p. 18)

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. (Urban Crossroads, 2019b, p. 18)

Rising Sea Levels

Rising sea levels, more intense coastal storms, and warmer water temperatures could increasingly threaten the state's coastal regions. Under the higher warming range scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate low-lying coastal areas with saltwater, accelerate

coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. Under the lower warming range scenario, sea level could rise 12-14 inches. (Urban Crossroads, 2019b, p. 18)

E. Human Health Effects

The potential health effects related directly to the emissions of carbon dioxide, methane, and nitrous oxide as they relate to development projects such as the Project are still being debated in the scientific community. Their cumulative effects to global climate change have the potential to cause adverse effects to human health. Increases in Earth's ambient temperatures would result in more intense heat waves, causing more heat-related deaths. Scientists also purport that higher ambient temperatures would increase disease survival rates and result in more widespread disease. Climate change would likely cause shifts in weather patterns, potentially resulting in devastating droughts and food shortages in some areas. Figure 4.7-1, *Summary of Projected Global Warming Impact, 2070-2099 (As Compared With 1961-1990)*, presents the potential impacts of global warming. (Urban Crossroads, 2019b, p. 18)

Specific health effects associated with directly emitted GHG emissions are discussed below.

- Water Vapor: There are no known direct health effects related to water vapor at this time. It should be noted however that when some pollutants react with water vapor, the reaction forms a transport mechanism for some of these pollutants to enter the human body through water vapor. (Urban Crossroads, 2019b, p. 18)

- Carbon Dioxide: According to the National Institute for Occupational Safety and Health (NIOSH) high concentrations of carbon dioxide can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of carbon dioxide in the earth's atmosphere are estimated to be approximately 370 ppm, the actual reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek and short-term reference exposure levels of 30,000 ppm averaged over a 15-minute period. (Urban Crossroads, 2019b, pp. 18-19)

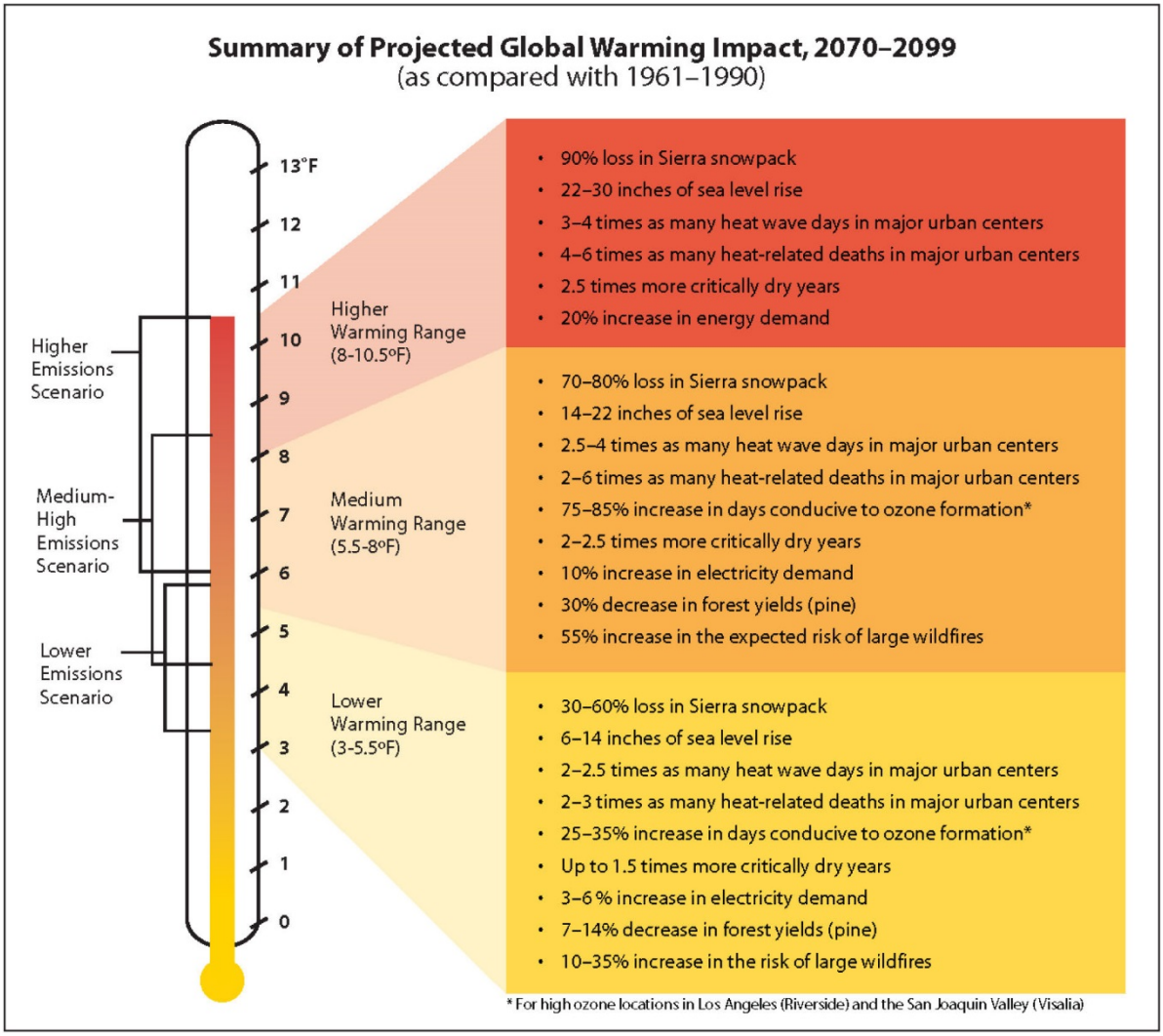
- Methane: Methane is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Methane is also an asphyxiant and may displace oxygen in an enclosed space. (Urban Crossroads, 2019b, p. 19)

- Nitrous Oxide: Nitrous Oxide is often referred to as laughing gas; it is a colorless greenhouse gas. The health effects associated with exposure to elevated concentrations of nitrous oxide include dizziness, euphoria, slight hallucinations, and in extreme cases of elevated concentrations nitrous oxide can also cause brain damage. (Urban Crossroads, 2019b, pp. 19-20)

- Fluorinated Gases: High concentrations of fluorinated gases can also result in adverse health effects such as asphyxiation, dizziness, headache, cardiovascular disease, cardiac disorders, and in extreme cases, increased mortality. (Urban Crossroads, 2019b, p. 20)

- Aerosols: The health effects of aerosols are similar to that of other fine particulate matter. Thus, aerosols can cause elevated respiratory and cardiovascular diseases as well as increased mortality. (Urban Crossroads, 2019b, p. 20)

Figure 4.7-1 Summary of Projected Global Warming Impact, 2070-2099 (As Compared With 1961-1990)



(Urban Crossroads, 2019b, Exhibit 2-A)

4.7.2 Applicable Regulatory Requirements

The following is a brief description of the federal, state, and local environmental laws and related regulations related to GHG emissions. A more detailed discussion of the regulatory setting as it pertains to GHGs is provided in Subsection 2.7 of the Project's GHGA (*Technical Appendix G*).

A. International Regulations

1. Kyoto Protocol

The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change, which commits its Parties by setting internationally binding emission reduction targets. Recognizing that developed countries are principally responsible for the current high levels of GHG emissions in the atmosphere as a result of more than 150 years of industrial activity, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities." (UNFCCC, n.d.)

The Kyoto Protocol was adopted in Kyoto, Japan, on December 11, 1997 and entered into force on February 16, 2005. The detailed rules for the implementation of the Protocol were adopted at Conference of the Parties (COP) 7 in Marrakesh, Morocco, in 2001, and are referred to as the "Marrakesh Accords." Its first commitment period started in 2008 and ended in 2012. (UNFCCC, n.d.)

In Doha, Qatar, on December 8, 2012, the "Doha Amendment to the Kyoto Protocol" was adopted. The amendment includes:

- New commitments for Annex I Parties to the Kyoto Protocol who agreed to take on commitments in a second commitment period from January 1, 2013 to December 31, 2020;
- A revised list of GHGs to be reported on by Parties in the second commitment period; and
- Amendments to several articles of the Kyoto Protocol which specifically referenced issues pertaining to the first commitment period and which needed to be updated for the second commitment period. (UNFCCC, n.d.)

On December 21, 2012, the amendment was circulated by the Secretary-General of the United Nations, acting in his capacity as Depositary, to all Parties to the Kyoto Protocol in accordance with Articles 20 and 21 of the Protocol. (UNFCCC, n.d.)

During the first commitment period, 37 industrialized countries and the European Community committed to reduce GHG emissions to an average of five percent against 1990 levels. During the second commitment period, Parties committed to reduce GHG emissions by at least 18 percent below 1990 levels in the eight-year period from 2013 to 2020; however, the composition of Parties in the second commitment period is different from the first. (UNFCCC, n.d.)

2. The Paris Agreement

The Paris Agreement builds upon the Convention and – for the first time – brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. As such, it charts a new course in the global climate effort. (UNFCCC, n.d.)

The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change. To reach these ambitious goals, appropriate financial flows, a new technology framework and an enhanced capacity building framework will be put in place, thus supporting action by developing countries and the most vulnerable countries, in line with their own national objectives. The Agreement also provides for enhanced transparency of action and support through a more robust transparency framework. (UNFCCC, n.d.)

The Paris Agreement requires all Parties to put forward their best efforts through "nationally determined contributions" (NDCs) and to strengthen these efforts in the years ahead. This includes requirements that all Parties report regularly on their emissions and on their implementation efforts. (UNFCCC, n.d.)

In 2018, Parties will take stock of the collective efforts in relation to progress towards the goal set in the Paris Agreement and to inform the preparation of NDCs. There will also be a global stock-taking every five years

to assess the collective progress towards achieving the purpose of the Agreement and to inform further individual actions by Parties. (UNFCCC, n.d.)

The Paris Agreement entered into force on November 4, 2016, thirty days after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55% of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval, or accession with the Depositary. (UNFCCC, n.d.)

On June 2, 2017 President Donald Trump announced his intention to withdraw from the Paris Agreement. It should be noted that under the terms of the agreement, the United Sates cannot formally announce its resignation until November 4, 2019. Subsequently, withdrawal would be effective one year after notification in 2020. (Urban Crossroads, 2019b, pp. 21-22)

B. Federal Regulations

1. Clean Air Act

Coinciding with the 2009 meeting of international leaders in Copenhagen, on December 7, 2009, the EPA issued an Endangerment Finding under § 202(a) of the Clean Air Act (CAA), opening the door to federal regulation of GHGs. The Endangerment Finding notes that GHGs threaten public health and welfare and are subject to regulation under the CAA. To date, the EPA has not promulgated regulations on GHG emissions, but it has begun to develop them.

Previously the EPA had not regulated GHGs under the CAA because it asserted that the Act did not authorize it to issue mandatory regulations to address GCC and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. In Massachusetts v. Environmental Protection Agency et al. (127 S. Ct. 1438 [2007]); however, the U.S. Supreme Court held that GHGs are pollutants under the CAA and directed the EPA to decide whether the gases endangered public health or welfare. The EPA had also not moved aggressively to regulate GHGs because it expected Congress to make progress on GHG legislation, primarily from the standpoint of a cap-and-trade system. However, proposals circulated in both the House of Representative and Senate have been controversial and it may be some time before the U.S. Congress adopts major climate change legislation. The EPA's Endangerment Finding paves the way for federal regulation of GHGs with or without Congress.

2. GHG Endangerment

In *Massachusetts v. Environmental Protection Agency* 549 U.S. 497 (2007), decided on April 2, 2007, the Supreme Court found that four GHGs, including carbon dioxide, are air pollutants subject to regulation under Section 202(a)(1) of the Clean Air Act. The Court held that the EPA Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act: (Urban Crossroads, 2019b, p. 22)

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs – carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride – in the atmosphere threaten the public health and welfare of current and future generations. (Urban Crossroads, 2019b, p. 22)

- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare. (Urban Crossroads, 2019b, p. 22)

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section "Clean Vehicles" below. After a lengthy legal challenge, the U.S. Supreme Court declined to review an Appeals Court ruling that upheld the EPA Administrator's findings. (Urban Crossroads, 2019b, p. 22)

3. Clean Vehicles

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the U.S. On April 1, 2010, the EPA and the Department of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the U.S. (Urban Crossroads, 2019b, p. 22)

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards would cut carbon dioxide emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the National Highway Safety Administration issued final rules on a second-phase joint rulemaking establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012. The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and medium duty passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 miles per gallon (mpg) if achieved exclusively through fuel economy improvements. (Urban Crossroads, 2019b, pp. 22-23)

The EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks and buses on September 15, 2011, effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20 percent reduction in carbon dioxide emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10-percent reduction for gasoline vehicles and a 15 percent reduction for diesel vehicles by the 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10 percent reduction in fuel consumption and carbon dioxide emissions from the 2014 to 2018 model years. (Urban Crossroads, 2019b, p. 23)

On April 2, 2018, the US EPA signed the Mid-term Evaluation Final Determination, which finds that the model year 2022-2025 greenhouse gas standards are not appropriate and should be revised. This Final Determination serves to initiate a notice to further consider appropriate standards for model year 2022-2025 light-duty vehicles. On August 24, 2018, the USEPA and NHTSA published a proposal to freeze the model year 2020 standards through model year 2026 and to revoke California's waiver under the Clean Air Act to establish more stringent standards. (Urban Crossroads, 2019b, p. 23)

4. Mandatory Reporting of GHGs

The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of GHGs Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the U.S. and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the EPA. (Urban Crossroads, 2019b, p. 23)

5. New Source Review

The EPA issued a final rule on May 13, 2010, that establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these Clean Air Act permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the Federal Code of Regulations, the EPA states: (Urban Crossroads, 2019b, p. 23)

> This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the Clean Air Act, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to GHG sources, starting with the largest GHG emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for GHG emissions until at least April 30, 2016. (Urban Crossroads, 2019b, pp. 23-24)

The EPA estimates that facilities responsible for nearly 70 percent of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities. (Urban Crossroads, 2019b, p. 24)

6. Standards of Performance for GHG Emissions for New Stationary Sources: Electric Utility Generating Units

As required by a settlement agreement, the EPA proposed new performance standards for emissions of carbon dioxide for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. New sources greater than 25 megawatts would be required to meet an output-based standard of 1,000 pounds of carbon dioxide per megawatt-hour, based on the performance of widely used natural gas combined cycle technology. It should be noted that on February 9, 2016 the U.S. Supreme Court issued a stay of this regulation pending litigation. Additionally, the current EPA Administrator has also signed a measure to repeal the Clean Power Plan, including the CO_2 standards. (Urban Crossroads, 2019b, p. 24)

7. Cap and Trade

Cap and trade refers to a policy tool where emissions are limited to a certain amount and can be traded, or provides flexibility on how the emitter can comply. Successful examples in the U.S. include the Acid Rain Program and the NO_X Budget Trading Program and Clean Air Interstate Rule in the northeast. There is no

federal GHG cap and trade program currently; however, some states have joined to create initiatives to provide a mechanism for cap and trade. (Urban Crossroads, 2019b, p. 24)

The Regional GHG Initiative is an effort to reduce GHGs among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. Each state caps carbon dioxide emissions from power plants, auctions carbon dioxide emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008. (Urban Crossroads, 2019b, p. 24)

The Western Climate Initiative partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15 percent below 2005 levels by 2020. The partners were originally California, British Columbia, Manitoba, Ontario, and Quebec. However, Manitoba and Ontario are not currently participating. California linked with Quebec's cap and trade system January 1, 2014, and joint offset auctions took place in 2015. (Urban Crossroads, 2019b, p. 24)

8. SmartWay Program

The SmartWay Program is a public-private initiative between the EPA, large and small trucking companies, rail carriers, logistics companies, commercial manufacturers, retailers, and other federal and state agencies. Its purpose is to improve fuel efficiency and the environmental performance (reduction of both GHG emissions and air pollution) of the goods movement supply chains. SmartWay is comprised of four components: (Urban Crossroads, 2019b, pp. 24-25)

1. SmartWay Transport Partnership: A partnership in which freight carriers and shippers commit to benchmark operations, track fuel consumption, and improve performance annually.
2. SmartWay Technology Program: A testing, verification, and designation program to help freight companies identify equipment, technologies, and strategies that save fuel and lower emissions.
3. SmartWay Vehicles: A program that ranks light-duty cars and small trucks and identifies superior environmental performers with the SmartWay logo.
4. SmartWay International Interests: Guidance and resources for countries seeking to develop freight sustainability programs modeled after SmartWay.

SmartWay effectively refers to requirements geared towards reducing fuel consumption. Most large trucking fleets driving newer vehicles are compliant with SmartWay design requirements. Moreover, over time, all heavy-duty trucks will have to comply with the CARB GHG Regulation that is designed with the SmartWay Program in mind, to reduce GHG emissions by making them more fuel-efficient. For instance, in 2015, 53-foot or longer dry vans or refrigerated trailers equipped with a combination of SmartWay-verified low-rolling resistance tires and SmartWay-verified aerodynamic devices would obtain a total of 10 percent or more fuel savings over traditional trailers. (Urban Crossroads, 2019b, p. 25)

Through the SmartWay Technology Program, the EPA has evaluated the fuel saving benefits of various devices through grants, cooperative agreements, emissions and fuel economy testing, demonstration projects and technical literature review. As a result, the EPA has determined the following types of technologies provide fuel saving and/or emission reducing benefits when used properly in their designed applications, and has verified certain products: (Urban Crossroads, 2019b, p. 25)

- Idle reduction technologies – less idling of the engine when it is not needed would reduce fuel consumption.
- Aerodynamic technologies minimize drag and improve airflow over the entire tractor-trailer vehicle. Aerodynamic technologies include gap fairings that reduce turbulence between the tractor and trailer, side skirts that minimize wind under the trailer, and rear fairings that reduce turbulence and pressure drop at the rear of the trailer.
- Low rolling resistance tires can roll longer without slowing down, thereby reducing the amount of fuel used. Rolling resistance (or rolling friction or rolling drag) is the force resisting the motion when a tire rolls on a surface. The wheel will eventually slow down because of this resistance.
- Retrofit technologies include things such as diesel particulate filters, emissions upgrades (to a higher tier), etc., which would reduce emissions.
- Federal excise tax exemptions.

C. State Regulations

1. Title 24 Building Energy Standards

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods. The latest revisions (2013 Building Energy Efficiency Standards) were adopted in 2012 and became effective on July 1, 2014. The 2013 Building Energy Efficiency Standards are 25 percent more efficient than the previous Building Energy Efficiency Standards for residential construction and 30 percent more efficient than the previous Standards for nonresidential construction.

Part 11 of Title 24 is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality." The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC). Unless otherwise noted in the regulation, all newly constructed buildings in California are subject of the requirements of the CALGreen Code.

2. California Assembly Bill No. 1493 (AB 1493)

On September 24, 2009, CARB adopted amendments to the "Pavley" regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016. These amendments are part of California's commitment toward a nation-wide program to reduce new passenger vehicle GHGs from 2012 through 2016. CARB's September amendments cement California's enforcement of the Pavley rule starting in 2009 while providing vehicle manufacturers with new compliance flexibility. The amendments also prepare California to harmonize its rules with the federal rules for passenger vehicles. (CARB, 2017a)

The U.S. EPA granted California the authority to implement GHG emission reduction standards for new passenger cars, pickup trucks, and sport utility vehicles On June 30, 2009. The first California request to implement GHG standards for passenger vehicles, known as a waiver request, was made in December 2005, and was denied by the EPA in March 2008. That decision was based on a finding that California's request to reduce GHG emissions from passenger vehicles did not meet the CAA requirement of showing that the waiver was needed to meet "compelling and extraordinary conditions." (CARB, 2017a)

CARB's Board originally approved regulations to reduce GHGs from passenger vehicles in September 2004, with the regulations to take effect in 2009. These regulations were authorized by the 2002 legislation Assembly Bill 1493 (Pavley). (CARB, 2017a)

The regulations had been threatened by automaker lawsuits and were stalled by the EPA's delay in reviewing and then initially denying California's waiver request. The parties involved entered a May 19, 2009 agreement to resolve these issues. With the granting of the waiver on June 30, 2009, it is expected that the Pavley regulations reduced GHG emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016, all while improving fuel efficiency and reducing motorists' costs. (CARB, 2017a)

The CARB has adopted a new approach to passenger vehicles – cars and light trucks – by combining the control of smog-causing pollutants and greenhouse gas emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California. (CARB, 2017a)

3. Executive Order S-3-05

Executive Order (EO) S-3-05 establishes GHG emission reduction targets, creates the Climate Action Team and directs the Secretary of the California EPA to coordinate efforts with meeting the targets with the heads of other state agencies. The EO requires the Secretary to report back to the Governor and Legislature biannually on progress toward meeting the GHG targets, GHG impacts to California, Mitigation, and Adaptation Plans. EO S-3-05 requires that by 2010, GHG emissions must be reduced to 2000 levels; by 2020, GHG emissions must be reduced to 1990 levels; and by 2050, GHG emissions must be reduced to 80 percent below 1990 levels. (CCC, n.d.)

4. California Assembly Bill 32 – Global Warming Solutions Act of 2006

In September 2006, former Governor Schwarzenegger signed Assembly Bill 32 (AB 32), the California Climate Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020, which represents a reduction of approximately 15 percent below emissions expected under a "business as usual" scenario. Pursuant to AB 32, the CARB must adopt regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. The full implementation of AB 32 will help mitigate risks associated with climate change, while improving energy efficiency, expanding the use of renewable energy resources, cleaner transportation, and reducing waste. (CARB, 2014)

AB 32 specifically requires that CARB shall do the following:

- Prepare and approve a Scoping Plan for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions from sources or categories of sources of GHGs by 2020, and update the Scoping Plan every five years.
- Maintain and continue reductions in emissions of GHG beyond 2020.

- Identify the statewide level of GHG emissions in 1990 to serve as the emissions limit to be achieved by 2020.
- Identify and adopt regulations for discrete early actions that could be enforceable on or before January 1, 2010.
- Adopt a regulation that establishes a system of market-based declining annual aggregate emission limits for sources or categories of sources that emit GHG emissions.
- Convene an Environmental Justice Advisory Committee to advise the Board in developing and updating the Scoping Plan and any other pertinent matter in implementing AB 32.
- Appoint an Economic and Technology Advancement Advisory Committee to provide recommendations for technologies, research, and GHG emission reduction measures. (CARB, 2014)

In November 2007, CARB completed its estimates of 1990 GHG levels. Net emission 1990 levels were estimated at 427 MMTs (emission sources by sector were: transportation – 35 percent; electricity generation – 26 percent; industrial – 24 percent; residential – 7 percent; agriculture – 5 percent; and commercial – 3 percent). Accordingly, 427 $MMTCO_2e$ equivalent was established as the emissions limit for 2020. For comparison, CARB's estimate for baseline GHG emissions was 473 $MMTCO_2e$ for 2000 and 532 $MMTCO_2e$ for 2010. "Business as usual" conditions (without the reductions to be implemented by CARB regulations) for 2020 were projected to be 596 $MMTCO_2e$. (CARB, 2007)

AB 32 requires CARB to develop a Scoping Plan which lays out California's strategy for meeting the goals. The Scoping Plan must be updated every five years. In December 2008, the Board approved the initial Scoping Plan, which included a suite of measures to sharply cut GHG emissions. Table 4.7-3, *Scoping Plan GHG Reduction Measures Towards 2020 Target*, shows the proposed reductions from regulations and programs outlined in the Scoping Plan. While local government operations were not accounted for in achieving the Year 2020 emissions reduction, local land use changes are estimated to result in a reduction of 5 $MMTCO_2e$, which is approximately 3 percent of the 2020 GHG emissions reduction goal. In recognition of the critical role local governments will play in successful implementation of AB 32, CARB is recommending GHG reduction goals of 15 percent of 2006 levels by 2020 to ensure that municipal and community-wide emissions match the state's reduction target. According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 $MMTCO_2e$ (or approximately 1.2 percent of the GHG reduction target). (CARB, 2014)

Overall, CARB determined that achieving the 1990 emission level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent in the absence of new laws and regulations (referred to as "Business-As-Usual" [BAU]). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team (CAT) early actions and additional GHG reduction measures, identifies additional measures to be pursued as regulations, and outlines the role of the cap-and-trade program.

When the 2020 emissions level projection also was updated to account for implemented regulatory measures, including Pavley (vehicle model-years 2009 - 2016) and the renewable portfolio standard (12% - 20%), the 2020 projection in the BAU condition was reduced further to 507 $MTCO_2e$. As a result, based on the updated economic and regulatory data, CARB determined that achieving the 1990 emissions level in 2020 would now only require a reduction of GHG emissions of 80 $MTCO_2e$, or approximately 16 percent (down from 28.5 percent), from the BAU condition.

Table 4.7-3 Scoping Plan GHG Reduction Measures Towards 2020 Target

Recommended Reduction Measures	*Reductions Counted toward 2020 Target of 169 MMT CO2e*	*Percentage of Statewide 2020 Target*
Cap and Trade Program and Associated Measures		
California Light-Duty Vehicle GHG Standards	31.7	19%
Energy Efficiency	26.3	16%
Renewable Portfolio Standard (33 percent by 2020)	21.3	13%
Low Carbon Fuel Standard	15	9%
Regional Transportation-Related GHG Targets[1]	5	3%
Vehicle Efficiency Measures	4.5	3%
Goods Movement	3.7	2%
Million Solar Roofs	2.1	1%
Medium/Heavy Duty Vehicles	1.4	1%
High Speed Rail	1.0	1%
Industrial Measures	0.3	0%
Additional Reduction Necessary to Achieve Cap	34.4	20%
Total Cap and Trade Program Reductions	146.7	87%
Uncapped Sources/Sectors Measures		
High Global Warming Potential Gas Measures	20.2	12%
Sustainable Forests	5	3%
Industrial Measures (for sources not covered under cap and trade program)	1.1	1%
Recycling and Waste (landfill methane capture)	1	1%
Total Uncapped Sources/Sectors Reductions	27.3	16%
Total Reductions Counted toward 2020 Target	174	100%
Other Recommended Measures – Not Counted toward 2020 Target		
State Government Operations	1.0 to 2.0	1%
Local Government Operations	To Be Determined[2]	NA
Green Buildings	26	15%
Recycling and Waste	9	5%
Water Sector Measures	4.8	3%
Methane Capture at Large Dairies	1	1%
Total Other Recommended Measures – Not Counted toward 2020 Target	42.8	NA

Source: CARB. 2008, MMTons CO2e: million metric tons of CO2e
[1]Reductions represent an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target.
[2]According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 million metric tons of CO2e (or approximately 1.2 percent of the GHG reduction target). However, these reductions were not included in the Scoping Plan reductions to achieve the 2020 Target

In May 2014, CARB approved the First Update to the Climate Change Scoping Plan (Update), which builds upon the initial Scoping Plan with new strategies and recommendations. The Update highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals, highlights the latest climate change science and provides direction on how to achieve long-term emission reduction goal described in Executive Order S-3-05. The Update recalculates 1990 GHG emissions using new global warming potentials identified in the IPCC Fourth Assessment Report released in 2007. Using those GWPs, the 427 $MTCO_2e$ 1990

emissions level and 2020 GHG emissions limit identified in the 2008 Scoping Plan would be slightly higher, at 431 $MTCO_2e$. Based on the revised 2020 emissions level projection identified in the 2011 Final Supplement and the updated 1990 emissions levels identified in the discussion draft of the First Update, achieving the 1990 emissions level in 2020 would require a reduction of 78 $MTCO_2e$ (down from 509 $MTCO_2e$), or approximately 15.3 percent (down from 28.5 percent), from the BAU condition. (CARB, 2014)

It should be noted that pursuant to Executive Order B-30-15 and SB 32, in November 2017, CARB approved California's 2017 Climate Change Scoping Plan, which extended the goals of AB 32 and set a 2030 goal of reducing emissions 40 percent from 2020 levels. Refer to the discussion under subsection 4.7.2.12 for a detailed discussion about California's 2017 Climate Change Scoping Plan. (CARB, 2017c)

5. California Senate Bill No. 1368 (SB 1368)

Senate Bill (SB) 1368 (Perata, Chapter 598, Statutes of 2006) limits long-term investments in baseload generation by the state's utilities to power plants that meet an emissions performance standard (EPS) jointly established by the California Energy Commission and the California Public Utilities Commission. (CEC, n.d.)

The Energy Commission has designed regulations that:

- Establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 pounds CO_2 per megawatt-hour (MWh). This will encourage the development of power plants that meet California's growing energy needs while minimizing their emissions of greenhouse gases;
- Require posting of notices of public deliberations by publicly owned utilities on long-term investments on the Energy Commission website. This will facilitate public awareness of utility efforts to meet customer needs for energy over the long-term while meeting the State's standards for environmental impact, and;
- Establish a public process for determining the compliance of proposed investments with the EPS. This process includes the following components:
  - A utility may request that the Commission determine whether or not an investment under consideration is subject to or complies with the EPS (Request for Evaluation of a Proposed Procurement).
  - A utility may request that an investment be exempted from the requirement that it meet the EPS if the investment is necessary to ensure reliable service to utility customers or to avoid a threat of significant financial harm (Request for Reliability or Financial Exemption), or, if the utility is under a legal obligation to contribute a share of a larger investment (Request for Exemption Due to Pre-existing Multi-Party Commitment).
  - A utility must submit a compliance filing upon committing to an investment that is required to meet the EPS (Compliance Filing).
  - Any party may request that the Energy Commission conduct a complaint or investigation proceeding to determine a utility's compliance with the regulations (Request for Compliance Investigation). (CEC, n.d.)

Investments that must be in compliance with the EPS include:

- Construction or purchase (turnkey agreements) of new power plants designed and intended for baseload generation;

- Purchase of existing power plants designed and intended for baseload generation, or ownership shares thereof, other than combined cycle natural gas power plants in operation or permitted prior to June 30, 2007;
- Capital investments in existing, utility-owned power plants designed and intended for baseload generation, other than those for routine maintenance, that:
  - For combined-cycle, natural gas power plants permitted before June 20, 2007, increase the generation capacity by 50 megawatts (MW) or more.
  - For other power plants, are intended to extend the life of one or more units by five years or more.
  - Are intended to increase the rated capacity of the power plant.
  - Are intended to convert a non-baseload power plant into a baseload power plant. (CEC, n.d.)

6. Executive Order S-01-07

Executive Order (EO) S-01-07 establishes the 2020 target and Low Carbon Fuel Standard (LCFS). The EO directs the Secretary of California EPA as coordinator of 2020 target activities and requires the Secretary to report back to the Governor and Legislature biannually on progress toward meeting the 2020 target. (CCC, n.d.)

7. Senate Bill 1078

SB 1078 establishes the California Renewables Portfolio Standard Program, which requires electric utilities and other entities under the jurisdiction of the California Public Utilities Commission to meet 20% of their renewable power by December 31, 2017 for the purposes of increasing the diversity, reliability, public health, and environmental benefits of the energy mix. (CCC, n.d.)

8. Senate Bill 107

SB 107 directed California Public Utilities Commission's Renewable Energy Resources Program to increase the amount of renewable electricity (Renewable Portfolio Standard) generated per year, from 17% to an amount that equals at least 20% of the total electricity sold to retail customers in California per year by December 31, 2010. (CCC, n.d.)

9. Executive Order S-14-08

On November 17, 2008, Governor Schwarzenegger signed Executive Order S-14-08, revising California's existing Renewable Portfolio Standard (RPS) upward to require all retail sellers of electricity to serve 33% of their load from renewable energy sources by 2020. In order to meet this new goal, a substantial increase in the development of wind, solar, geothermal, and other "RPS eligible" energy projects will be needed. Executive Order S-14-08 seeks to accelerate such development by streamlining the siting, permitting, and procurement processes for renewable energy generation facilities. To this end, S-14-08 issues two directives: (1) the existing Renewable Energy Transmission Initiative will identify renewable energy zones that can be developed as such with little environmental impact, and (2) the California Energy Commission (CEC) and the California Department of Fish and Wildlife (CDFW) will collaborate to expedite the review, permitting, and licensing process for proposed RPS-eligible renewable energy projects.

10. Senate Bill 97

By enacting SB 97 in 2007, California's lawmakers expressly recognized the need to analyze GHGs as a part of the CEQA process. SB 97 required the Governor's Office of Planning and Research (OPR) to develop, and the Natural Resources Agency to adopt, amendments to the CEQA Guidelines addressing the analysis and

mitigation of greenhouse gas emissions. (OPR, n.d.) Those CEQA Guidelines amendments clarified several points, including the following:

- Lead agencies must analyze the GHG emissions of proposed projects, and must reach a conclusion regarding the significance of those emissions. (See CEQA Guidelines § 15064.4.)
- When a project's GHG emissions may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions. (See CEQA Guidelines § 15126.4(c).)
- Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change. (See CEQA Guidelines § 15126.2(a).)
- Lead agencies may significantly streamline the analysis of GHGs on a project level by using a programmatic GHG emissions reduction plan meeting certain criteria. (See CEQA Guidelines § 15183.5(b).)
- CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply, and ways to reduce energy demand, including through the use of efficient transportation alternatives. (See CEQA Guidelines, Appendix G, Section VI., *Energy*.) (OPR, n.d.)

As part of the administrative rulemaking process, the Natural Resources Agency developed a Final Statement of Reasons explaining the legal and factual bases, intent, and purpose of the CEQA Guidelines amendments. The amendments to the CEQA Guidelines implementing SB 97 became effective on March 18, 2010. (OPR, n.d.)

Of note, the new guidelines state that a lead agency shall have discretion to determine whether to use a quantitative model or methodology, or in the alternative, rely on a qualitative analysis or performance based standards. Pursuant to CEQA Guidelines § 15064.4(a), "A lead agency shall have discretion to determine, in the context of a particular project, whether to: (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use; or (2) Rely on a qualitative analysis or performance based standards."

CEQA emphasizes that the effects of greenhouse gas emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis. (See CEQA Guidelines § 15130(f)).

§ 15064.4(b) of the guidelines provides direction for lead agencies for assessing the significance of impacts of greenhouse gas emissions:

1. The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; or
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a

particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

The CEQA Guideline amendments do not identify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. Instead, they call for a "good-faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." The amendments encourage lead agencies to consider many factors in performing a CEQA analysis and preserve lead agencies' discretion to make their own determinations based upon substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. Specific GHG language incorporated in the Guidelines' suggested Environmental Checklist (Guidelines Appendix G) is as follows:

VII. GREENHOUSE GAS EMISSIONS

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

11. Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, SB 375, Chapter 728, Statutes of 2008) supports the State's climate action goals to reduce GHG emissions through coordinated transportation and land use planning with the goal of more sustainable communities. (CARB, 2017b)

Under the Sustainable Communities Act, CARB sets regional targets for GHG emissions reductions from passenger vehicle use. In 2010, CARB established these targets for 2020 and 2035 for each region covered by one of the State's metropolitan planning organizations (MPO). CARB will periodically review and update the targets, as needed. (CARB, 2017b)

Each of California's MPOs must prepare a "sustainable communities strategy" (SCS) as an integral part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. CARB must review the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional GHG targets. If the combination of measures in the SCS would not meet the regional targets, the MPO must prepare a separate "alternative planning strategy" (APS) to meet the targets. The APS is not a part of the RTP. (CARB, 2017b)

The Sustainable Communities Act also establishes incentives to encourage local governments and developers to implement the SCS or the APS. Developers can get relief from certain environmental review requirements under CEQA if their new residential and mixed-use projects are consistent with a region's SCS (or APS) that meets the targets (see Cal. Public Resources Code §§ 21155, 21155.1, 21155.2, 21159.28.). (CARB, 2017b)

This law also extends the minimum time period for the regional housing needs allocation cycle from 5 years to 8 years for local governments located within an MPO that meets certain requirements. City or county land use policies (including general plans) are not required to be consistent with the regional transportation plan (and associated SCS or APS). However, new provisions of CEQA would incentivize (through streamlining and other provisions) qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects." (Urban Crossroads, 2019b, p. 24)

The Southern California Association of Governments (SCAG) is required by law to update the Southern California Regional Transportation Plan (RTP) every four years. The 2016 plan was based on assumptions provided by both CARB and SCAG in the latest available EMFAC model for the most recent motor vehicle and demographics information, respectively. The air quality levels projected in the 2016 AQMP are based on several assumptions. For example, the 2016 AQMP has 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 2016 RTP. The 2016 AQMP also has assumed that such development projects will implement strategies to reduce emissions generated during the construction and operational phases of development. (Urban Crossroads, 2019b, pp. 24-25)

12. Executive Order B-30-15

On April 29, 2015, Governor Brown issued Executive Order B-30-15, which sets a goal to reduce GHG emissions in California to 40 percent below 1990 levels by 2030. The 2030 target serves as a benchmark goal on the way to achieving the GHG reductions goal set by former Governor Schwarzenegger via Executive Order S-3-05 (i.e., 80 percent below 1990 greenhouse gas emissions levels by 2050). (CCC, n.d.)

Executive Order B-30-15 requires CARB to update the Climate Change Scoping Plan to reflect the 2030 target. In November 2017, the Board approved California's 2017 Climate Change Scoping Plan, which included a suite of measures based on the measures contained in the in the initial Climate Change Scoping Plan to continue to cut GHG emissions. The 2017 Scoping Plan highlights California programs that have been effective to reduce GHG emissions, identifies additional programs and measures to reduce emissions, and provides direction on how to achieve the long-term reduction goal described in Executive Order B-30-15. Meeting the 2030 target would require a reduction of 171 $MTCO_2e$ reduction from the 2020 GHG emissions target. (CARB, 2017c)

13. Senate Bill 32

On September 8, 2016, Governor Jerry Brown signed the SB 32 and its companion bill, Assembly Bill (AB) 197. SB 32 requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide greenhouse gas reduction target of 80% below 1990 levels by 2050. Pursuant to Executive Order B-30-15, CARB updated the Climate Change Scoping Plan to reflect the 2030 target established by SB 32.

Pursuant to guidance from the Association of Environmental Professionals (AEP), GHG emissions "…should be identified for the project horizon year and lead agencies should consider the project horizon year when applying a threshold of significance" (AEP, 2016, p. 32). Because the Project's opening year would be 2025, and in recognition of AB 32's requirement to reduce GHG emissions to 1990 levels by 2020 and SB 32's goal to achieve statewide GHG emissions to 40% below 1990 levels by 2030, the Project would be required to demonstrate that it meets a reduction level of 20% below 1990 levels in order to demonstrate consistency with SB 32. Demonstrating compliance with the 2025 interpolated target also would show that the Project would

not inhibit the City of Menifee's ability to achieve the 2030 target established by SB 32, as the bulk of the GHG reductions needed by 2030 would occur at the state and regional levels and compliance with the threshold of 20% below 1990 levels for horizon year (2025) would demonstrate that the Project is on trajectory to meet the 2030 SB 32 target.

14. Newhall Ranch Decision

In its recent decision, Center for Biological Diversity v. Department of Fish and Wildlife, S217763 (Newhall), the Court evaluated the CDFW analysis of potential GHG emissions as contained in the EIR for the proposed land development called Newhall Ranch. In the EIR, the CDFW analyzed GHG emissions under AB 32, using the business-as-usual (BAU) comparison as its sole significance determination criteria. (Urban Crossroads, 2019b, p. 34)

In Newhall, the California Supreme Court concluded that a finding of consistency with meeting statewide emission reduction goals is a legally permissible criterion of significance when analyzing potential impacts of GHG emissions under CEQA. However, the Court found that the EIR's conclusion that the project's emissions would be less than significant under that criterion was not supported by substantial evidence, and remanded back to the appellate court the narrow issue of whether substantial evidence supported the application of AB 32 statewide GHG reduction goal of approximately 28.5% to new land use projects. (Urban Crossroads, 2019b, pp. 34-35)

The Court then identified "potential options" for lead agencies evaluating cumulative significance of a proposed land use development's GHG emissions in future CEQA documents:

1. BAU Model: While the Court cautioned that the Scoping Plan may not be appropriate at the project-level, the BAU model might be used to determine what level of reduction from BAU a new land use development at the proposed location must contribute in order to comply with statewide goals pursuant to AB 32. (Urban Crossroads, 2019b, p. 35)

2. Compliance With Regulatory Programs Designed To Reduce Greenhouse Gas Emissions: The Court suggests that a lead agency could rely on a showing of compliance with regulatory programs designed to reduce greenhouse gas emissions. The Court clarifies that a significance analysis based on compliance with such statewide regulations only goes to impact within the area governed by the regulations. (Urban Crossroads, 2019b, p. 35)

4. Local Climate Action Plan Or Other "Geographically Specific Greenhouse Gas Emission Reduction Plans": The Court points out that these plans may provide a basis for the tiering or streamlining of project-level CEQA analysis, so long as the plan is "sufficiently detailed and adequately supported." (Urban Crossroads, 2019b, p. 35)

5. Regional SCS: The Court also articulates that a lead agency need not additionally analyze greenhouse gas emissions from cars and light trucks in CEQA documents for certain residential, mixed use, and transit priority projects that are consistent with an applicable SCS adopted pursuant to SB 375. (Urban Crossroads, 2019b, p. 35)

6. Numerical GHG Significance Thresholds: Although noting that use of such thresholds are not required, the Court favorably cited to the BAAQMD GHG significance thresholds, which are based on compliance with AB 32, and use a "Service Population" GHG ratio threshold for land use projects and

a 10,000 ton annual GHG emission threshold for industrial projects. The Court remanded for further consideration the application of the 28.5% overall Scoping Plan metric, which is used by several Air Districts and, like the favorably-cited BAAQMD metric, is based on AB 32. (Urban Crossroads, 2019b, p. 35)

7. Executive Order Nos. S-3-05 and B-30-15: Citing to Executive Order Nos. S-3-05 and B- 30-15, the Court cautioned that those EIRs taking a goal-consistency approach to CEQA significance may in the future need to consider the project's effects on meeting emissions reduction targets beyond 2020. (Urban Crossroads, 2019b, p. 35)

D. Local Regulations

1. SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

The 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) for the SCAG region was prepared to ensure that the Southern California region attains the per capita vehicle miles targets for passenger vehicles identified by CARB, as required by Senate Bill 375. The Project would be consistent with the plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. (Urban Crossroads, 2019b, p. 32)

4.7.3 Basis for Determining Significance

In order to assess the significance of a Project's environmental impacts it is necessary to identify quantitative or qualitative thresholds which, if exceeded, would constitute a finding of significance. As discussed below in Subsection 4.7.4, while estimated Project-related GHG emissions can be quantified, the direct impacts of such emissions on GCC and global warming cannot be determined on the basis of available science. There is no evidence at this time that would indicate that the emissions from a project the size of the Project would directly or indirectly affect the global climate.

AB 32 states, in part, that "[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California." Because global warming is the result of GHG emissions, and GHGs are emitted by innumerable sources worldwide, the Project would have no potential to result in a direct impact to global warming; rather, Project-related contributions to GCC, if any, only have potential significance on a cumulative basis. Therefore, the analysis below focuses on the Project's potential to contribute to GCC in a cumulatively considerable way.

Section VIII of Appendix G to the CEQA Guidelines addresses typical adverse effects due to greenhouse gas emissions, and includes the following threshold questions to evaluate the Project's impacts due to greenhouse gas emissions (OPR, 2018):

a. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or*

b. *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

The City of Menifee has not established local CEQA significance thresholds for GHG emissions, as described in Section 15064.7 of the CEQA guidelines. According to the Final Statement of Reason (FSOR) for Regulatory Action, the revised § 15064.7 gives lead agencies the discretion to determine their methodology for quantifying GHG emissions. As such, the City has selected the SCAQMD Tier 4 Option 3 approach to determining potential GHG emissions impacts. The SCAQMD Tier 4 Option 3 approach consists of City of Menifee establishing a sector-based performance standard to determine significance of GHG impacts. If a project's GHG emissions are less than the established efficiency standard, the project would not be significant relative to GHG emissions. (Urban Crossroads, 2019b, p. 46)

The SCAQMD defines the service population as the total residents and employees associated with a project. The origin of the service population is based on CARB's 2008 Scoping Plan. The Scoping Plan identified that based on the GHG emissions inventories for the state, the people of California generate approximately 14 tons of GHG emissions per capita and would need to reduce annual emissions to approximately 10 tons per capita in order to meet the GHG reduction target of AB 32. Because people who live in California generally work in California, the service population metric did not include employees. As CEQA significance thresholds were being determined by air districts, the air districts considered applying this efficiency metric to their air district boundaries. Consistent with methodology provided by the Regional Targets Advisory Committee (RTAC) as part of the SB 375 target setting discussions, the definition of service population was amended to include employees in addition to residents. This is because the transportation sector is the primary source of project-related GHG emissions; and unlike the state as a whole, people who work in one county/air district may not live in the same county/ air district boundary. Also, people who live in a county/air district boundary would also have other trip ends such as school, parks, and retail uses. As such, the air district/county boundary as a whole did not take into account other users within the site. (Urban Crossroads, 2019b, p. 46)

Relevant to the proposed Project, the SCAQMD Tier 4 Option 3 is to utilize an efficiency target. The SCAQMD has proposed targets for project-level and plan-level analysis. At the September 2010 working group meeting the SCAQMD recommended a project-level efficiency target of 4.8 MT CO_2e per service population as a 2020 target. (Urban Crossroads, 2019b, p. 46)

The calculations behind this option are based on the same inventory calculated by CARB. The 4.8 metric ton per service population target is based on the same statewide 2020 GHG inventory in the CARB Scoping Plan, i.e., 295,530,000 MT CO_2e/yr. To derive the project level service population of 4.8 metric ton, SCAQMD took the 2020 statewide GHG reduction target for land use only (295,530,000 MTCO_2e/yr) and divided it by the total 2020 statewide population plus the total statewide employment for land use only (44,135,923 + 17,064,489) (i.e., (295,530,000 MTCO_2e/yr)/(44,135,923 + 17,064,489) = 4.8 MTCO_2e/yr). Thus, SCAQMD's threshold is another metric for assessing compliance with AB 32, just based on using numbers attributable to certain sectors and trying to break down the analysis to a finer grain based on a per person methodology associated with land use-related sectors. (Urban Crossroads, 2019b, pp. 46-47)

This approach is a widely accepted screening threshold used by numerous cities in the SCAB and is based on the SCAQMD staff's proposed GHG screening threshold for stationary source emissions for non-industrial projects, as described in the SCAQMD's Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans ("SCAQMD Interim GHG Threshold"). The SCAQMD Interim GHG Threshold identifies a screening threshold to determine whether additional analysis is required. As noted by the SCAQMD: (Urban Crossroads, 2019b, p. 47)

> "…the…screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects...the policy objective of [SCAQMD's] recommended interim GHG

> significance threshold proposal is to achieve an emission capture rate of 90 percent of all new or modified stationary source projects. A GHG significance threshold based on a 90 percent emission capture rate may be more appropriate to address the long-term adverse impacts associated with global climate change because most projects will be required to implement GHG reduction measures. Further, a 90 percent emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. This assertion is based on the fact that [SCAQMD] staff estimates that these GHG emissions would account for slightly less than one percent of future 2050 statewide GHG emissions target (85 $MMTCO_2e/yr$). In addition, these small projects may be subject to future applicable GHG control regulations that would further reduce their overall future contribution to the statewide GHG inventory. Finally, these small sources are already subject to [Best Available Control Technology] (BACT) for criteria pollutants and are more likely to be single-permit facilities, so they are more likely to have few opportunities readily available to reduce GHG emissions from other parts of their facility." (Urban Crossroads, 2019b, p. 47)

Although the SCAQMD's draft significance criteria have not been adopted, the City has determined that the SCAQMD's project-level efficiency threshold methodology can be used to set an appropriate significance criterion by which to determine whether the project emits a significant amount of GHG. (Urban Crossroads, 2019b, p. 47)

Pursuant to guidance from the AEP, GHG emissions "…should be identified for the project horizon year and lead agencies should consider the project horizon year when applying a threshold of significance" (AEP, 2016, p. 32). Because the Project's opening year would be 2025, the Project's GHG emissions are based on an interpolation between the threshold established by AB 52 to achieve 1990 levels by 2020 and the threshold of SB 32 to achieve a reduction of 40% below 1990 levels by 2030, the Project would be required to achieve a reduction level of 20% below 1990 levels by 2025. As such, the appropriate reduction target for 2030 would be 2.88 MT CO_2e/yr. For analysis purposes herein, the Service Population (SP) threshold for the Project's buildout year of 2025 was calculated by linear interpolation between the 2020 target of 4.8 $MTCO_2e/yr$ and the 2030 target of 2.88 $MTCO_2e/yr$. As such, the target for the Project's buildout year of 2025 is 3.84 $MTCO_2e/yr$. Thus, if a project would emit GHGs less than 3.84 $MTCO_2e$ per SP, the project would not be considered a substantial GHG emitter and the GHG impacts would be less than significant. (Urban Crossroads, 2019b, p. 47)

4.7.4 Methodology for Estimating Greenhouse Gas Emissions

A. California Emissions Estimator Model™ (CalEEMod™)

CEQA Guidelines § 15064.4(b)(1) states that a lead agency may use a model or methodology to quantify greenhouse gas emissions associated with a project. On October 17, 2017, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the California Emissions Estimator Model™ (CalEEMod™) v2016.3.2. The purpose of this model is to calculate construction-source and operational-source criteria pollutants (VOCs, NO_X, SO_x, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures. Accordingly, the latest version of CalEEMod™ has been used for the Project to determine GHG emissions. Output from the model runs for operational activity are provided in Appendices 3.1 and 3.3 to the GHGA (*Technical Appendix G*). (Urban Crossroads, 2019b, p. 37)

The Project is located on a 331.0-acre parcel. As per information provided by the Project Applicant, the Project is proposed to consist of up to 1,061 single family detached residential dwelling units, up to 225,000 s.f. of commercial use, up to 10,000 s.f. of recreational community center, and up to 11.23 acres of community park use. As CalEEMod does not provide an extensive selection of land use subtype categories, land uses that most closely fit the Project will be utilized. For purposes of analysis, the following land uses were modeled: (Urban Crossroads, 2019b, p. 49)

- 1,061 DU Single-Family Housing
- 225,000 s.f. Regional Shopping Center
- 10,000 s.f. Health Club[1]
- 11.23 acres City Park[2]

B. Construction and Operational Life-Cycle Analysis Not Required

A full life-cycle analysis (LCA) for construction and operational activity is not included in this analysis due to the lack of consensus guidance on LCA methodology at this time. Life-cycle analysis (i.e., assessing economy-wide GHG emissions from the processes in manufacturing and transporting all raw materials used in the project development, infrastructure, and on-going operations) depends on emission factors or econometric factors that are not well established for all processes. At this time an LCA would be extremely speculative and thus has not been prepared. (Urban Crossroads, 2019b, p. 50)

Additionally, the SCAQMD recommends analyzing direct and indirect project GHG emissions generated within California and not life-cycle emissions because the life-cycle effects from a project could occur outside of California, might not be very well understood, or documented, and would be challenging to mitigate. Additionally, the science to calculate life cycle emissions is not yet established or well defined; therefore, SCAQMD has not recommended, and is not requiring, life-cycle emissions analysis. (Urban Crossroads, 2019b, p. 50)

C. Project-Related Greenhouse Gas Emissions

1. Construction Emissions

Construction activities associated with the Project would result in emissions of CO_2 and CH_4 from construction activities. The Project's Air Quality Impact Analysis (*Technical Appendix B*) contains detailed information regarding construction activity. For construction phase Project emissions, GHGs are quantified and amortized over the life of the Project. To amortize the emissions over the life of the Project, the SCAQMD recommends calculating the total greenhouse gas emissions for the construction activities, dividing it by a 30-year project life then adding that number to the annual operational phase GHG emissions. As such, construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions. (Urban Crossroads, 2019b, p. 50)

2. Operational Emissions

Operational activities associated with the Project would result in emissions of CO_2, CH_4, and N_2O from the following primary sources: Area Source Emissions; Energy Source Emissions (combustion emissions

[1] As per the CalEEMod User's Guide, the Health Club land use is defined as privately-owned facilities that primarily focus on individual fitness or training. Typically, they provide exercise classes; weightlifting, fitness and gymnastics equipment; spas; locker rooms; and small restaurants or snack bars.
[2] For purposes of analysis, the CalEEMod City Park land use will be used to model the 11.23-acre Community Park.

associated with natural gas and electricity); Mobile Source Emissions; Water Supply, Treatment, and Distribution; and Solid Waste. Each is discussed below. (Urban Crossroads, 2019b, p. 50)

❑ Area Source Emissions

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 the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in the CalEEMod model. (Urban Crossroads, 2019b, p. 51)

❑ Energy Source Emissions

Combustion Emissions Associated with Natural Gas and Electricity

GHGs are emitted from buildings as a result of activities for which electricity and natural gas are typically used as energy sources. Combustion of any type of fuel emits CO_2 and other GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a building (the building energy emissions do not include street lighting[3]). GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are considered to be indirect emissions. Unless otherwise noted, CalEEMod default parameters were used. (Urban Crossroads, 2019b, p. 51)

❑ Mobile Source Emissions

Vehicles

GHG emissions also would result from mobile sources associated with the Project. Project mobile source emissions 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. Trip characteristics available from the Project's Traffic Impact Analysis (*Technical Appendix K*) were utilized in the GHGA's analysis of mobile-source emissions. (Urban Crossroads, 2019b, p. 51)

❑ Water Supply, Treatment and Distribution

Indirect GHG emissions result from the production of electricity used to convey, treat, and distribute water and wastewater. The amount of electricity required to convey, treat, and distribute water depends on the volume of water as well as the sources of the water. The Project water demand was based on the Specific Plan land uses and the Eastern Municipal Water District (EMWD) demand factor criteria. As presented in the Project's Water Supply Assessment (WSA, EIR *Technical Appendix L1*), the flow factor (gpd/unit) of 440 gpd/unit for Medium Density Residential uses and 2,220 gpd/unit for Commercial and Open Space land uses were utilized to calculate the Project's annual water demand. For CalEEMod purposes, the flow factors were utilized to calculate the annual water demand factor by land use as shown in Table 4.7-4, *Annual Water Demand by Land Use*, for modeling purposes in CalEEMod. (Urban Crossroads, 2019b, p. 38)

[3] The CalEEMod emissions inventory model does not include indirect emission related to street lighting. Indirect emissions related to street lighting are expected to be negligible and cannot be accurately quantified at this time as there is insufficient information as to the number and type of street lighting that would occur.

Table 4.7-4 Annual Water Demand by Land Use

Land Use	Base Unit	Project Size (units)	Water Use Factor (gpd/unit)	Annual Water Use (gpy)
Single Family Detached Residential Use	DU	1,061	440	170,396,600
Regional Shopping Center	Acre	20.10	2,200	16,140,300
Community Center	Acre	1.67	2,200	1,341,010
Sports Park	Acre	11.23	2,200	9,017,690

(Urban Crossroads, 2019b, Table 3-1)

Solid Waste

Residential land uses would result in the generation and disposal of solid waste. A large percentage of this waste would be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting. The remainder of the waste not diverted would be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material. GHG emissions associated with the disposal of solid waste associated with the proposed Project were calculated by the CalEEMod model using default parameters. (Urban Crossroads, 2019b, p. 52)

D. Service Population

Residential

Implementation of the Project would result in the construction of up to 1,061 DUs. According to the City of Menifee General Plan Draft Housing Element 2013-2021, the average size of households residing in Menifee is approximately 2.8 persons per household (pph). As such, the Project would generate a future population of approximately 2,971 residents for the Project. (Urban Crossroads, 2019b, p. 52) It should be noted that the Project site is also subject to the provisions of City of Menifee Municipal Code Chapter 9.55 and City Council Resolution No. 15-143, which utilizes a population generation rate to calculate parkland demand that is different than the Menifee General Plan Housing Element average number of pph**Invalid source specified.**. For purposes of calculating the Project's population for analysis of GHG emissions impacts in this EIR Subsection, the City of Menifee General Plan Draft Housing Element 2013-2021 pph value was utilized. The General Plan Draft Housing Element population generation rate is appropriate for calculating the Project's population in this EIR Subsection because rates identified by City Council Resolution No. 15-143 are intended to apply only to the calculation of parkland required in association with new development, while the City's Housing Element sets forth the City's vision for accommodating future population within its boundaries. Thus, the General Plan Draft Housing Element population generation rate of 2.8 pph is utilized herein. The population generation rate to calculate parkland demand is utilized only in EIR Section 4.13, *Recreation*.

Employees

The employment generation rates specified in Table 11B of the *Employment Density Study Summary Report* prepared for SCAG, indicates that the that the County of Riverside averages approximately 629 s.f. of retail space per employee. The employment calculation for the proposed 225,000 s.f. commercial use was calculated by dividing 225,000 s.f. by the employment density of 629 s.f. of retail space per employee to arrive at approximately 358 employees (225,000 s.f. ÷ 629 s.f. of retail space per employee = 358 employees). It should be noted that the end users of the commercial component of this Project are unknown and may include office tenants in addition to retail tenants. (Urban Crossroads, 2019b, p. 52)

Total Service Population

The service population is the sum of residents and employees for a given time. For purposes of analysis, the service population each scenario is shown in Table 4.7-5, *Estimated Project Service Population.* (Urban Crossroads, 2019b, p. 52)

Table 4.7-5 Estimated Project Service Population

Land Use	Residents	Employees	Total
Single Family Detached Residential Use	2,971	-	2,971
Commercial Use	-	358	358
		SERVICE POPULATION	***3,329***

(Urban Crossroads, 2019b, Table 3-2)

4.7.5 IMPACT ANALYSIS

Threshold a: ***Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?***

As discussed in EIR Subsection 3.3.8, implementation of the Project would result in a future population of 2,971 persons and a future employment of 358 employees. The sum of both the future population and future employment yields a Service Population of 3,329. (Urban Crossroads, 2019b, p. 52)

As shown in Table 4.7-6, *Total Project GHG Emissions (Annual – Without CRDRs and Mitigation),* prior to implementation of City Regulations and Design Requirements (CRDRs) which are included in *Technical Appendix G* as "Project Design Features" and mitigation, the Project would result in emissions of up to 30,634.30 $MTCO_2e$ per year. Detailed operational model outputs are presented in Appendices 3.2 and 3.3 of *Technical Appendix G*. Thus, prior to mitigation, the Project would emit approximately 9.2 $MTCO_2e$ per Service Population (30,634.30 $MTCO_2e$ ÷ 3,329 Service Population = 9.2 $MTCO_2e$/Service Population), which would exceed the threshold of 3.84 $MTCO_2e$ per Service Population. Therefore, prior to mitigation, the Project's level of GHGs would cumulatively contribute to significant impacts to the environment resulting from GCC. Thus, the Project's GHG emissions would be significant on a cumulative basis prior to mitigation. (Urban Crossroads, 2019b, p. 39)

As shown in Table 4.7-9, *Total Project GHG Emissions (Annual – With CRDRs and Mitigation),* with implementation of Regulatory Requirements, Design Requirements CRDR 4.7-1 through **Error! Reference source not found.**, and Project-specific mitigation measures, the Project's Service Population Ratio would be reduced to 8.32 $MTCO_2e$ per Service Population, which would still exceed the threshold of 3.84 $MTCO_2e$ per Service Population. Thus, the Project's cumulatively-considerable impacts due to GHG emissions would be significant and unavoidable.

Threshold b: ***Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?***

The City of Menifee has not adopted any plans, policies, or regulations addressing GHG emissions or GCC. However, the City of Menifee General Plan contains policies adopted for the purpose of reducing the emissions of greenhouse gases. Thus, the applicable plans, policies, and regulations affecting the Project are limited to the City of Menifee General Plan, AB 32, and SB 32. The Project's consistency with each is discussed below.

Table 4.7-6 Total Project GHG Emissions (Annual – Without CRDRs and Mitigation)

Emission Source	Emissions (metric tons per year)			
	CO_2	CH_4	N_2O	Total CO_2E
Annual construction-related emissions amortized over 30 years	484.81	0.06	0.00	486.19
Area	347.15	0.35	0.01	358.26
Energy	5,660.77	0.19	0.07	5,685.22
Mobile Sources	22,056.87	0.99	0.00	22,081.66
Waste	306.99	18.14	0.00	760.55
Water Usage	1,062.70	6.16	0.15	1,262.42
Total CO_2E (All Sources)	**30,634.30**			
Service Population	3,329			
Total CO_2E (All Sources) per Service Population	**9.20**			
SCAQMD Threshold per Service Population	3.84			
Exceedance?	**YES**			

(Urban Crossroads, 2019b, Table 3-3)

Project Consistency with City of Menifee General Plan

Projects that are consistent with the policies related to GHG emissions in the General Plan would be consistent with the applicable City Plan adopted for the purpose of reducing the emissions of GHGs. All projects must demonstrate compliance with the following sections of the City of Menifee General Plan:

- OCS-10.1: Align the city's local GHG reduction targets to be consistent with the statewide GHG reduction target of AB 32.

  Project Consistency: As discussed further below under the discussion of the Project's consistency with AB 32, the Project would not conflict with the GHG reduction measures associated with AB 32. Thus, the Project would not conflict with General Plan Policy OCS-10.1

- OCS-10.2: Align the city's long-term GHG reduction goal consistent with the statewide GHG reduction goal of Executive Order S-03-05.

  Project Consistency: As discussed further below under the discussion of the Project's consistency with SB 32, the Project would not conflict with the state's implementation of S-03-05; however, the Project would exceed the applicable numeric threshold and would result in a cumulatively-considerable impact with respect to GHG emissions (as discussed under the analysis of Threshold a.). Thus, the Project would conflict with General Plan Policy OCS-10.2 and impacts would be significant.

- OCS-10.3: Participate in regional greenhouse gas emission reduction initiatives.

Project Consistency: At the time the NOP for the Project was released (November 2017), there were no additional regional greenhouse gas emission reduction activities that applied to the Project. Thus, the Project would not conflict with General Plan Policy OCS-10.3.

- OCS-10.4: Consider impacts to climate change as a factor in evaluation of policies, strategies, and projects.

  Project Consistency: The Project has considered impacts to climate change as a factor in the evaluation of the Project, as demonstrated throughout this Subsection. Furthermore, the Project incorporates a number of design regulations that would serve to reduce climate change-related impacts. Thus, the Project would not conflict with General Plan Policy OCS-10.4.

Project Consistency with Assembly Bill 32 (AB 32)

CARB's Scoping Plan identifies strategies to reduce California's greenhouse gas emissions in support of AB 32 which requires the State to reduce its GHG emissions to 1990 levels by 2020. Projects that are consistent with the CARB Scoping Plan would be consistent with the rules and regulations required by AB 32. Many of the strategies identified in the Scoping Plan are not applicable at the project level, such as long-term technological improvements to reduce emissions from vehicles. Some measures are applicable and supported by the Project, such as energy efficiency. Finally, while some measures are not directly applicable, the Project would not conflict with their implementation. As stated previously, the CARB Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32. The CARB Scoping Plan recommendations serve as statewide measures to reduce GHG emissions levels. Reduction measures are grouped into 18 action categories, as follows: (Urban Crossroads, 2019b, pp. 54-56)

1. California Cap-and-Trade Program Linked to Western Climate Initiative Partner Jurisdictions. Implement a broad-based California cap-and-trade program to provide a firm limit on emissions. Link the California cap–and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.

2. California Light-Duty Vehicle Greenhouse Gas Standards. Implement adopted Pavley standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.

3. Energy Efficiency. Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities).

4. Renewables Portfolio Standards. Achieve 33 percent renewable energy mix statewide.

5. Low Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard.

6. Regional Transportation-Related Greenhouse Gas Targets. Develop regional greenhouse gas emissions reduction targets for passenger vehicles.

7. Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures.

8. Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.

9. Million Solar Roofs Program. Install 3,000 megawatts of solar-electric capacity under California's existing solar programs.

10. Medium- and Heavy-Duty Vehicles. Adopt medium- (MD) and heavy-duty (HD) vehicle efficiencies. Aerodynamic efficiency measures for HD trucks pulling trailers 53-feet or longer that include improvements in trailer aerodynamics and use of rolling resistance tires were adopted in 2008 and went into effect in 2010. Future, yet to be determined improvements, includes hybridization of MD and HD trucks.

11. Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.

12. High Speed Rail. Support implementation of a high-speed rail system.

13. Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.

14. High Global Warming Potential Gases. Adopt measures to reduce high warming global potential gases.

15. Recycling and Waste. Reduce methane emissions at landfills. Increase waste diversion, composting and other beneficial uses of organic materials, and mandate commercial recycling. Move toward zero-waste.

16. Sustainable Forests. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation. The 2020 target for carbon sequestration is 5 million MTCO2e/yr.

17. Water. Continue efficiency programs and use cleaner energy sources to move and treat water.

18. Agriculture. In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.

Project consistency with applicable CARB 2008 Scoping Plan GHG emissions reduction measures is summarized at Table 4.7-7, *Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction*. As indicated in Table 4.7-7, the Project would comply with, or otherwise would not conflict with, all applicable Scoping Plan measures. The Project in fact supports seven of the action categories through energy efficiency, water conservation, recycling, and landscaping. As such, the Project would not conflict with the GHG reduction measures associated with AB 32, and a less-than-significant impact would occur. (Urban Crossroads, 2019b, pp. 56-57)

Table 4.7-7 Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Measures

Action	Supporting Measures	Consistency
Cap-and-Trade Program	--	Not applicable. These programs involve capping emissions from electricity generation, industrial facilities, and broad scoped fuels. Caps do not directly affect manufacturing projects.
Light-Duty Vehicle Standards	T-1	Not applicable. This is a statewide measure establishing vehicle emissions standards.
Energy Efficiency	E-1	Consistent. The project will include a variety of building, water, and solid waste efficiencies consistent with the current CALGREEN requirements.
	E-2	
	CR-1	
	CR-2	
Renewables Portfolio Standard	E-3	Not applicable. Establishes the minimum statewide renewable energy mix.
Low Carbon Fuel Standard	T-2	Not applicable. Establishes reduced carbon intensity of transportation fuels.
Regional Transportation-Related Greenhouse Gas Targets	T-3	Not applicable. This is a statewide measure and is not within the purview of this Project.
Vehicle Efficiency Measures	T-4	Not applicable. Identifies measures such as minimum tire-fuel efficiency, lower friction oil, and reduction in air conditioning use.
Goods Movement	T-5	Not applicable. Identifies measures to improve goods movement efficiencies such as advanced combustion strategies, friction reduction, waste heat recovery, and electrification of accessories. While these measures are yet to be implemented and will be voluntary, the proposed Project would not interfere with their implementation.
	T-6	

Table 4.7-7 Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Measures

Action	Supporting Measures	Consistency
Million Solar Roofs (MSR) Program	E-4	Not applicable. The MSR program sets a goal for use of solar systems throughout the state as a whole. The project currently does not include solar energy generation, and it is unknown if the building roof structure will be designed to support solar panels in the future.
Medium- & Heavy-Duty Vehicles	T-7	Not applicable. MD and HD trucks and trailers working from the proposed parcel delivery facility will be subject to aerodynamic and hybridization requirements as established by ARB; no feature of the project would interfere with implementation of these requirements and programs.
	T-8	
Industrial Emissions	I-1	Not applicable. These measures are applicable to large industrial facilities (> 500,000 $MTCO_2e/yr$) and other intensive uses such as refineries.
	I-2	
	I-3	
	I-4	
	I-5	
High Speed Rail	T-9	Not applicable. Supports increased mobility choice.
Green Building Strategy	GB-1	Consistent. The project will include a variety of building, water, and solid waste efficiencies consistent with the current CALGREEN requirements.
High Global Warming Potential Gases	H-1	Not applicable. The proposed Project is not substantial sources of high GWP emissions and will comply with any future changes in air conditioning, fire protection suppressant, and other requirements.
	H-2	
	H-3	
	H-4	
	H-5	
	H-6	
	H-7	
Recycling and Waste	RW-1	Consistent. The Project will recycle a minimum of 50 percent from construction activities and operations pursuant to AB 939 and AB 75 requirements.
	RW-2	
	RW-3	
Sustainable Forests	F-1	Consistent. The project will increase carbon sequestration by increasing on-site trees per the project landscaping plan.
Water	W-1	Consistent. The project will include use of low-flow fixtures and efficient landscaping pursuant to current CALGREEN requirements.
	W-2	
	W-3	
	W-4	
	W-5	
	W-6	
Agriculture	A-1	Not applicable. The project is not an agricultural use.

(Urban Crossroads, 2019b, Table 3-5)

Project Consistency with SB 32 and the 2017 Scoping Plan

At the state level, Executive Orders S-3-05 and B-30-15 are orders from the State's Executive Branch for the purpose of reducing GHG emissions. The goal of Executive Order S-3-05 is to reduce GHG emissions to 1990 levels by 2020 was codified by the Legislature as the 2006 Global Warming Solutions Act (AB 32). The Project, as analyzed above, is consistent with AB 32. Therefore, the Project does not conflict with this component of Executive Order S-3-05. The Executive Orders also establish goals to reduce GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. The 2017 Scoping Plan Update reflects the 2030 reduction target, set by Executive Order B-30-15 and codified by SB 32. However, studies have shown that, in order to meet the 2030 and 2050 targets, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. In its Climate Change Scoping Plan, CARB acknowledged that the "measures needed to meet the 2050 are too far in the future to define in detail." In the First Scoping Plan Update, however, CARB generally described the type of activities required to achieve the 2050 target: "energy demand reduction through efficiency and activity changes; largescale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and rapid market penetration of efficiency and clean energy technologies that requires significant efforts to deploy and scale markets for the cleanest technologies immediately." (Urban Crossroads, 2019b, p. 58)

In 2017, the California Supreme Court examined the need to use the Executive Order S-3-05 2050 reduction target in Cleveland National Forest Foundation v. San Diego Association of Governments (2017) 3 Cal.5th 497 (Cleveland National). The case arose from SANDAG's adoption of its 2050 Regional Transportation Plan, which included its Sustainable Communities Strategy, as required by SB 375 (discussed above). On review, the Supreme Court held that SANDAG did not violate CEQA by not considering the Executive Order S-3-05 2050 reduction target. (Urban Crossroads, 2019b, p. 58)

Unlike the 2020 and 2030 reduction targets of AB 32 and SB 32, respectively the 2050 target of Executive Order S-3-05 has not been codified. Accordingly, the 2050 reduction target has not been the subject of any analysis by CARB. For example, CARB has not prepared an update to the aforementioned Scoping Plan that provides guidance to local agencies as to how they may seek to contribute to the achievement of the 2050 reduction target. (Urban Crossroads, 2019b, p. 58)

Further, the Project is much smaller in size and scope in comparison to the Regional Transportation Plan examined in Cleveland National. In that case, the California Supreme Court held that SANDAG did not violate CEQA by not considering the Executive Order S-3-05 2050 reduction target. Accordingly, there is no information presently available to assess the Project's consistency with regard to the 2050 target of Executive Order S-3-05. (Urban Crossroads, 2019b, p. 58)

The 2017 Scoping Plan Update reflects the 2030 target of a 40 percent reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Table 4.7-8, *2017 Scoping Plan Consistency Summary*, summarizes the project's consistency with the 2017 Scoping Plan. As summarized, the project would not conflict with any of the provisions of the Scoping Plan and in fact supports seven of the action categories. (Urban Crossroads, 2019b, p. 59)

As shown in Table 4.7-8, the Project would not conflict with any of the 2017 Scoping Plan elements as any regulations adopted would apply directly or indirectly to the Project. Further, recent studies show that the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40 percent below 1990 levels by 2030. (Urban Crossroads, 2019b, p. 63)

Table 4.7-8 2017 Scoping Plan Consistency Summary

Action	Responsible Parties	Consistency
Implement SB 350 by 2030		
Increase the Renewables Portfolio Standard to 50 percent of retail sales by 2030 and ensure grid reliability.	CPUC CEC CARB	Consistent. This measure is not directly applicable to development projects, but the Proposed Project would use energy from Southern California Edison, which has committed to diversify its portfolio of energy sources by increasing energy from wind and solar sources.
Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.		Consistent. Although this measure is directed towards policymakers, the proposed Project would be designed and constructed to implement the energy efficiency measures for new commercial developments and would include several measures designed to reduce energy consumption.
Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in IRPs to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly- owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs.		Consistent. The proposed Project would be designed and constructed to implement the energy efficiency measures, where applicable by including several measures designed to reduce energy consumption. The proposed Project includes energy efficient field lighting and fixtures that meet the current Title 24 Standards throughout the Project Site and would be a modern development with energy efficient boilers, heaters, and air conditioning systems.
Implement Mobile Source Strategy (Cleaner Technology and Fuels)		
At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025.	CARB CalSTA SGC Caltrans CEC OPR Local Agencies	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
At least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030.		Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations.		Not applicable. This measure is not within the purview of this Project.

Action	Responsible Parties	Consistency
Medium- and heavy-duty GHG Phase 2.		Not applicable. This measure is not within the purview of this Project.
Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO_X standard.		Not applicable. This measure is not within the purview of this Project.
Last Mile Delivery: New regulation that would result in the use of low NO_X or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.		Not applicable. This measure is not within the purview of this Project.
Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document "Potential VMT Reduction Strategies for Discussion."		Not applicable. This measure is not within the purview of this Project.
Increase stringency of SB 375 Sustainable Communities Strategy (2035 targets).	CARB	Not applicable. The Project is not within the purview of SB 375 and would therefore not conflict with this measure.
By 2019, adjust performance measures used to select and design transportation facilities		
Harmonize project performance with emissions reductions and increase competitiveness of transit and active transportation modes (e.g. via guideline documents, funding programs, project selection, etc.).	CalSTA SGC OPR CARB GoBiz IBank DOF CTC Caltrans	Not applicable. Although this is directed towards CARB and Caltrans, the Proposed Project would be designed to promote and support pedestrian activity on-site and in the Project Site area. The Project Site is within proximity to residential neighborhoods.
By 2019, develop pricing policies to support low-GHG transportation (e.g. low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts).	CalSTA Caltrans CTC OPR/SGC CARB	Not applicable. Although this measure is directed towards policymakers, the proposed Project would comply with AB 939, which sets a statewide policy that not less than 50 percent of solid waste generated be source reduced, recycled, or composted.

Action	Responsible Parties	Consistency
		Additionally, the proposed Project would be required to have a recycling program and recycling collection. During construction, the proposed Project shall recycle and reuse construction and demolition waste per City Solid Waste procedures.
Implement California Sustainable Freight Action Plan		
Improve freight system efficiency.	CalSTA CalEPA CNRA CARB Caltrans CEC GoBiz	When adopted, this measure would apply to all trucks accessing the Project site, this may include existing trucks or new trucks that are part of the statewide goods movement sector.
Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.		Not applicable. This measure is not within the purview of this Project.
Adopt a Low Carbon Fuel Standard with a CI reduction of 18 percent.	CARB	Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030). When adopted, this measure would apply to all fuel purchased and used by the Project in the state.
Implement the Short-Lived Climate Pollutant Strategy by 2030		
40 percent reduction in methane and hydrofluorocarbon emissions below 2013 levels.	CARB CalRecycle CDFA SWRCB Local Air Districts	When adopted, the Project would be required to comply with this measure and reduce SLPS accordingly.
50 percent reduction in black carbon emissions below 2013 levels.		Not applicable. This measure is not within the purview of this Project.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	CARB CalRecycle CDFA SWRCB Local Air Districts	Not applicable. This measure is not within the purview of this Project.
Implement the post-2020 Cap-and-Trade Program with declining annual caps.	CARB	When adopted, the Project would be required to comply with the Cap-and-Trade Program if it generates emissions from sectors covered by Cap-and-Trade.

Action	Responsible Parties	Consistency
By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California's land base as a net carbon sink		
Protect land from conversion through conservation easements and other incentives.	CNRA Departments Within CDFA CalEPA CARB	Not applicable. This measure is not within the purview of this Project.
Increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity		Not applicable. This measure is not within the purview of this Project.
Utilize wood and agricultural products to increase the amount of carbon stored in the natural and built environments		Not applicable. This measure is not within the purview of this Project.
Establish scenario projections to serve as the foundation for the Implementation Plan		Not applicable. This measure is not within the purview of this Project.
Establish a carbon accounting framework for natural and working lands as described in SB 859 by 2018	CARB	Not applicable. This measure is not within the purview of this Project.
Implement Forest Carbon Plan	CNRA CAL FIRE CalEPA and Departments Within	Not applicable. This measure is not within the purview of this Project.
Identify and expand funding and financing mechanisms to support GHG reductions across all sectors.	State Agencies & Local Agencies	Not applicable. This measure is not within the purview of this Project.

(Urban Crossroads, 2019b, Table 3-6)

Notwithstanding, because the Project would exceed the applicable numeric threshold and results in a cumulatively considerable-impact with respect to GHG emissions (as discussed under the analysis of Threshold a.), the Project would result in a conflict with the provisions of SB 32. Accordingly, prior to mitigation, the Project's impacts due to a conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be significant on a cumulative basis. (Urban Crossroads, 2019b, p. 63)

As shown in Table 4.7-9, with implementation of Regulatory Requirements, Design Requirements CRDR 4.7-1 through CRDR 4.7-3, and Project-specific mitigation measures, the Project's Service Population Ratio would be reduced to 8.32 $MTCO_2e$ per Service Population, which would still exceed the threshold of 3.84 $MTCO_2e$ per Service Population. Thus, the Project's impacts due to a conflict with the GHG reduction target established by SB 32 and General Plan Policy OCS-10.2 which requires compliance with the GHG reduction target established by SB 32 would remain significant and unavoidable following mitigation.

4.7.6 Cumulative Impact Analysis

As discussed in Subsection 4.7.3, there is no evidence at this time that would indicate that the emissions from a project the size of the Project would directly or indirectly affect the global climate. As such, Project impacts due to GHG emissions are inherently cumulative in nature.

As discussed under Threshold a., the Project would emit approximately 9.2 $MTCO_2e$ per Service Population, which would exceed the threshold of 3.84 $MTCO_2e$ per Service Population. Therefore, prior to mitigation, the Project's level of GHGs would cumulatively contribute to significant impacts to the environment resulting from GCC. Thus, the Project's GHG emissions would be significant on a cumulative basis prior to mitigation.

As discussed under the analysis of Threshold b, because the Project exceed the applicable numeric threshold and results in a cumulatively-considerable impact with respect to GHG emissions, the Project would result in a conflict with the provisions of General Plan Policy OSC-10.2 and SB 32. Other developments in the region also could result in conflicts with the provisions of General Plan Policy OSC-10.2 and SB 32. Accordingly, prior to mitigation, the Project's impacts due to a conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be significant on a cumulative basis.

4.7.7 Significance of Impacts Before Mitigation

Threshold a: Cumulatively-Considerable Impact. At Project Buildout (2025), the Project would emit approximately 9.2 $MTCO_2e$ per Service Population, which would exceed the threshold of 3.84 $MTCO_2e$ per Service Population. Therefore, prior to mitigation, the Project's level of GHGs would cumulatively contribute to significant impacts to the environment resulting from GCC. Thus, the Project's GHG emissions would be significant on a cumulative basis prior to mitigation.

Threshold b: Cumulatively-Considerable Impact. Because the Project would exceed the applicable numeric threshold and results in a cumulatively-considerable impact with respect to GHG emissions, the Project would result in a conflict with the provisions of SB 32 and General Plan Policy OCS-10.2 which requires compliance with the GHG reduction target established by SB 32. Accordingly, prior to mitigation, the Project's impacts due to a conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be significant on a cumulative basis.

4.7.8 City Regulations, Design Requirements, and Mitigation

The following are standard applicable regulations and project design requirements within the City of Menifee, and/or reflect the Project's proposed design features as included in the proposed Legado Specific Plan (Specific Plan No. 2017-187). Although these requirements technically do not meet CEQA's definition for mitigation, they are imposed herein to ensure Project compliance with applicable Project Design Features (PDFs) and regulatory requirements.

Regulatory Requirements

The Project would be required to comply with all mandates imposed by the State of California and the South Coast Air Quality Management District and other agencies/entities aimed at the reduction of air quality emissions. Those that are applicable to the Project and that would assist in the reduction of greenhouse gas emissions are described below. (Urban Crossroads, 2019b, pp. 1, 4)

- Global Warming Solutions Act of 2006 (AB 32). Requires California to reduce its GHG emissions to 1990 levels by 2020, which represents a reduction of approximately 15 percent below emissions expected under a "business as usual" scenario. Compliance with AB 32 would ensure the Project implements measures to reduce GHG emissions.

- Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies (SB 375). Requires each of California's metropolitan planning organizations to prepare a "sustainable communities strategy" (SCS) as an integral part of its regional transportation plan (RTP). Compliance with the RTP/SCS would ensure the Project does not conflict with GHG reduction measures and would serve to help reduce Project-related GHG emissions.

- Pavley Fuel Efficiency Standards (AB 1493). Establishes fuel efficiency ratings for new vehicles. Compliance with AB 1493 would ensure that Project-related vehicles meet the fuel efficiency ratings to reduce vehicular-related GHG emissions during operation of the Project.

- Title 24 California Code of Regulations (California Building Code). Establishes energy efficiency requirements for new construction. Compliance with Title 24 would ensure Project implements energy efficiency requirements to reduce GHG emissions during operation of the Project.

- Title 20 California Code of Regulations (Appliance Energy Efficiency Standards). Establishes energy efficiency requirements for appliances. Compliance with Title 20 would ensure appliances installed on the Project site meet the energy efficiency requirements to reduce GHG emissions during operation of the Project.

- Title 17 California Code of Regulations (Low Carbon Fuel Standard). Requires carbon content of fuel sold in California to be 10% less by 2020. Compliance with Title 17 would ensure that fuel utilized by future Project residents would reduce GHG emissions during operation of the Project.

- California Water Conservation in Landscaping Act of 2006 (AB 1881). Requires local agencies to adopt the Department of Water Resources updated Water Efficient Landscape Ordinance or equivalent by January 1, 2010 to ensure efficient landscapes in new development and reduced water waste in existing landscapes. The City of Menifee adopted a Water Efficient Landscape Ordinance (Municipal Code Chapter 15.04, *Landscape Water Use Efficiency Requirements*), which would be applicable to the Project. Compliance with Chapter 15.04 would require the Project to utilize water efficient landscaping in order to reduce GHG emissions during operation of the Project.

- Statewide Retail Provider Emissions Performance Standards (SB 1368). Requires energy generators to achieve performance standards for GHG emissions. Compliance with SB 1368 would require the Project to achieve performance standards for GHG emissions in order to reduce GHG emissions on the Project site.

- Renewable Portfolio Standards (SB 1078). Requires electric corporations to increase the amount of energy obtained from eligible renewable energy resources to 20 percent by 2010 and 33 percent by 2020. Compliance with SB 1078 would help increase the amount of renewable energy resources used for energy on-site to reduce GHG emissions during operation of the Project.

- Senate Bill 32 (SB 32). Requires the state to reduce statewide greenhouse gas emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. Compliance with SB 32 would ensure the Project reduces GHG emissions to the maximum feasible extent.

Promulgated regulations that would affect the Project's emissions are accounted for in the Project's GHG calculations provided in the Project's GHGA (*Technical Appendix G*). In particular, the Pavley Standards, Low Carbon Fuel Standards, and Renewable Portfolio Standards (RPS) will be in effect for the AB 32 target year of 2020, and therefore are accounted for in the Project's emission calculations. (Urban Crossroads, 2019b, p. 4)

Applicable City Regulations and Design Requirements

In addition, the following PDFs and regulatory requirements would apply. Measures listed below (or equivalent language) shall appear on all Project grading and/or building plans, as appropriate. Energy-saving and sustainable design features and operational programs would be incorporated into all facilities developed pursuant to the Project. Notably, the Project would comply with the California Green Building Standards Code (CALGreen; CCR, Title 24, Part 11) as implemented by the City of Menifee. The Project also incorporates and expresses the following design features and attributes promoting energy efficiency and sustainability. Because these features/attributes are integral to the Project, and/or are regulatory requirements, they are not considered to be mitigation measures.

CRDR 4.7-1 In conformance with the Legado Specific Plan (Specific Plan No. 2017-187), the Project is required to create pedestrian connections, as set forth in the Legado Specific Plan (Specific Plan No. 2017-187), which shall be constructed at selected roads within the Project, providing pedestrian access to the various uses and activity centers within the Project. Facilitating pedestrian access encourages people to walk instead of drive. The Project shall not impose barriers to pedestrian access and interconnectivity. Furthermore, the mix of uses within the Specific Plan as proposed by the Project would reduce travel distances and regional vehicle miles traveled (VMT) by consolidating trips and reducing requirements for multiple trips.

CRDR 4.7-2 The Project is required by the Legado Specific Plan (Specific Plan No. 2017-187) to create local "light" vehicle networks, such as NEV networks. NEVs offer an alternative to traditional vehicle trips and can legally be used on roadways with speed limits of 35 MPH or less (unless specifically restricted). To create an NEV network, the Project will implement NEV lanes. Compliance with the NEV network requirement in the Legado Specific Plan would ensure the NEV network is installed and would encourage the use of alternative transportation to reduce GHG emissions during operation of the Project.

CRDR 4.7-3 As per information provided by the Project Applicant, the Project is required to comply with SCAQMD Rule 445, which prohibits the use of wood burning stoves and fireplaces in new development. Compliance with SCAQMD Rule 445 would prohibit the use of wood burning stoves and fire places which would reduce GHG emissions during operation of the Project.

Mitigation Measures

MM 4.7-1 Prior to the issuance of building permits, and to reduce water demands and associated energy use, prior to approval of landscaping plans associated with future implementing development permits, the Project Applicant shall prepare, and the City of Menifee shall approve, a Water

Conservation Strategy that demonstrates a minimum 20% reduction in outdoor water usage when compared to baseline water demand (total expected water demand without implementation of the Water Conservation Strategy). Planning Area 18 of the Legado Specific Plan shall not be subject to the minimum 20% reduction in outdoor water usage requirement. In addition, the City shall review building permit applications to ensure the following requirements are implemented:

- The City shall review landscaping plans to verify that the landscaping palette emphasizes drought-tolerant plants consistent with provisions of the City of Menifee requirements including but not limited to, Municipal Code Chapter 15.04 (Landscape Water Use Efficiency Requirements) and Chapter 8.04 (Building Code); and
- The City shall review proposed irrigation plans to ensure the installation of water-efficient irrigation techniques consistent with City of Menifee requirements including but not limited to, Municipal Code Chapter 15.04 (Landscape Water Use Efficiency Requirements) and Chapter 8.04 (Building Code).

MM 4.7-2 Prior to issuance of building permits, and to reduce water consumption and the associated energy usage, the Project shall be required to be designed to comply with the mandatory reductions in indoor water usage contained in the incumbent CalGreen Code and any mandated reduction in outdoor water usage contained in the City's water efficient landscape requirements. In addition, the City shall review building permit applications to ensure the following requirement is implemented:

- The City shall review building plans to require that all faucets, high-efficiency toilets (HETs), and other plumbing fixtures are EPA Certified WaterSense labeled or equivalent.

MM 4.7-3 Prior to issuance of building permits, the Project Applicant shall demonstrate that the proposed building components would surpass by a minimum of 5% the 2019 Title 24 performance standards or shall comply with the Title 24 requirements in effect at the time, whichever is more stringent, established under the Building Energy Efficiency Standards contained in the California Code of Regulations (CCR), Title 24, Part 6 (Title 24, Title 24 Energy Efficiency Standards).

MM 4.7-4 Prior to issuance of building permits, the Project Applicant shall demonstrate that the proposed roofs of the buildings are designed to accommodate maximally sized photovoltaic (PV) solar arrays taking into consideration limitations imposed by other rooftop equipment, roof warranties, building and fire code requirements, and other physical or legal limitations. The Project shall develop each Project building with the necessary electrical system and other infrastructure to accommodate maximally sized PV arrays in the future. The electrical system and infrastructure shall be clearly labeled with noticeable and permanent signage which informs future tenant/purchasers of the existence of this infrastructure.

MM 4.7-5 Prior to approval of implementing commercial plot plan(s) within Planning Area 16 of the Legado Specific Plan, the City of Menifee Planning Division shall ensure that the plot plan(s) include a minimum of three (3) electric-vehicle charging stations. The electric-vehicle charging stations also shall be depicted on building plans for implementing development within Planning Area 16. Prior to issuance of occupancy permits for the proposed commercial land

uses within Planning Area 16, the City of Menifee Building and Safety Department shall ensure that a minimum of three electric-vehicle charging stations have been installed on-site.

4.7.9 Significance of Impacts After Mitigation

Threshold a: Significant and Unavoidable Cumulatively-Considerable Impact. As shown in Table 4.7-9, *Total Project GHG Emissions (Annual – With CRDRs and Mitigation)*, with implementation of Regulatory Requirements, Design Requirements CRDR 4.7-1 through CRDR 4.7-3, and Project-specific mitigation measures, the Project's Service Population Ratio would be reduced to 8.32 $MTCO_2e$ per Service Population, which would still exceed the threshold of 3.84 $MTCO_2e$ per Service Population. Thus, the Project's cumulatively-considerable impacts due to GHG emissions would be significant and unavoidable.

Threshold b: Significant and Unavoidable Cumulatively-Considerable Impact. As shown in Table 4.7-9, with implementation of Regulatory Requirements, Design Requirements CRDR 4.7-1 through CRDR 4.7-3, and Project-specific mitigation measures, the Project's Service Population Ratio would be reduced to 8.32 $MTCO_2e$ per Service Population, which would still exceed the threshold of 3.84 $MTCO_2e$ per Service Population. Thus, the Project's impacts due to a conflict with the GHG reduction target established by SB 32 and General Plan Policy OCS-10.2 which requires compliance with the GHG reduction target established by SB 32 would remain significant and unavoidable following mitigation.

Table 4.7-9 Total Project GHG Emissions (Annual – With CRDRs and Mitigation)

Emission Source	Emissions (metric tons per year)			
	CO_2	CH_4	N_2O	Total CO_2E
Annual construction-related emissions amortized over 30 years	484.81	0.06	0.00	486.19
Area	17.88	0.02	0.00	18.31
Energy	4,204.64	0.15	0.05	4,222.11
Mobile Sources	21,153.01	0.97	0.00	21,177.23
Waste	306.99	18.14	0.00	760.55
Water Usage	856.80	4.93	0.12	1,016.60
Total CO_2E (All Sources)	**27,681.00**			
Service Population	3,329			
Total CO_2E (All Sources) per Service Population	**8.32**			
SCAQMD Threshold per Service Population	3.84			
Exceedance?	**YES**			

(Urban Crossroads, 2019b, Table 3-4)

4.8 HAZARDS AND HAZARDOUS MATERIALS

The information and analysis presented in this Subsection is based in part of a technical study that was prepared to determine the presence or absence of hazardous materials on the Project site under existing conditions. The report titled "Phase I Environmental Site Assessment" ("ESA") prepared by Petra Geosciences, Inc. (referenced herein as "Petra"), and dated July 13, 2016, addresses the entire Project site (Petra, 2016). This report is included as EIR *Technical Appendix H*.

4.8.1 EXISTING CONDITIONS

A. Definition of Toxic Substances and Hazardous Waste

For purposes of this EIR, the term "toxic substance" is defined as a substance which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may present an unreasonable risk of injury to human health or the environment. Toxic substances include: chemical, biological, flammable, explosive, and radioactive substances.

"Hazardous material" is defined as a substance which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may: 1) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, disposed of, or otherwise mismanaged; or 2) cause or contribute to an increase in mortality or an increase in irreversible or incapacitating illness.

Hazardous waste is defined in the California Code of Regulations, Title 22, § 66261.3. The defining characteristics of hazardous waste are: ignitability (oxidizers, compressed gases, and extremely flammable liquids and solids), corrosivity (strong acids and bases), reactivity (explosives or generates toxic fumes when exposed to air or water), and toxicity (materials listed by the United States Environmental Protection Agency [EPA] as capable of inducing systemic damage to humans or animals).

Certain wastes are called "Listed Wastes" and are found in the California Code of Regulations, Title 22, §§ 66261.30 through 66261.35. Wastes appear on the lists because of their known hazardous nature or because the processes that generate them are known to produce hazardous wastes (which are often complex mixtures).

B. Historical Review, Regulatory Review, and Field Reconnaissance

Petra performed a search of readily available environmental record sources. The search results are summarized below. The search radius for each data base was one mile from the Project site. Environmental Data Resources, Inc. (EDR) conducted a search for sites listed on various federal and state databases within one mile of the Project site. A detailed description of the results of the regulatory records review is provided in the Project's ESA, (*Technical Appendix H*), and is summarized below.

1. Historical Review

Petra performed a search of aerial photographs, topographical maps, and Sanborn fire insurance maps, and interviewed property owners in order to determine the past uses of the Project site. The Project site between 1956 to between/during 2016 was utilized for dry farming activities. The Project site remained undeveloped with unchanged from conditions observed during site reconnaissance conducted by McAlister in 2016. (Petra, 2016, pp. 12-15)

Based on a review of state and local information sources for the Project site and surrounding areas, the Project site and areas within 0.5-mile of the site were not identified on any of the following information sources:

Riverside County Department of Public Health; Department of Toxic Substances Control; EnviroStor; California Regional Water Quality Board (RWQCB) GeoTracker; National Pipeline Mapping System GeoTracker; and the State of California Department of Oil, Gas, and Geothermal Resources. Additionally, building permits were reviewed for the Project site from the City of Menifee, and no building, plumbing, grading, or electrical permits were found for the Project site or adjoining properties. (Petra, 2016, pp. 7,10-11,15)

2. Regulatory Records Review

Petra conducted a search for sites listed on various federal and state databases within the vicinity of the Project site. The databases provide lists of facilities that use, store, or disposes of hazardous substances, as well as sites with known or suspected contaminated soil or groundwater. The Project site was not located on any of the databases reviewed by Petra. Eleven sites and one orphan site (sites with inadequate address information to be mapped) were identified during the agency database search. All of the sites in the vicinity of the Project do not represent a recognized environmental condition (REC) with regards to the Project site, due to the nature of the listings, the oversight agency having granted closure, the site being down gradient from the Project site, and/or the distance of the listed site to the Project site. For a more detailed description of the sites identified during the regulatory records review, please refer to EIR *Technical Appendix H*. (Petra, 2016, pp. 7-10)

3. Property Owner Interviews

Interviews were conducted with the owner of the Project site, Fred Fleming, and the client, Bristol Land Company, LLC. None of the owners identified soil or groundwater impacts during the interviews. The owner indicated that the property was utilized for farming from 1956 to 2016, and that no pesticides or fertilizers were used in farming. No hazards were identified during the property owner interviews. (Petra, 2016, p. 15)

4. Field Reconnaissance

Petra conducted an inspection of the Project site on June 28, 2016. Although field reconnaissance took place in 2016, the conditions on-site have not substantially changed since June 2016. Petra observed that the Project site consists of undeveloped land with several unimproved dirt roads, and contains a light to heavy amount of vegetation including soy beans, wild grass, weeds, brush, and scattered mature trees. No structures or wells were observed on-site. Multiple stockpiles of soils were observed on the northeast sides of the Project site. (Petra, 2016, p. 6)

Scattered debris was observed throughout the Project site. The debris consisted of concrete, brick, stockpiles of shrubs, trash, empty cans of Ironlak interior and exterior paint, mattresses, plastic containers with (what appeared to be) used oil, and windblown trash. (Petra, 2016, p. 6)

Power lines with wooden poles were observed extending along the north side of Rouse Road and east towards Antelope Road. A total of three pole mounted transformers were observed at the northwest corner of the Project site adjacent to the Evans-Brown Mortuary. No signs of leaking or discoloration was observed on the soils below the transformers. (Petra, 2016, p. 6)

Staining was observed on the northeast side of the Project site just east of Dawson Road. The localized staining appeared to be from a leaking vehicle. No other staining was observed on-site. There was no evidence of sumps, pits, pools, or lagoons identified during site reconnaissance. (Petra, 2016, p. 7)

C. Airport Hazards

The Project site is located 9.7 miles southeast of the March Air Reserve Base (MARB), which is the only active public airport facility in the Project's vicinity. The Project site is located within the Airport Influence Area (AIA) for the MARB, and is located within Compatibility Zone E. Prohibited land uses within Compatibility Zone E are limited to hazards to flight, and developments within Zone E are required to notify prospective property owners of aircraft overflights as part of future real estate transactions. Compatibility Zone E does not have any restrictions on residential density or number of people per acre. (ALUC, 2014, Table MA-2 and Map MA-1) The nearest private airport facility to the Project site is the Perris Valley Airport, located approximately 2.5 miles northwest of the Project site. According to the ALUCP for the Perris Valley Airport, the Project site is not located within the AIA for this facility, indicating operations at the Perris Valley Airport are unlikely to create a safety hazard or excessive noise for people working or residing in the Project area (RCIT, 2017; ALUC, 2011, Map PV-1).

D. Wildland Fire Hazards

According to the City of Menifee General Plan EIR, the northeastern portion of the Project site is located within a "High Fire Hazard Severity Zone," while the remaining portions of the site are not identified as being subject to wildland fires. Additionally, lands to the east and southeast of the Project site are located within a "Moderate Fire Hazard Severity Zone," "High Fire Hazard Severity Zone," and "Very High Fire Hazard Severity Zone" (Menifee, 2013b, Figure 5.8-3).

4.8.2 Applicable Regulatory Requirements

The following is a brief description of the federal, state, and local environmental laws and related regulations related to hazards and hazardous materials.

A. Hazardous Materials Regulations and Plans

1. Federal Regulations

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Superfund Amendments and Reauthorization Act (SARA)

The Comprehensive Environmental Response, Compensation, and Liability Act, also known as CERCLA or Superfund, provides a Federal "Superfund" to clean up uncontrolled or abandoned hazardous-waste sites as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment. Through CERCLA, the EPA was given power to seek out those parties responsible for any release and assure their cooperation in the cleanup. (EPA, 2017d)

EPA cleans up orphan sites when potentially responsible parties cannot be identified or located, or when they fail to act. Through various enforcement tools, EPA obtains private party cleanup through orders, consent decrees, and other small party settlements. EPA also recovers costs from financially viable individuals and companies once a response action has been completed. (EPA, 2017d)

EPA is authorized to implement the Act in all 50 states and U.S. territories. Superfund site identification, monitoring, and response activities in states are coordinated through the state environmental protection or waste management agencies. (EPA, 2017d)

The Superfund Amendments and Reauthorization Act (SARA) of 1986 reauthorized CERCLA to continue cleanup activities around the country. Several site-specific amendments, definitions clarifications, and

technical requirements were added to the legislation, including additional enforcement authorities. Also, Title III of SARA authorized the Emergency Planning and Community Right-to-Know Act (EPCRA). (EPA, 2017d)

❑ Resource Conservation and Recovery Act (RCRA)

The Resource Conservation and Recovery Act (RCRA) gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. (EPA, 2016a)

The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to 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 EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program. (EPA, 2016a)

❑ Hazardous Materials Transportation Act (HMTA)

The Hazardous Materials Transportation Act of 1975 (HMTA) empowered the Secretary of Transportation to designate as hazardous material any "particular quantity or form" of a material that "may pose an unreasonable risk to health and safety or property." (OSHA, n.d.)

Hazardous materials regulations are subdivided by function into four basic areas:

- Procedures and/or Policies 49 CFR Parts 101, 106, and 107
- Material Designations 49 CFR Part 172
- Packaging Requirements 49 CFR Parts 173, 178, 179, and 180
- Operational Rules 49 CFR Parts 171, 173, 174, 175, 176, and 177 (OSHA, n.d.)

The HMTA is enforced by use of compliance orders [49 U.S.C. 1808(a)], civil penalties [49 U.S.C. 1809(b)], and injunctive relief (49 U.S.C. 1810). The HMTA (Section 112, 40 U.S.C. 1811) preempts state and local governmental requirements that are inconsistent with the statute, unless that requirement affords an equal or greater level of protection to the public than the HMTA requirement. (OSHA, n.d.)

❑ Hazardous Materials Transportation Uniform Safety Act of 1990

In 1990, Congress enacted the Hazardous Materials Transportation Uniform Safety Act (HMTUSA) to clarify the maze of conflicting state, local, and federal regulations. Like the HMTA, the HMTUSA requires the Secretary of Transportation to promulgate regulations for the safe transport of hazardous material in intrastate, interstate, and foreign commerce. The Secretary also retains authority to designate materials as hazardous when they pose unreasonable risks to health, safety, or property. (OSHA, n.d.)

The statute includes provisions to encourage uniformity among different state and local highway routing regulations, to develop criteria for the issuance of federal permits to motor carriers of hazardous materials, and to regulate the transport of radioactive materials. (OSHA, n.d.)

❑ Occupational Safety and Health Act (OSHA)

Congress passed the Occupational and Safety Health Act (OSHA) to ensure worker and workplace safety. Their goal was to make sure employers provide their workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. (EPA, 2016b)

In order to establish standards for workplace health and safety, the Act also created the National Institute for Occupational Safety and Health (NIOSH) as the research institution for OSHA. OSHA is a division of the U.S. Department of Labor that oversees the administration of the Act and enforces standards in all 50 states. (EPA, 2016b)

❑ Toxic Substances Control Act

The Toxic Substances Control Act of 1976 provides EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics, and pesticides. TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint. (EPA, 2016c)

Various sections of TSCA provide authority to:

- Require, under Section 5, pre-manufacture notification for "new chemical substances" before manufacture
- Require, under Section 4, testing of chemicals by manufacturers, importers, and processors where risks or exposures of concern are found
- Issue Significant New Use Rules (SNURs), under Section 5, when it identifies a "significant new use" that could result in exposures to, or releases of, a substance of concern.
- Maintain the TSCA Inventory, under Section 8, which contains more than 83,000 chemicals. As new chemicals are commercially manufactured or imported, they are placed on the list.
- Require those importing or exporting chemicals, under Sections 12(b) and 13, to comply with certification reporting and/or other requirements.
- Require, under Section 8, reporting and record-keeping by persons who manufacture, import, process, and/or distribute chemical substances in commerce.
- Require, under Section 8(e), that any person who manufactures (including imports), processes, or distributes in commerce a chemical substance or mixture and who obtains information which reasonably supports the conclusion that such substance or mixture presents a substantial risk of injury to health or the environment to immediately inform EPA, except where EPA has been adequately informed of such information. EPA screens all TSCA b§8(e) submissions as well as voluntary "For Your Information" (FYI) submissions. The latter are not required by law, but are submitted by industry and public interest groups for a variety of reasons. (EPA, 2016c)

2. State Regulations

❑ Cal/ Occupational Safety and Health Act (OSHA) and the California State Plan

Under an agreement with OSHA, since 1973 California has operated an occupational safety and health program in accordance with Section 18 of the federal OSHA. The State of California's Department of Industrial Relations administers the California Occupational Safety and Health Program, commonly referred to as

Cal/OSHA. The State of California's Division of Occupational Safety and Health (DOSH) is the principal agency that oversees plan enforcement and consultation. In addition, the California State program has an independent Standards Board responsible for promulgating State safety and health standards, and reviewing variances. It also has an Appeals Board to adjudicate contested citations and the Division of Labor Standards Enforcement to investigate complaints of discriminatory retaliation in the workplace.

Pursuant to 29 CFR 1952.172, the California State Plan applies to all public and private sector places of employment in the state, with the exception of federal employees, the United States Postal Service, private sector employers on Native American lands, maritime activities on the navigable waterways of the United States, private contractors working on land designated as exclusively under federal jurisdiction and employers that require federal security clearances. Cal/OSHA is the only agency in the state authorized to adopt, amend, or repeal occupational safety and health standards or orders. In addition, the Standards Board maintains standards for certain things not covered by federal standards or enforcement, including: elevators, aerial passenger tramways, amusement rides, pressure vessels and mine safety training. The Cal/OSHA enforcement unit conducts inspections of California workplaces in response to a report of an industrial accident, a complaint about an occupational safety and health hazard, or as part of an inspection program targeting industries with high rates of occupational hazards, fatalities, injuries or illnesses.

❑ California Hazardous Waste Control Law

The Hazardous Waste Control Law (HWCL) (Health and Safety Code [HSC], Division 20, Chapter 6.5, Article 2, Section 25100, et seq.) is the primary hazardous waste statute in California. The HWCL implements RCRA as a "cradle-to-grave" waste management system in the state. It specifies that generators have the primary duty to determine whether their wastes are hazardous and to ensure its proper management. The HWCL also establishes criteria for the reuse and recycling of hazardous wastes used or reuse as raw materials. The HWCL exceeds federal requirements by mandating source reduction planning and broadening requirements for permitting facilities that treat hazardous waste. It also regulates a number of waste types and waste management activities not covered by federal law (RCRA).

❑ California Code of Regulations (CCR), Titles 22 and 26

A variety of California Code of Regulation (CCR) titles address regulations and requirements for generators of hazardous waste. Title 22 contains detailed compliance requirements for hazardous waste generators, transporters, and facilities for treatment, storage, and disposal. Because California is a fully-authorized state according to RCRA, most regulations (i.e., 40 CFR 260, et seq.) have been duplicated and integrated into Title 22. However, because the Department of Toxic Substances Control (DTSC) regulates hazardous waste more stringently than the EPA, the integration of state and federal hazardous waste regulations that make up Title 22 does not contain as many exemptions or exclusions as does 40 CFR 260. As with the HSC, Title 22 also regulates a wider range of waste types and waste management activities than does RCRA. To aid the regulated community, California has compiled hazardous materials, waste, and toxics-related regulations from CCR, Titles 3, 8, 13, 17, 19, 22, 23, 24 and 27 into one consolidated listing: CCR Title 26 (Toxics). However, the hazardous waste regulations are still commonly referred to collectively as "Title 22."

B. Airport and Aircraft Hazards Regulations and Plans

1. State Regulations

❑ State Aeronautics Act

The State Aeronautics Commission Act of 1947 created the Division of Aeronautics ("Division"), and was later amended by statute to read the State Aeronautics Act (Aeronautics Act) in 1961. As a result of this legislation, the Division's first priorities are those mandated by the Aeronautics Act, then Caltrans guidance, then Division guidance as expressed through its Policy Element. As directed by the Aeronautics Act, the Division is a steward and advocate of aviation in California. To that end, its efforts are focused on activities that "protect the public interest in aeronautics and aeronautical progress." (§ 21002) (Caltrans, 2016, p. 1-2)

The Aeronautics Act itself is divided into six chapters, the first five of which have not received significant cleanup legislation since its enabling in 1947. The first chapter begins with general provisions and definitions and explains the Legislature's intent for a State aviation program. Chapter two explains Caltrans' role in administering the Division, and explains the role of the California Transportation Commission (CTC). Chapter three includes many of the safety considerations from Federal Aviation Administration (FAA) regulations that help keep airports and the surrounding communities safe and compatible with flight operations. Chapter four deals with airport and heliport permitting, air navigation facilities, noise guidelines, funding, and importantly, the formation and authority of Airport Land Use Commissions (ALUC). Chapter five covers the investigations and hearings on matters covered in the Aeronautics Act. Finally, Chapter six introduces airport planning and specifically introduces the intent of the CASP and how it can be used to support California aviation. (Caltrans, 2016, p. 1-2)

❑ California Environmental Quality Act (CEQA)

The operation of airports and aircraft is the responsibility of the FAA, but the requirement to document potential hazards related to airports and air activities when a new project is proposed is contained in CEQA, specifically PRC Section 21096, which states:

> *"(a) If a lead agency prepares an environmental impact report for a project situated within airport land use compatibility plan boundaries, or, if an airport land use compatibility plan has not been adopted, for a project within two nautical miles of a public airport or public use airport, the Airport Land Use Planning Handbook published by the Division of Aeronautics of the Department of Transportation, in compliance with section 21674.5 of the Public Utilities Code and other documents, shall be utilized as technical resources to assist in the preparation of the environmental impact report as the report relates to airport-related safety hazards and noise problems.*
>
> *(b) A lead agency shall not adopt a negative declaration for a project described in subdivision (a) unless the lead agency considers whether the project will result in a safety hazard or noise problem for persons using the airport or for persons residing or working in the project area."*

2. Local Regulations

❑ March Air Reserve Base Airport Land Use Compatibility Plan (MARB ALUCP)

The MARB ALUCP is a document prepared by the ALUC in accordance with the State Aeronautics Act. This document promotes compatibility between airports and the land uses that surround them to the extent that these uses are not already developed with incompatible land uses. The MARB ALUCP serves as a tool for the

ALUC to fulfill their duty to review proposed development plans for the MARB and the surrounding uses. Included within the document are compatibility criteria and maps for the influence area of the MARB. Also within the ALUCP are the procedural requirements associated with the compatibility review of development proposals.

❑ Perris Valley Airport Land Use Compatibility Plan (ALUCP)

The Perris Valley ALUCP is a document prepared by the ALUC in accordance with the State Aeronautics Act. This document promotes compatibility between airports and the land uses that surround them to the extent that these uses are not already developed with incompatible land uses. The Perris Valley ALUCP serves as a tool for the ALUC to fulfill their duty to review proposed development plans for the Perris Valley Airport and the surrounding uses. Included within the document are compatibility criteria and maps for the influence area of the Perris Valley Airport. Also within the ALUCP are the procedural requirements associated with the compatibility review of development proposals.

C. Wildland Fire Hazards Regulations and Plans

1. Federal Regulations

❑ Healthy Forests Restoration Act of 2003

On August 22, 2002, President Bush established the Healthy Forests Initiative, directing the Departments of Agriculture and the Interior, and the Council on Environmental Quality, to improve regulatory processes to ensure more timely decisions, greater efficiency, and better results in reducing the risk of catastrophic wildland fires. On June 5, 2003, the Departments of Agriculture and the Interior adopted two new categorical exclusions from documentation in an environmental assessment or environmental impact statement: an exclusion for hazardous-fuel reduction and another for rehabilitation of resources and infrastructure damaged by wildfire (68 FR 33814).

This act also defines "communities at risk" as those "wildland urban interface communities within the vicinity of federal lands that are at high risk from wildfire." For California, CalFire has expanded this definition to include all communities (regardless of distance from federal lands) for which a significant threat to human life or property exists as a result of a wildland fire event. According to the 2010 California Strategic Fire Plan (page E-1), factors used to determine at-risk communities include: high fuel hazard, probability of a fire and proximity of intermingles wildland fuels, and urban environments near fire threats.

2. State Regulations

❑ Public Ressources Code (PRC) Sections 4290-4299

These sections establish minimum statewide fire safety provisions pertaining to: roads for fire equipment access; signs identifying streets, roads, and buildings; minimum private water supply reserves for emergency fire use; and fire fuel breaks and greenbelts. With certain exceptions, all new construction after July 1, 1991, in potential wildland fire areas, is required to meet these statewide standards. The state requirements, however, do not supersede more restrictive local regulations.

As defined by CalFire, wildland areas defined as State Responsibility Areas (SRAs) may contain substantial wildfire risks and hazards. They consist of lands exclusive of cities, and federal lands regardless of ownership. The primary financial responsibility for preventing and suppressing fires within wildlands belongs to the State of California. However, it is not the State of California's responsibility to provide fire protection services to buildings or structures located within the wildlands unless CalFire has entered into a cooperative agreement

with a local agency for those purposes pursuant to PRC Section 4142. As such, wildland areas require disclosure of these fire hazards in real estate transactions, and owners of properties in wildland areas are subject to PRC Section 4291 maintenance requirements. The law requires CalFire every five years (1991, 1996, 2001, etc.) to provide maps identifying the boundaries of lands classified as SRAs to the Riverside County Assessor.

❑ PRC Section 4213 – Fire Prevention Fees

Pursuant to PRC Section 4213, in July of 2011, the State of California began assessing an annual "Fire Prevention Fee" for all habitable structures within SRAs to pay for fire prevention services. SRAs are the portions of California where the State of California is financially responsible for the prevention and suppression of wildfires. The SRA does not include lands within incorporated city boundaries, Tribal or federally owned land. As of 2013, the fee is up to $150 per habitable structure (i.e., a building that can be occupied for residential use, which does not include incidental buildings such as detached garages, barns, outdoor bathrooms, sheds, etc.).

❑ California Government Code (CGC) Section 51178

This section specifies that the Director of CalFire, in cooperation with local fire authorities, shall identify areas that are Very High Fire Hazard Severity Zones (VHFHSZ) in Local Responsibility Areas (LRAs), based on consistent statewide criteria, and the expected severity of fire hazard. Per CGC § 51178, a local agency may, at its discretion, exclude from the requirements of § 51182 an area within its jurisdiction that has been identified as a VHFHSZ, if it provides substantial evidence in the record that the requirements of § 51182 are not necessary for effective fire protection within the area. Alternatively, local agencies may include areas not identified as VHFHSZ by CalFire, following a finding supported by substantial evidence in the record that the requirements of § 51182 are necessary for effective fire protection within the new area. According to § 51182, such changes made by a local agency shall be final, and shall not be rebuttable by CalFire.

❑ California Code of Regulations (CCR) Title 14 – Natural Resources

These regulations constitute the basic wildland fire protection standards of the California Board of Forestry. They were prepared and adopted to establish minimum wildfire protection standards in conjunction with building, construction, and development within SRAs. Among other things, Title 14 requires the design, and construction of structures, subdivisions, and developments in an SRA provide for basic emergency access and perimeter wildfire protection measures (fire fuel modification zones, etc.).

❑ CCR Title 24, Parts 2 and 9 – Fire Codes

Part 2 of Title 24 of the CCR refers to the California Building Code, which contains complete regulations and general construction building standards of state adopting agencies, including administrative, fire and life safety, and field inspection provisions. Part 2 was updated in 2008 to reflect changes in the base document from the Uniform Building Code to the International Building Code. Part 9 refers to the California Fire Code, which contains other fire safety-related building standards. In particular, Chapter 7A, "Materials and Construction Methods for Exterior Wildfire Exposure," in the 2010 California Building Code addresses fire safety standards for new construction. In addition, Section 701A.3.2, "New Buildings Located in Any Fire Hazard Severity Zone," states:

> "*New buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, any Local Agency Very-High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter.*"

3. Local Ordinances and Requirements

- ❑ Riverside County Fire Department Strategic Plan

The County of Riverside has developed a strategic fire plan that details the department's goals and strategies for proactively coordinating fire facility, service, and equipment needs for 2009-2029. It incorporates CalFire's management plan for several sub-zones within Riverside County. The plan is aimed at ensuring that existing and future development maintain adequate service levels throughout Riverside County.

- ❑ City of Menifee Ordinance No. 2017-232 (Municipal Code Chapter 8.02)

City of Menifee Municipal Code Ordinance 2017-232 establishes the program for the adoption and administration of development impact fees (DIF) and is contained in Chapter 8.02 of the City of Menifee Municipal Code. Chapter 8.02 requires development applicants pay established fire protection mitigation fees that shall be deposited into a specific account for public fire facilities in the City. The funds are to be used solely for the financing of fire facilities or to reimburse the City for public facilities funded or constructed in whole or in part by the City. The Riverside County standard for the establishment of a new fire station is the development of 2,000 dwelling units, or 3.5 million square feet of commercial or industrial uses. The City of Menifee currently requires new development proponents to pay mitigation fees to help offset the cost of providing new fire facilities.

- ❑ Riverside County Ordinance No. 695 – Abatement of Hazardous Vegetation (As Adopted by the City of Menifee)

Under this ordinance, the RCFD distributes hazard abatement notices, roughly 30,000 each year, requiring property owners to reduce the fuels around their property. These notices order property owners to reduce fuels (e.g., flammable grass, brush, etc.) around their property. Requirements for hazard reduction around improved parcels (i.e., those with structures) are set forth in Ordinance No. 787. A minimum 30-foot clearance is required around all structures; it may be extended up to 100 feet in areas with severe fire hazards. On unimproved parcels, the property owner is required to disc or mow 100 feet around the property perimeter. Again, this may be increased (or decreased) from the initial 100-foot width based on visual inspection by the Fire Chief or Chief's designee. The County of Riverside also requires new development within high fire hazard areas to include a fuel modification program for its Wildland Urban Interface, subject to approval by the Riverside County Fire Department. Lastly, this ordinance also allows the Fire Chief or designee entry onto any real property to inspect when there is reasonable cause that hazardous vegetation exists.

4.8.3 Basis for Determining Significance

Section IX of Appendix G to the CEQA Guidelines addresses typical adverse effects due to hazards and hazardous materials, and includes the following threshold questions to evaluate that Project's impacts from hazards and hazardous materials (OPR, 2018):

a. *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;*

b. *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;*

c. *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one- quarter mile of an existing or proposed school;*

d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the project area;

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

g. Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires.

As a general matter, CEQA does not require the analysis of the environment's impact on the proposed Project (see the decision reached by the Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, Case No. S213478). Therefore, CEQA does not require that the potential wildland impacts from the environment (unrelated to the Project) be analyzed with respect to their effect(s) on future residents of the proposed Project. Thus, impacts to the Project from wildland fire impacts are provided for information purposes only.

4.8.4 IMPACT ANALYSIS

Threshold a: ***Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?***

Implementation of the proposed Project has the potential to expose future site workers and/or residents to hazardous materials or conditions associated with the existing site conditions, construction activities, and long-term operation of the proposed Project. Each is discussed below.

Existing Site Conditions

Based on the Phase I ESA conducted by Petra (EIR *Technical Appendix H)*, and based on a review of regulatory databases, historical conditions of the Project site, and a site reconnaissance, the Project site does not contain any RECs, nor is the Project site affected by any off-site RECs. No RECs associated with the historic agricultural uses on-site were identified by Petra. No odors, pools of liquids, drums, significantly stained soil, unidentified subsurface containers, distressed vegetation, pits, or unmaintained ponds were observed. Staining was observed on the northeast site of the Project site; however, the staining was determined to be localized and was not considered by Petra to be significant. Three pole-mounted transformers were observed at the northwest corner of the Project site. No leaking or staining was observed in the area surrounding the transformers. Scattered debris were observed on the Project site; however, Petra determined that none of the debris represents a significant hazard to the public or environment. Based on these findings, Petra concluded there are no conditions associated with the Project site's existing condition or surroundings that would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Accordingly, no impact would occur associated with the Project site's existing conditions. (Petra, 2016, pp. 18-20)

Temporary Construction-Related Activities

Heavy equipment that would be used during construction of the proposed Project would be fueled and maintained by substances such as oil, diesel fuel, gasoline, hydraulic fluid, and other liquid materials that would be considered hazardous if improperly stored or handled. In addition, materials such as paints, roofing materials, solvents, and other substances typically used in building construction would be located on the Project site during construction. Improper use, storage, or transportation of hazardous materials could result in accidental releases or spills, potentially posing health risks to workers, the public, and the environment. This is a standard risk on all construction sites, and there would be no greater risk for improper handling, transportation, or spills associated with future development that would be a reasonably consequence of the proposed Project than would occur on any other similar construction site. Thus, impacts due to construction activities would not cause a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. A less-than-significant impact would occur.

Long-Term Operation

The Project consists of a proposal to allow for future development of residential, commercial, and recreational uses. These uses are not associated with the transport, use, or disposal of significant quantities of hazardous materials. Household and other goods used by residential homes and retail uses that contain toxic substances are usually low in concentration and small in amount; therefore, there is no significant risk to humans or the environment from the use of such household goods. Residents and employees are required to dispose of household hazardous waste, including pesticides, batteries, old paint, solvents, used oil, antifreeze, and other chemicals, at a Household Hazardous Waste Collection Facility. Also, as of February 2006, fluorescent lamps, batteries, and mercury thermostats can no longer be disposed in the trash. Furthermore, the transport, use, and disposal of hazardous materials are fully regulated by the EPA, state, and/or the City of Menifee. With mandatory regulatory compliance, potential hazardous materials impacts associated with long-term operation of the Project would be less than significant.

Threshold b:	***Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?***

As indicated under the discussion and analysis Threshold a, near-term construction activities would not have a significant impact associated with hazardous materials handling or disposal. The potential for an accidental release of hazardous materials into the environment is no greater than the potential on any other construction site. Thus, hazards due to the foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be less than significant.

Long-term operation of the proposed Project also would not result in any significant adverse effects associated with hazardous materials handling or disposal. Residential and commercial uses are not associated with the transport, use, or disposal of hazardous materials. Household goods used by residential homes or commercial land uses that contain toxic substances are usually low in concentration and small in amount; therefore, there is no significant risk to humans or the environment from the use of such materials. Accordingly, the proposed Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and impacts would be less than significant.

Threshold c: ***Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one- quarter mile of an existing or proposed school?***

The Project site is located immediately adjacent to the Hans Christensen Middle School. The nearest building at the Hans Christensen Middle School is located 0.1 mile from the Project site. However, the Project consists of a proposal to allow for future development of residential, commercial, and recreational uses. These uses are not associated with the transport, use, or disposal of significant quantities of hazardous materials. As such, impacts to nearby schools would be less than significant.

Threshold d: ***Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?***

According to the Phase I ESA prepared for the Project (EIR *Technical Appendix H*), the Project site is not located on any list of hazardous materials sites compiled pursuant to Government Code § 65962.5. Accordingly, no impact would occur. (Petra, 2016)

Threshold e: ***For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the project area?***

The Project site is located within the AIA for the MARB, located approximately 9.7 miles northwest of the Project site. According to the ALUCP for MARB, the Project site is located within Compatibility Zone E, which does not have any restrictions on residential density or number of people per acre. Prohibited land uses within Compatibility Zone E include hazards to flight, and developments within Zone E are required to notify prospective property owners of aircraft overflights as part of future real estate transactions. (ALUC, 2014, Table MA-2 and Map MA-1) The Project does not propose any land uses that would hazards to flight, and would be subject to mandatory compliance to notify future property owners about aircraft overflights as part of future real estate transactions. Accordingly, the Project would be fully compatible with the MARB ALUCP. Nonetheless, and in accordance with the MARB ALUCP, the Riverside County Airport Land Use Commission (ALUC) reviewed the proposed Project for consistency with the ALUCP. Based on the results of the ALUC's review, the Project was determined to be fully consistent with the MARB ALUCP, although some standard conditions of approval would apply (ALUC, 2017, p. 1). These conditions include the following:

- Any new outdoor lighting that is installed shall be hooded or shielded so as to prevent either the spillage of lumens or reflection into the sky. Outdoor lighting shall be downward facing. (ALUC, 2017, pp. 1-2)

- The following uses/activities are not included in the Project and shall be prohibited at the site (ALUC, 2017, p. 2):

  (a) Any use which would direct a steady light or flashing light of red, white, green, or amber colors associated with airport operations toward an aircraft engaged in an initial straight climb following takeoff or toward an aircraft engaged in a straight final approach toward a landing at an airport, other than an FAA-approved navigational signal light or visual approach slope indicator.

(b) Any use which would cause sunlight to be reflected towards an aircraft engaged in an initial straight climb following takeoff or towards an aircraft engaged in a straight final approach towards a landing at an airport.

(c) Any use which would generate smoke or water vapor or which would attract large concentrations of birds, or which may otherwise affect safe air navigation within the area. (Such uses include landscaping utilizing water features, aquaculture, production of cereal grains, sunflower, and row crops, composting operations, trash transfer stations that are open on one or more sides, recycling centers containing putrescible wastes, construction and demolition debris centers, fly ash disposal, and incinerators.)

(d) Any use which would generate electrical interference that may be detrimental to the operation of aircraft and/or aircraft instrumentation.

- The attached notice shall be provided to all potential purchasers of the proposed lots and to tenants of the homes thereon. (ALUC, 2017, p. 2)

- All new aboveground detention or bioretention basins on the site shall be designed so as to provide for a maximum 48-hour detention period following the conclusion of the storm event for the design storm (may be less, but not more), and to remain totally dry between rainfalls. Vegetation in and around the detention/bioretention basin(s) that would provide food or cover for bird species that would be incompatible with airport operations shall not be utilized in project landscaping. (ALUC, 2017, p. 2)

Therefore, the Project would not result in an inconsistency with the MARB ALUCP, and would not result in a safety hazard or excessive noise for people residing or working in the Project area. Impacts would be less than significant.

Threshold f: ***Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?***

The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route. During construction and at Project build-out, the proposed Project would be required to maintain adequate access for emergency vehicles. Accordingly, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan, and no impact would occur.

Threshold g: ***Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?***

The northeastern portion of the Project site is located within a "High Fire Hazard Severity Zone," while the rest of the Project site is not located within a Fire Hazard Zone. Lands to the east and southeast of the Project site are located within a "Moderate Fire Hazard Severity Zone," "High Fire Hazard Severity Zone," and "Very High Fire Hazard Severity Zone" (Menifee, 2013b, Figure 5.8-3). The Project would be surrounded by improved roadways. Antelope Road and Rouse Road would provide in excess of 100 feet of buffer area within the right-of-way (ROW), while Chambers Avenue would provide a 104-foot buffer consisting of 94 feet of improved ROW and a 10-foot landscape buffer. A buffer distance of 100 feet as provided by these roads would reduce the site's potential for fire hazards to below a level of significance. Furthermore, the Project would be developed in a manner consistent with the jurisdictional requirements for fire protection, and would generally

decrease the fire hazard in the local area. Therefore, impacts regarding exposing people or structures either directly or indirectly to significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residents are intermixed with wildlands, would be less than significant.

4.8.5 Cumulative Impact Analysis

Because the issue of hazards and hazardous materials tend to be site-specific in nature, the cumulative study area includes existing and planned developments within a one-mile radius of the Project site. A one-mile radius is appropriate because that is the standard distance used in regulatory database searches of properties that may generate or store toxic materials.

There are no known hazards located on the Project site under existing conditions, and no proposed hazardous uses under long-term operation. Accordingly, short-term cumulative impacts associated with the routine transport, use, or disposal of hazardous materials, and cumulative impacts associated with reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, would be less-than-cumulatively considerable. Additionally, there are no long-term operational conditions associated with the Project with the potential to result in significant cumulative effects associated with the storage, use, disposal, transport, or upset and accident conditions involving hazardous materials; thus, no cumulatively-considerable impacts would occur under long-term conditions.

The Project site is immediately adjacent to Hans Christensen Middle School; however, the Project does not propose uses that are associated with the transport, use, or disposal of significant quantities of hazardous materials. Therefore, the Project would not cumulatively contribute to a significant hazards/hazardous materials impact on any existing or proposed schools.

The Project site is not located on the list of hazardous materials sites compiled pursuant to Government Code § 65962.5. Therefore, the Project would not contribute to a cumulatively significant hazardous materials impact associated with a listed hazardous materials site.

The Project site has the potential to expose residents or workers to hazards associated with the MARB. The Project site is located within Compatibility Zone E of the AIA for the MARB. Based on discretionary review by the Riverside County ALUC on October 26, 2017, the Project was found to be consistent with the MARB ALUCP, subject to the conditions that would enforced by the City of Menifee as part of the Project's conditions of approval. Thus, the Project would not result in a safety hazard or excessive noise for people residing or working in the Project area. Because other developments within the AIA for MARB also would be subject to ALUC review for any development within an airport hazard zone at the MARB, the Project's potential to expose residents or workers to airport-related hazards would be less-than-cumulatively-considerable.

The Project site does not contain any emergency facilities nor would it impact an emergency evacuation route. Other cumulative developments would be reviewed by the City of Menifee to ensure no interference with emergency access and evacuation routes would occur. Accordingly, the Project has no potential to result in cumulatively-considerable impacts associated with emergency evacuation plans or evacuation routes, and cumulatively-considerable impacts would not occur.

As discussed above under the analysis of Threshold g, the northeastern portion of the Project site is identified as having a "High" susceptibility to wildfires. The remainder of the Project site is not subject to wildfire hazards. The Project would be surrounded by improved roadways with minimum buffer distance of 100 feet

as provided by Project roadways (Antelope Road, Rouse Road, Chambers Avenue) would reduce the site's potential for fire hazards to below a level of significance. Furthermore, the Project site would be developed in a manner consistent with jurisdictional requirements for fire protection, and would generally decrease fire hazards in the local area. Other developments within the study area also would be subject to the jurisdictional requirements for fire protection, and would generally decrease fire hazards in the local area. As such, within the cumulative context of the Project vicinity, fire hazards are anticipated to decline over time, and the Project has no potential to contribute to cumulatively significant impacts associated with wildland fire hazards.

4.8.6 Significance of Impacts Before Mitigation

Threshold a: Less-than-Significant Impact. Under existing conditions, no hazards were found on the Project site. During Project construction and operation, mandatory compliance with federal, state, and local regulations would ensure that the Project as proposed would not create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials.

Threshold b: Less-than-Significant Impact. During Project construction and operation there would not be a significant safety risk due to the release of hazards into the environment. The residential, commercial, and recreational uses proposed by the Project would not routinely use hazardous materials at significant levels. Thus, the Project would not create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials in the environment.

Threshold c: Less-than-Significant Impact. The Project site is located immediately adjacent to the Hans Christensen Middle School. However, the Project consists of a proposal to allow for future development of residential, commercial, and recreational uses. These uses are not associated with the transport, use, or disposal of significant quantities of hazardous materials. Thus, the Project would not emit hazardous emissions or handle hazardous materials within one-quarter mile of an existing or proposed school.

Threshold d: No Impact. The Project site is not located on any list of hazardous materials sites compiled pursuant to Government Code § 65962.5. Accordingly, no impact would occur.

Threshold e: Less-than-Significant Impact. The Project site is located within the AIA for the MARB, and the Project was revised by the ALUC on October 26, 2017, which found that the Project would not conflict with the MARB ALUCP, subject to several conditions that would be enforced by the City as City Regulation and Design Requirement CRDR 4.8-1. Because the ALUCP is intended to preclude safety hazards with airport operations, and because the Project is fully consistent with the ALUCP, the Project would not result in a safety hazard or excessive noise for people residing or working in the Project area associated with the MARB, and impacts would be less than significant.

Threshold f: No Impact. The Project would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. No emergency facilities exist on the Project site, and the site does not serve as an emergency evacuation route. Thus, no impact would occur.

Threshold g: Less-than-Significant Impact. According to the City of Menifee General Plan EIR, the northeastern portion of the Project site is located within a "High Fire Hazard Severity Zone," while the rest of the Project site is not located within a Fire Hazard Zone. The Project would be surrounded by improved roadways. Antelope Road and Rouse Road would provide in excess of 100 feet of buffer area within the ROW, while Chambers Avenue would provide a 104-foot buffer consisting of 94 feet of improved ROW and a 10-foot landscape buffer. A buffer distance of 100 feet as provided by these roads would reduce the site's potential

for fire hazards to below a level of significance. In addition, the Project would be subject to mandatory compliance with Riverside County Ordinance No. 695 as adopted by the City of Menifee (listed as a Regulatory Requirement below), which requires the abatement of hazardous vegetation. Furthermore, the Project site would be developed in a manner consistent with jurisdictional requirements for fire protection and would generally decrease the fire hazard in the local area. As such, impacts regarding wildland fires would be less than significant.

4.8.7 City Regulations, Design Requirements, and Mitigation

Regulatory Requirements

The Project would be required to comply with all mandates imposed by the Federal and State Government aimed at the reduction of significant hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials. Those that are applicable to the Project and that would assist in reducing hazards to the public are described below.

- Resource Conservation and Recovery Act (RCRA). Gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. Compliance with the RCRA would reduce impacts related to transportation, storage and disposal of hazardous waste on the Project site.

- Hazardous Materials Transportation Act of 1975 (HMTA). Empowered the Secretary of Transportation to designate as hazardous material any "particular quantity or form" of a material that "may pose an unreasonable risk to health and safety or property" and required the Secretary of Transportation to promulgate regulations for the safe transport of hazardous material in intrastate, interstate, and foreign commerce. Compliance with the HMTA would ensure materials on the Project site are properly identified as hazardous materials (as applicable) and ensure that hazardous materials would be safely transported.

- Hazardous Materials Transportation Uniform Safety Act (HMTUSA). Requires the U.S. Government to clarify the maze of conflicting state, local, and federal regulations. Like the HMTA, the HMTUSA requires the Secretary of Transportation to promulgate regulations for the safe transport of hazardous material in intrastate, interstate, and foreign commerce. The Secretary also retains authority to designate materials as hazardous when they pose unreasonable risks to health, safety, or property. Compliance with the HMTUSA would ensure materials on the Project site are properly identified as hazardous materials (as applicable) and ensure that hazardous materials would be safely transported.

- Occupational and Safety Health Act (OSHA). Ensures worker and workplace safety. The goal was to make sure employers provide their workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. Compliance with the OSHA would ensure future employment uses on-site would not expose employees to recognized hazards.

- Toxic Substances Control Act. Provides the EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics, and pesticides. TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint. Compliance with

the Toxic Substances Control Act would ensure that household hazardous materials used during Project operation are properly disposed.

- California Occupational Safety and Health Act (OSHA) and the California State Plan. Ensures worker and workplace safety. The goal was to make sure employers provide their workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions in the State of California in accordance with Section 18 of the federal OSHA. Compliance with the California OSHA would ensure future employment uses on-site would not expose employees to recognized hazards.

- Hazardous Waste Control Law (HWCL) (Health and Safety Code [HSC], Division 20, Chapter 6.5, Article 2, Section 25100, et seq.). Serves as the primary hazardous waste statute in California. The HWCL implements RCRA as a "cradle-to-grave" waste management system in the state. It specifies that generators have the primary duty to determine whether their wastes are hazardous and to ensure its proper management. The HWCL also establishes criteria for the reuse and recycling of hazardous wastes used or reuse as raw materials. Compliance with the HWCL would reduce impacts related to transportation, storage and disposal of hazardous waste on the Project site.

- California Code of Regulations (CCR). A variety of CCR titles address regulations and requirements for generators of hazardous waste. Title 22 contains detailed compliance requirements for hazardous waste generators, transporters, and facilities for treatment, storage, and disposal. Compliance with the CCR would reduce impacts related to transportation, storage, and disposal of hazards on the Project site.

- Future Project operation will be subject to Riverside County Ordinance No. 695, as adopted by the City of Menifee, which requires the abatement of hazardous vegetation. Compliance with Ordinance No. 695 would reduce fire hazards by ensuring regular abatement of hazardous vegetation occurs on-site.

Applicable City Regulations and Design Requirements

The following are City regulations and a standard project design requirement within the City of Menifee. Although these requirements technically do not meet CEQA's definition for mitigation, they are imposed herein to ensure Project compliance with applicable project design and regulatory requirements.

CRDR 4.8-1 To ensure compliance with the requirements of the MARB AIA as regulated by the Riverside County ALUC, during development review and prior to final building inspection, the City of Menifee shall ensure that implementing projects within the Legado Specific Plan comply with the following ALUC mandatory conditions of approval, which include but are not limited to the following:

  - Any new outdoor lighting that is installed shall be hooded or shielded so as to prevent either the spillage of lumens or reflection into the sky. Outdoor lighting shall be downward facing. (ALUC, 2017, pp. 1-2)

  - The following uses/activities are not included in the Project and shall be prohibited at the site (ALUC, 2017, p. 2):

(a) Any use which would direct a steady light or flashing light of red, white, green, or amber colors associated with airport operations toward an aircraft engaged in an initial straight climb following takeoff or toward an aircraft engaged in a straight final approach toward a landing at an airport, other than an FAA-approved navigational signal light or visual approach slope indicator.

(b) Any use which would cause sunlight to be reflected towards an aircraft engaged in an initial straight climb following takeoff or towards an aircraft engaged in a straight final approach towards a landing at an airport.

(c) Any use which would generate smoke or water vapor or which would attract large concentrations of birds, or which may otherwise affect safe air navigation within the area. (Such uses include landscaping utilizing water features, aquaculture, production of cereal grains, sunflower, and row crops, composting operations, trash transfer stations that are open on one or more sides, recycling centers containing putrescible wastes, construction and demolition debris centers, fly ash disposal, and incinerators.)

(d) Any use which would generate electrical interference that may be detrimental to the operation of aircraft and/or aircraft instrumentation.

- A notice of 'Airport in the Vicinity' (refer to Attachment 1 to ALUC Development Review-Directors Determination Letter included in EIR *Technical Appendix M*) shall be provided to all potential purchasers of the proposed lots and to tenants of the homes thereon. (ALUC, 2017, p. 2)

- All new aboveground detention or bioretention basins on the site shall be designed so as to provide for a maximum 48-hour detention period following the conclusion of the storm event for the design storm (may be less, but not more), and to remain totally dry between rainfalls. Vegetation in and around the detention/bioretention basin(s) that would provide food or cover for bird species that would be incompatible with airport operations shall not be utilized in project landscaping. (ALUC, 2017, p. 2)

Mitigation

Impacts to Hazards and Hazardous Materials as a result of Project implementation would be less than significant, and mitigation is not required.

4.9 HYDROLOGY AND WATER QUALITY

The following analysis is based on a study entitled "Preliminary Drainage Report for Legado Development, City of Menifee" prepared by K&A Engineering, Inc. and dated April 2019. The Drainage Report is included in this EIR as *Technical Appendix I1* (K&A, 2019a). The analysis in this Subsection is also based on the Project's Water Supply Assessment (WSA) titled "Water Supply Assessment Report Fleming Ranch Project (SP 2017-187)" prepared by the Eastern Municipal Water District (EMWD), dated September 22, 2017, and included as *Technical Appendix L1* in this EIR (EMWD, 2017a). The analysis in this Subsection is also based on the Project's Water WSA update letter titled "Fleming Ranch Water Supply Assessment" prepared by the EMWD, dated July 9, 2019, and included as *Technical Appendix L2* in this EIR (EMWD, 2019). Analysis in this Subsection also is based on a Preliminary Water Quality Management Plan (WQMP) titled "Preliminary Project Specific Water Quality Management Plan" prepared by K&A Engineering, Inc. and dated July 2019. The WQMP is included in this EIR as *Technical Appendix I2* (K&A, 2019b).

4.9.1 EXISTING CONDITIONS

A. *Regional Hydrology*

The Project site is located within the San Jacinto Subbasin of the Santa Ana River Watershed (Menifee, 2013b, Figure 5.9-1). The 2,800-square mile Santa Ana River Watershed encompasses portions of Orange County, northwestern Riverside County, southwestern San Bernardino County, and a small portion of Los Angeles County. The watershed is bounded to the north and west by the Mojave and San Gabriel watersheds, to the east by the Salton Sea and Southern Mojave watersheds, and to the south by the Santa Margarita. The headwaters of the San Jacinto River are located in the San Jacinto Mountains, which flows into Lake Elsinore approximately 42 miles to the west. During flood events, Lake Elsinore overflows into Temescal Creek, which flows in a northwesterly direction and discharges into the Santa Ana River. The Project site's location within the Santa Ana River Watershed is shown in Figure 4.9-1, *Santa Ana River Watershed Map*. (Menifee, 2013b, p. 5.9-1)

B. *Site Hydrology*

The Project site currently consists of vacant, undeveloped land. Topography of the Project site is characterized by relatively flat terrain on the western and central portions of the Project site and moderately steep irregular hilly terrain on the eastern portions of the Project site. Topographic relief of the Project site is approximately 225 feet, with the lowest elevation at the site being approximately 1,425 feet above mean sea level (amsl) along the western boundary of the Project site, and the highest elevation being approximately 1,650 feet amsl on the northeast corner of the Project site. (K&A, 2019a, p. 5)

The Project-specific Drainage Report (EIR *Technical Appendix I1*) identifies two (2) existing drainage facilities in the Project area include the following: (1) a drainage outlet of an existing 6-foot by 4-foot reinforced concrete box (RCB) at the northeast corner of Chambers Avenue and Sherman Road that discharges into an on-site open channel that terminates approximately 400 feet to the north of the southern Project site boundary; and (2) a drainage inlet of the existing Caltrans 10-foot by 5-foot RCB culvert located along westerly Project site boundary/Encanto Drive approximately 700 feet south of Rouse Road. The Caltrans 10-foot by 5-foot RCB culvert conveys the existing flows under Encanto Drive and the Interstate 215 (I-215) to an existing Riverside County Flood Control and Water Conservation District (RCFCWCD) maintained concrete trapezoidal channel. The trapezoidal channel continues in a southwesterly direction, while also accepting additional flows from other drainage areas and ultimately outlets in the regional Salt Creek Channel which then flows to Canyon Lake. (K&A, 2019a, p. 3)

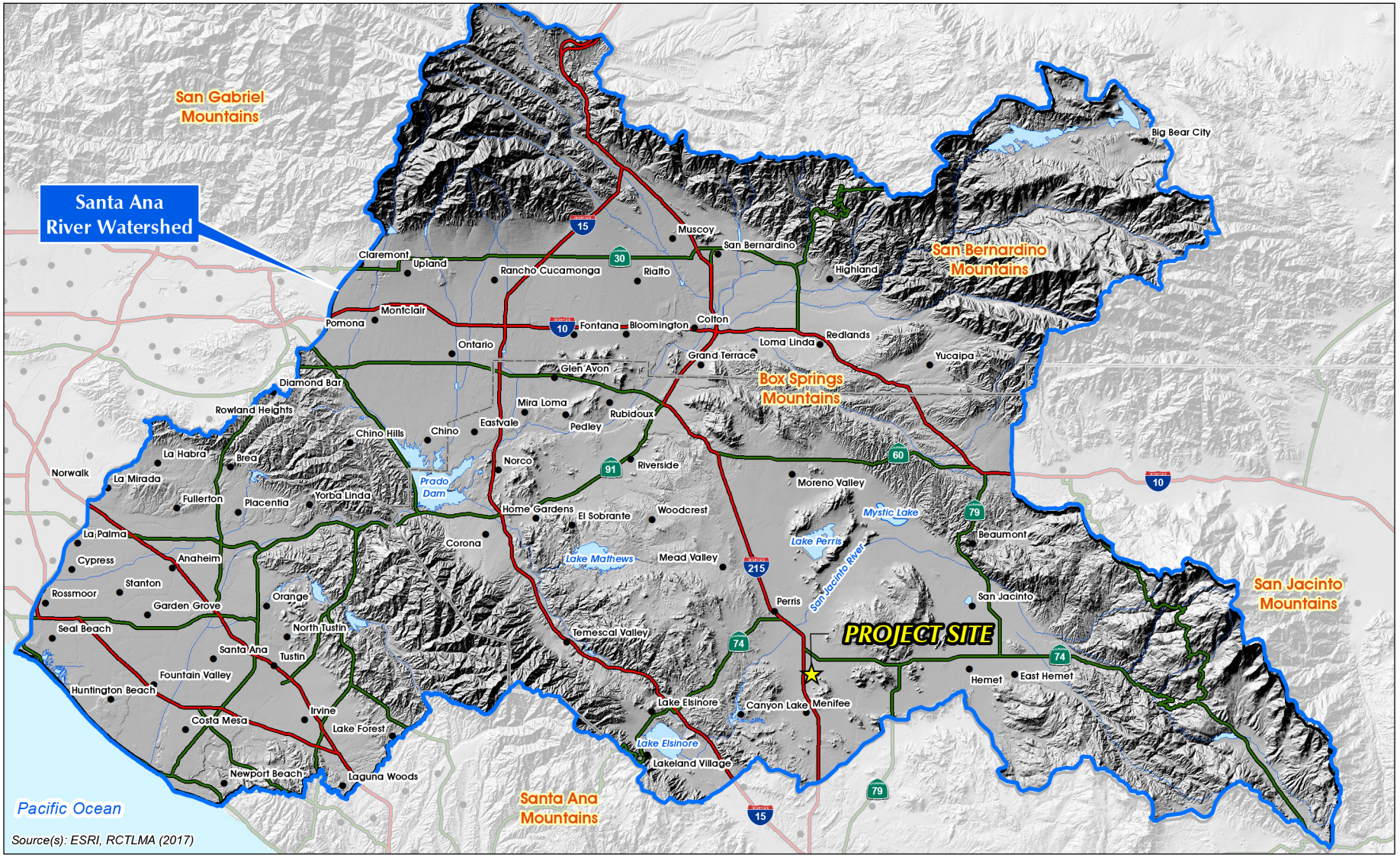


Figure 4.9-1

SANTA ANA RIVER WATERSHED MAP

Figure 4.9-2, *Existing Storm Drain System*, depicts the existing storm drain system in the vicinity of the Project site. Figure 4.9-3, *Existing On-Site Drainage Conditions*, depicts the locations of the four (4) drainage areas evaluated in the Project-specific Drainage Report (EIR *Technical Appendix I1*) for existing site conditions. A description of the four (4) natural drainage areas present under existing conditions is presented below:

- **Drainage Area A.** Drainage A consists of approximately 212.4 acres. Under existing conditions, Drainage Area A is tributary to the southeasterly area of the Project site and flows towards the southern edge of Chambers Avenue into an existing drainage system where it is conveyed to an existing 6-foot by 4-foot RCB located beneath Chambers Avenue, east of Sherman Road. (K&A, 2019a, p. 5)

- **Drainage Area B.** Drainage Area B consists of approximately 381.6 acres, including the entire Project site and an off-site area east of Antelope Road, and is tributary direct to an existing on-site Caltrans RCB culvert measuring 10 feet in width by 5 feet in height that drains westerly from the Project site, beneath the I-215 freeway, and discharges to an existing off-site concrete flood control channel to the west of the I-215 freeway. (K&A, 2019a, p. 6)

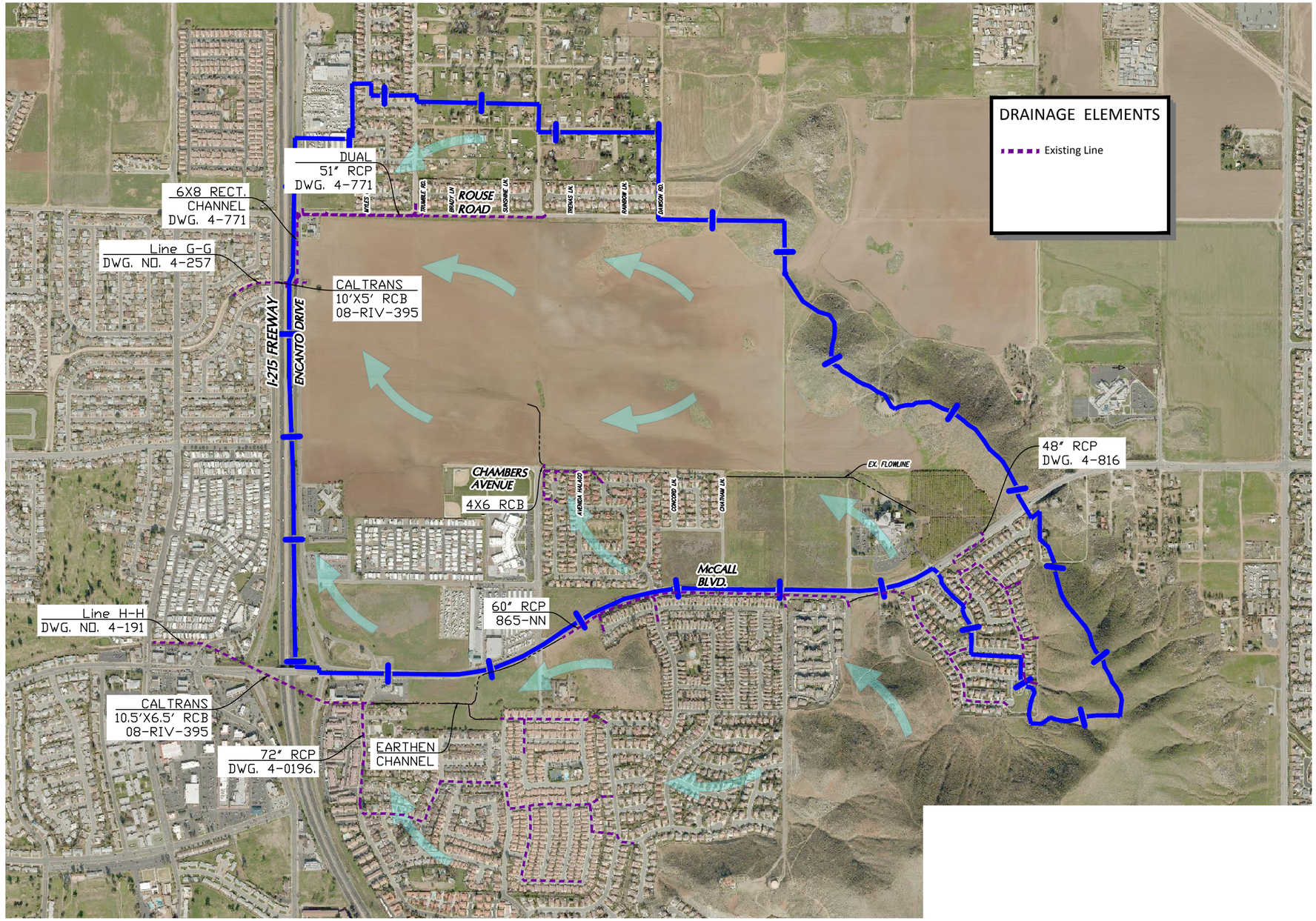
- **Drainage Area C.** Drainage Area C consists of approximately 103.2 acres and is tributary to the existing Sun City – Rouse Road storm drain. Drainage Area C encompasses the off-site area to the north of the Project site which drains to the existing Caltrans RCB culvert (an inlet for which is located west of the Project site). According to the Project-specific Drainage Study (EIR *Technical Appendix I1*), Drainage Area C is not tributary to the Project site, but is included in the Drainage Study because it is tributary to the existing Caltrans RCB culvert. (K&A, 2019a, p. 6)

- **Drainage Area D.** Drainage Area D consists of approximately 118.9 acres of off-site area to the southwest of the Project site. Drainage Area D drains directly to the existing Caltrans RCB culvert to the west of the Project site via inlets on the west side of Encanto Drive. According to the Project-specific Drainage Study (EIR *Technical Appendix I1*), Drainage Area D is not tributary to the Project site, but is included in the Drainage Study because it is tributary to the existing Caltrans RCB culvert. (K&A, 2019a, p. 6)

C. Flood Hazards

Exhibit S-5, "Flood Zones," of the City of Menifee General Plan does not depict the Project site as being located within a special flood hazard area (Menifee, 2013a, Figure S-5). According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM), the Project site is located within the bounds of the following two (2) FIRM Map Nos.: 06065C2055H (western portion of the site) and 06065C2060H (eastern portion of the site), both effective on August 18, 2014 (FEMA, 2014a). The Project site is not located within a special flood hazard area subject to inundation by the 1 percent annual flood (100-year flood). Additionally, according to Riverside County GIS, the Project site is not depicted within an area of flood sensitivity (RCIT, 2019). Policies S-3.1 through S-3.5 and Implementation Actions S-16 through S-30 of the Safety Element of the Menifee General Plan specifically address flood hazards within the City of Menifee.

Dams located within the vicinity of the Project site include the Forebay Dam (located approximately 6.1 miles southeast of the Project site) and the Lake Perris dam (located approximately 7.7 miles north of the Project site) (Menifee, 2013b, Figure 5.9-4).

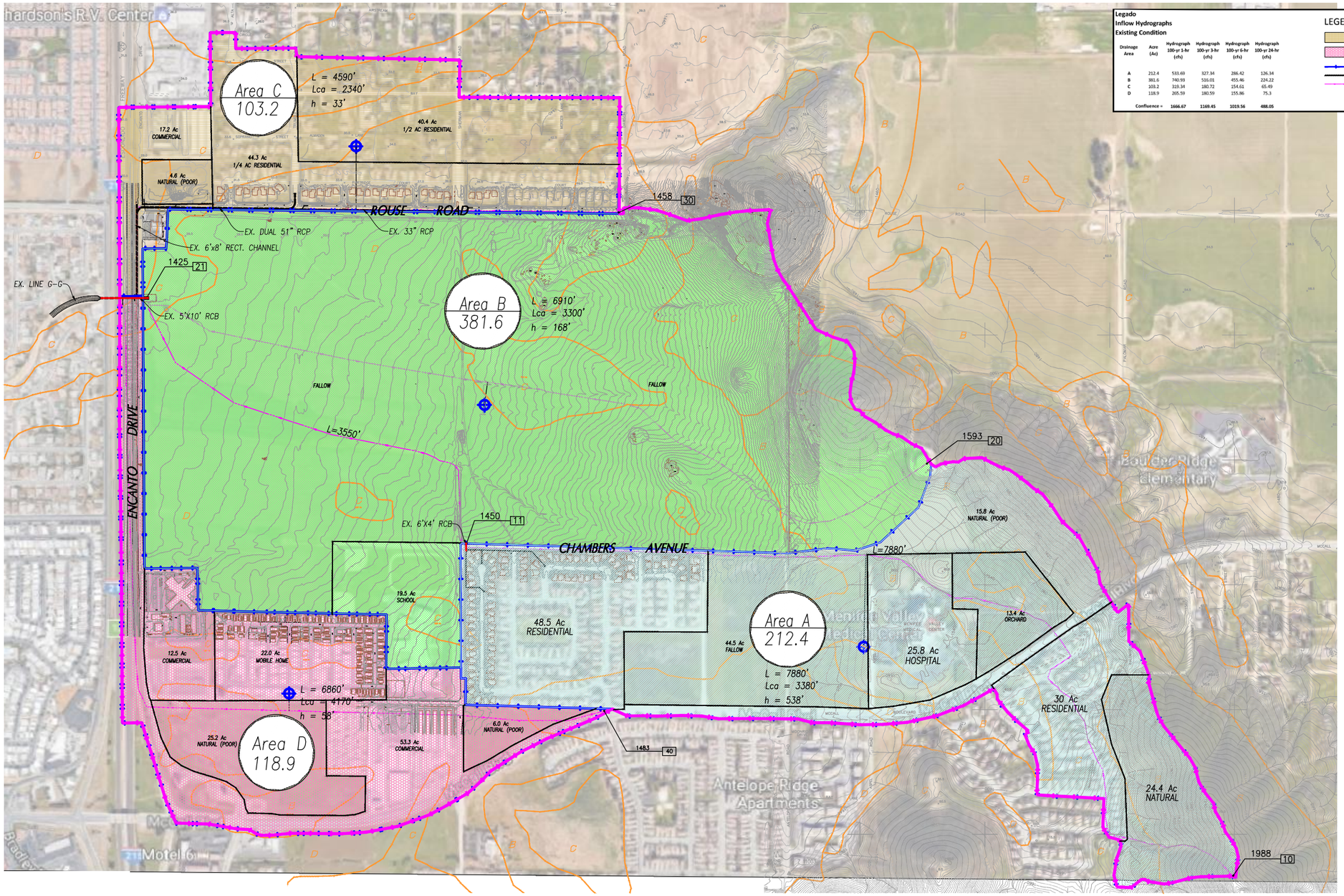


Source(s): K&A Engineering (K&A_April 2019)

NOT TO SCALE

Figure 4.9-2

EXISTING STORM DRAIN SYSTEM



Source(s): K&A Engineering (April 2019)

Figure 4.9-3

EXISTING ON-SITE DRAINAGE CONDITIONS

Based on Riverside County General Plan Figure S-10, "Dam Inundation Zones," it appears the western portion of the Project site is potentially located within a dam inundation zone (Riverside County, 2015a, Figure S-10). In recognition of the possibility of dam inundation, the Safety Element of the Menifee General Plan includes the following "Implementation Actions" that are specifically intended to attenuate the risk of dam failure to persons or property.

- Action S-27: Prepare and distribute informational materials to owners of properties within the flood zones (Zones A, AE and X) and inundation zones (Exhibit bS-2.1, Dams with the Potential to Inundate the Menifee General Plan Area) regarding the potential for flooding in their area, including the potential for flooding of access routes to and from their neighborhoods. (Menifee, 2013c, pp. 17-21)

- Action S-65: Require all essential and critical facilities (including but not limited to essential City offices and buildings, medical facilities, schools, child care centers, and nursing homes) in or within 200 feet of Flood Zones A, AE and X, or within the dam inundation pathways, to develop disaster response and evacuation plans that address the actions that will be taken in the event of flooding or inundation due to catastrophic failure of a dam. (Menifee, 2013c, pp. 17-21)

The Project site is subject to the above referenced regulations and policies regarding dam inundation.

D. Water Quality

The Project site is located within the jurisdiction of the Santa Ana Basin Regional Water Quality Control Board's (RWQCB). The receiving waters of flows from the Project site include the Rouse Road Storm Drain/Sun City Channel, Salt Creek, Canyon Lake, San Jacinto River (Reach 1), and Lake Elsinore (K&A, 2019b, p. 3). None of the receiving waters of flows from the Project site are listed as "impaired" in accordance with the Clean Water Act 303(d) list regulation, except for Canyon Lake (impaired by pollutants including nutrients and pathogens) and Lake Elsinore (impaired by pollutants including nutrients, toxic sediment, poly-chlorinated biphenyls (PCBs), and organic enrichment/low dissolved oxygen). Impairment is typically associated with point and non-point sources of water pollutants including industrial discharge and agricultural operations, respectively. Table 4.9-1, *Receiving Waters for Storm Water Runoff from the Project Site*, lists the receiving waters for storm water runoff from the Project site. The beneficial uses of the receiving surface waters of the Project site are also summarized in Table 4.9-1.

E. Groundwater

As shown in Figure 4.9-4, *Groundwater Basins*, the Project site is located within the Perris South Management Zone of the San Jacinto Groundwater Basin (Menifee, 2013b, Figure 5.9-2). The San Jacinto Groundwater Basin underlies several valleys in western Riverside County. This basin is bounded by the San Jacinto Mountains on the east, the San Timoteo Badlands on the northeast, the Box Mountains on the north, the Santa Rosa Hills and Bell Mountain on the south, and unnamed hills on the west. (DWR, 2006, p. 1)

The Project's Geotechnical Report, contained in this EIR as *Technical Appendix F1*, states that groundwater was not encountered to the maximum depth of approximately 11 feet below existing ground surface during the subsurface evaluation. During a previous subsurface investigation, groundwater was encountered at the Project site at depths ranging from 17 feet to 30 feet below existing grade, and was interpreted to be perched or local groundwater derived from seasonal precipitation.

Table 4.9-1 Receiving Waters for Storm Water Runoff from the Project Site

Receiving Waters	EPA Approved 303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Beneficial Use
Local Storm Drain – Rouse Rd SD – Sun City Channel			
Salt Creek	None	Intermittent-REC1, REC2, WARM, WILD	Not a RARE water body
Canyon Lake	Nutrients and Pathogens	MUN, AGR, GWR, REC1, REC2, WARM, WILD	Not a RARE water body
San Jacinto River Reach 1	None	Intermittent-MUN, AGR, GWR, REC1, REC2, WARM, WILD	Not a RARE water body
Lake Elsinore	Nutrients, Sediment Toxicity, PCBs, Organic Enrichment/Low Dissolved Oxygen	REC1,REC2, WARM, WILD	Not a RARE water body

Notes: AGR = Agricultural Supply; GWR = Groundwater Recharge; MUN = Municipal and Domestic Supply; RARE = Preservation of Rare and Endangered Species; REC(1) = Water Contact Recreation; REC(2) = Non-Contact Water Recreation; WARM = Warm Freshwater Habitat; WILD = Wildlife Habitat.
(K&A, 2019b, Table A.1)

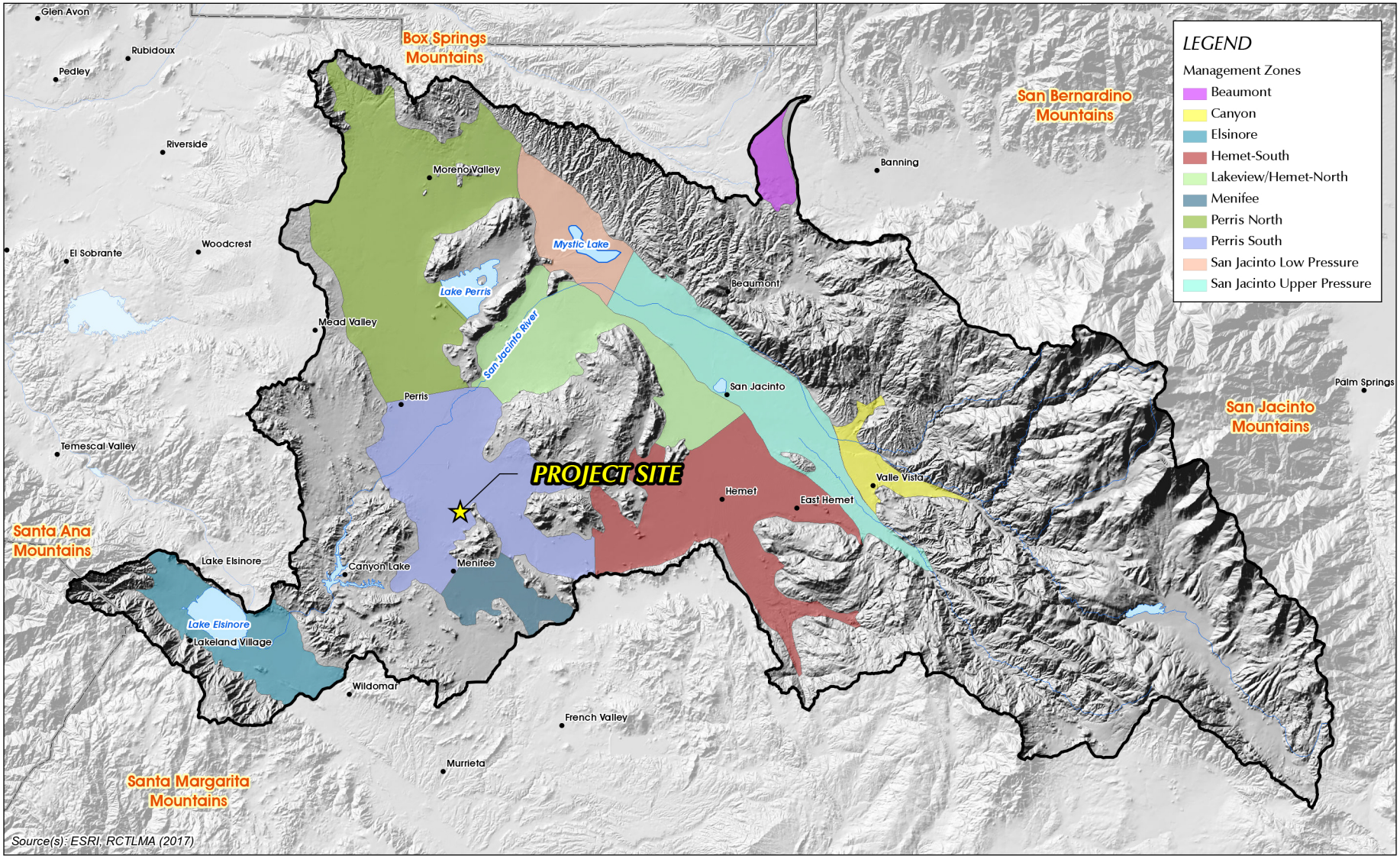


Figure 4.9-4

GROUNDWATER BASINS

According to the Project's Geotechnical Report, groundwater is not anticipated to be encountered during earthwork grading of the Project site. Seasonal fluctuations of groundwater elevations should be expected over time, and local perched groundwater conditions or surface seepage may develop once the Project is completed. (LGC, 2017a, p. 7)

4.9.2 Applicable Regulatory Requirements

The following is a brief description of the federal, state, and local environmental laws and related regulations related to hydrology and water quality.

A. Federal Regulations

1. Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972. Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industry, and also has set water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. (EPA, 2017e)

2. Federal Flood Insurance Program

The U.S. Congress established the National Flood Insurance Program (NFIP) with the passage of the National Flood Insurance Act of 1968. The NFIP is a Federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages. Participation in the NFIP is based on an agreement between communities and the Federal Government. If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to new construction in floodplains, the Federal

Government will make flood insurance available within the community as a financial protection against flood losses. This insurance is designed to provide an insurance alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods. The Federal Insurance and Mitigation Administration (FIMA) within the Federal Emergency Management Agency (FEMA) is responsible for administering the NFIP and administering programs that provide assistance for mitigating future damages from natural hazards. (FEMA, 2002)

3. Executive Order 11988 – Floodplain Management

Executive Order 11988 requires federal agencies to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the

impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by flood plains in carrying out its responsibilities" for the following actions:

- acquiring, managing, and disposing of federal lands and facilities;
- providing federally-undertaken, financed, or assisted construction and improvements; and
- conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities. (FEMA, 2015)

B. State Regulations

1. Porter-Cologne Water Control Act

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code § 13000 et seq.), the policy of the State is as follows:

- That the quality of all the waters of the State shall be protected;
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and
- That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation. (SWRCB, 2014)

The Porter-Cologne Act established nine Regional Water Boards (based on hydrogeologic barriers) and the State Water Board, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The State Water Board provides program guidance and oversight, allocates funds, and reviews Regional Water Boards decisions. In addition, the State Water Board allocates rights to the use of surface water. The Regional Water Boards have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The State Water Board and Regional Water Boards have numerous non-point source (NPS) related responsibilities, including monitoring and assessment, planning, financial assistance, and management. (SWRCB, 2014)

The Regional Water Boards regulate discharges under the Porter-Cologne Act primarily through issuance of NPDES permits for point source discharges and waste discharge requirements (WDRs) for NPS discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge. The Storm Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) can make their own investigations or may require dischargers to carry out water quality investigations and report on water quality issues. The Porter-Cologne Act provides several options for enforcing WDRs and other orders, including cease and desist orders, cleanup and abatement orders, administrative civil liability orders, civil court actions, and criminal prosecutions. (SWRCB, 2014)

The Porter-Cologne Act also implements many provisions of the Clean Water Act, such as the NPDES permitting program. The Porter-Cologne Act also requires adoption of water quality control plans that contain the guiding policies of water pollution management in California. In addition, regional water quality control plans (basin plans) have been adopted by each of the Regional Water Boards and get updated as necessary and practical. These plans identify the existing and potential beneficial uses of waters of the State and establish

water quality objectives to protect these uses. The basin plans also contain implementation, surveillance, and monitoring plans. (SWRCB, 2014)

2. California Water Code

The California Water Code is the principle state law regulating water quality in California. Water quality provisions must be complied with as contained in numerous code sections including: 1) the Health and Safety Code for the protection of ground and surface waters from hazardous waste and other toxic substances; 2) the Fish and Game Code for the prevention of unauthorized diversions of any surface water and discharge of any substance that may be deleterious to fish, plant, animal, or bird life; 3) the Harbors and Navigation Code for the prevention of the unauthorized discharge of waste from vessels into surface waters; and 4) the Food and Agriculture Code for the protection of groundwater which may be used for drinking water supplies. The California Department of Fish and Wildlife (CDFW), through provisions of the Fish & Game Code (§§ 1601 - 1603) is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

Surface water quality is the responsibility of the RWQCB; water supply and wastewater treatment agencies; and city and county governments. The principal means of enforcement by the RWQCB is through the development, adoption, and issuance of water discharge permits. RWQCB basin plans establish water quality objectives that are defined as the limits or levels of water quality constituents or characteristics for the reasonable protection of beneficial uses of water.

3. California Toxics Rule (CTR)

The California Toxics Rule (CTR) fills gap in California's water quality standards necessary to protect human health and aquatic life beneficial uses. The CTR criteria are similar to those published in the National Recommended Water Quality Criteria. The CTR supplements, and does not change or supersede, the criteria that EPA promulgated for California waters in the National Toxics Rule (NTR). The human health NTR and CTR criteria that apply to drinking water sources (those water bodies designated in the Basin Plans as municipal and domestic supply) consider chemical exposure through consumption of both water and aquatic organisms (fish and shellfish) harvested from the water. For waters that are not drinking water sources (e.g., enclosed bays and estuaries), human health NTR and CTR criteria only consider the consumption of contaminated aquatic organisms. The CTR and NTR criteria, along with the beneficial use designations in the Basin Plans and the related implementation policies, are the directly applicable water quality standards for toxic priority pollutants in California waters. (SWRCB, 2016, pp. 14-15)

4. CDFG Code Section 1600 et seq. (Lake- or Streambed Alteration Agreement Program)

Fish and Game Code § 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following:

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
- Substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or
- Deposit debris, waste or other materials that could pass into any river, stream, or lake. (CDFW, 2017c)

It should be noted that "any river, stream or lake" includes those that are episodic (they are dry for periods of time) as well as those that are perennial (they flow year-round). This includes ephemeral streams, desert

washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water. (CDFW, 2017c)

CDFW requires a Lake and Streambed Alteration (LSA) Agreement when it determines that the activity, as described in a complete LSA Notification, may substantially adversely affect existing fish or wildlife resources. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify a project that would eliminate or reduce harmful impacts to fish and wildlife resources. Before issuing an LSA Agreement, CDFW must comply with CEQA. (CDFW, 2017c)

5. Watershed Management Initiative (WMI)

The State and Regional Water Boards are currently focused on looking at entire watersheds when addressing water pollution. The Water Boards adopted the Watershed Management Initiative (WMI) to further their goals. The WMI establishes a broad framework overlying the numerous federal and state mandated priorities. As such, the WMI helps the Water Boards achieve water resource protection, enhancement and restoration while balancing economic and environmental impacts. (SWRCB, 2013) The integrated approach of the WMI involves three main ideas:

- Use water quality to identify and prioritize water resource problems within individual watersheds. Involve stakeholders to develop solutions.
- Better coordinate point source and nonpoint source regulatory efforts. Establish working relationships between staff from different programs.
- Better coordinate local, state, and federal activities and programs, especially those relating to regulations and funding, to assist local watershed groups. (SWRCB, 2013)

C. Local Regulations

1. City of Menifee General Plan

The Safety Element of the City of Menifee General Plan addresses flooding hazards within the City, including storm-induced flooding, inundation resulting from the failure of water reservoirs, dams, and levees, and areas vulnerable to flooding after wildfires. The Safety Element includes Goal S-3, which reads as follows: "A Community that is minimally disrupted by flooding and inundation hazards" (Menifee, 2013a). In order to obtain Goal S-3, the Safety Element includes Policies S-3.1 through S-3.5 and Implementation Actions S-16 through S-30 that address flood hazards. The Project would be subject to the applicable policies and Implementation Actions established in the Safety Element of the Menifee General Plan.

4.9.3 Basis for Determining Significance

Section X of Appendix G to the CEQA Guidelines addresses typical adverse effects to hydrology and water quality, and includes the following threshold questions to evaluate the Project's impacts on hydrology and water quality (OPR, 2018):

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;

b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would

i) Result in a substantial erosion or siltation on- or off-site;

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

iii) 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; or

iv) Impede or redirect flood flows.

d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

4.9.4 IMPACT ANALYSIS

Threshold a: ***Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?***

A. Construction-Related Water Quality Impacts

Grading and construction of the Project would involve substantial ground disturbance resulting in the generation of pollutants such as silt, debris, chemicals, paints, and other solvents potentially affecting water quality. As such, short-term water quality impacts would likely occur in the absence of any protective or avoidance measures.

Pursuant to requirements of the SWRCB, the Project Applicant is required to obtain an NPDES permit for construction activities. The NPDES permit is required for all projects that include construction activities, such as clearing, grading, and/or excavation that disturb at least one (1) acre of total land area. Compliance with the NPDES permit involves the preparation and implementation of a stormwater pollution prevention plan (SWPPP) for construction related activities. The SWPPP would be continuously updated during Project construction to address impacts on water quality brought on by construction activities. The SWPPP would specify Best Management Practices (BMPs) to minimize pollutants in storm water runoff, as well as non-storm water discharges during construction activities. Typical measures employed during construction include the use of water trucks to minimize erosion; use of straw bale barriers; stabilizing construction entrances; hydroseeding, etc. The implementation of this plan would serve to prevent and/or minimize discharge of additional sources of polluted runoff and hence, protect water quality. Therefore, water quality impacts associated with construction activities are evaluated as less than significant and no mitigation measures would be required beyond compliance with the mandatory regulatory requirements (i.e., implementation of BMPs from a Project-specific SWPPP) described herein.

B. Post-Development Water Quality Impacts

Implementation of the Project would permanently alter the amount of impervious surfaces as a result of newly constructed roadways, structures, and other paved surfaces such as driveways, walkways, parking lots, and other residential- and commercial-related hardscape. As a result, there would be an increase in storm water

runoff when compared with existing conditions. This runoff would contain such urban pollutants as tire-wear residues, petroleum products such as oil and grease, landscaping fertilizer and pesticides, as well as litter and other types of wastes. Other potential sources of urban pollutants include bacterial indicators, nutrients, pesticides, possible pesticides (fertilizers from landscape maintenance activities), sediments, trash/debris, oil, and grease (K&A, 2019b, p. 2). The pollutants are washed off from the street surfaces by a rainfall adequate to produce sufficient runoff. The EPA has identified street surfaces as the primary source of pollution in urban areas, and such runoff is considered to be a "non-point" source. Unlike "point" source wastes, non-point sources cannot be quantified through flow measurement, sampling, and analysis techniques. This runoff, typical of urban use, would contribute to the incremental degradation of the water quality downstream. This would be regarded as a significant cumulative water quality impact.

Compliance with the City's NPDES permit requirements, as stipulated in the CWA, would reduce impacts to water quality associated with Project-related activities. The NPDES permit requires the preparation of a post-construction management program, such as a WQMP, to ensure ongoing protection of the watershed basin by requiring structural and programmatic controls. A WQMP (EIR *Technical Appendix I2*) was prepared for the Project and identifies non-structural and structural source controls as well as Project design features and BMPs for post-development Project operation. Structural controls include location of inlets, signage and stenciling; showing the locations of native trees or areas of shrubs and groundcover to be undisturbed and retained; proposed native trees or areas of shrubs and ground cover; implementing minimal driveway widths; designing roofs to discharge runoff to adjoining landscaping; avoiding roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff; protection of slopes and channels; irrigation systems that conform to the City's landscape requirements; utilizing native and drought tolerant vegetation; irrigation maintenance; efficient irrigation; landscaped hillsides; and on-site drainage facility inspection and maintenance. Non-structural source controls include: maintenance and repainting of inlet marking; education of property owners, tenants, and occupants; activity restrictions; irrigation system and landscape maintenance; activity restrictions; landscape area inspections; landscape maintenance; common area litter control; street sweeping; drainage facility inspection and maintenance; and inspection of detention areas before the onset of the rainy season (October 1 to May 1) and once after the rainy season (May 2 to September 30). The Project's WQMP also outlines the long-term funding mechanisms and contractual obligations for the operation and maintenance of the Project's post-development water quality features. The on-site water quality basins and the slopes of the detention basins would be maintained by the City of Menifee's Community Facilities District (CFD) and the floor of the on-site detention basins would be maintained by the RCFCWCD. (K&A, 2019b, pp. 30-32)

The Project's post-development WQMP has been prepared in accordance with the Santa Ana Region Hydromodification Management Plan and City of Menifee requirements. The proposed storm drain design is shown in Figure 3-8, *Drainage Plan*, and was developed to maintain existing drainage patterns to the maximum extent practicable. The system collects flows generated on-site and flows generated off-site that are tributary to the Project site and conveys the flows via an underground storm water drain system to three (3) on-site detention/water quality basins for treatment. Detention/water quality basins are proposed to capture and treat the flows from tributary areas. These primary design features minimize urban runoff, limit the impervious footprint, maximize water conservation areas, and minimize the connection of impervious areas. These design measures are intended to capture first flush flows, defined as the first 0.75-inch of precipitation from storm events, which represents the initial surface runoff from a storm event containing a typically higher concentration of pollutants. All basins and storm drain facilities necessary would be built prior to the construction of any residential homes. Thus, at any stage of the Project, the storm drain facilities would have more capacity than needed until final Project build-out. Adherence to statutory requirements would ensure that water quality and waste discharge requirements are not violated. As such, with respect to the potential to

violate water quality standards and waste discharge requirements and further degrade existing surface or ground water quality, or otherwise substantially degrade surface or ground water quality, the Project would result in less-than-significant impacts.

Threshold b: ***Would the Project substantially decrease groundwater supplies or interfere with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?***

No potable groundwater wells are proposed by the Project. In addition, there are no active or inactive water wells located on the Project site. The Project site would receive potable water from the Eastern Municipal Water District (EMWD), which relies on water supplies from the San Jacinto Groundwater Basin; however, water supplies are primarily imported from the Metropolitan Water District (EMWD, 2017a, p. 5). Local potable groundwater accounts for approximately 12% of the water supply, and desalted groundwater accounts for 3% of the water supply. It is anticipated that water demands as a result of future development would be met through additional water imports from the Metropolitan Water District, and no additional groundwater supplies would be required through the year 2040 (EMWD, 2017a, p. 8). Thus, the Project would not substantially decrease groundwater and impacts would be less than significant. For a detailed discussion of water supply and demand, refer to Subsection 4.16, *Utilities and Service Systems*.

The Project site is located in the San Jacinto Groundwater Basin, as shown in Figure 4.9-4. The San Jacinto Groundwater Basin underlies several valleys in western Riverside County. This basin is bounded by the San Jacinto Mountains on the east, the San Timoteo Badlands on the northeast, the Box Mountains on the north, the Santa Rosa Hills and Bell Mountain on the south, and unnamed hills on the west (DWR, 2006, p. 1). With development of the Project site, the site's existing undeveloped character would be converted to that of a residential community. As a result of this conversion, impervious surfaces would be introduced to the site which could adversely affect groundwater recharge that occurs under existing conditions. As shown on Table 4.9-2, *Existing vs. Proposed Drainage Conditions*, the Project would reduce 100-year peak flow from the Project site at the discharge point (existing 5-foot by 10-foot Caltrans RCB culvert located along the westerly Project site boundary) under post-development conditions by up to 77 percent (K&A, 2019a, p. 33).

Table 4.9-2 Existing vs. Proposed Drainage Conditions

Storm Frequency	Existing Peak Discharge	Proposed Peak Discharge (Detention Basin Outflow)	Different	Different
	(cfs)	(cfs)	(cfs)	(%)
100-yr 1-hr	1666.67	382.18	-1284.49	-77%
100-yr 3-hr	1169.45	410.70	-758.75	-65%
100-yr 6-hr	1019.56	416.38	-603.18	-59%
100-yr 24-hr	488.05	340.57	-147.48	-30%

(K&A, 2019a, p. 33)

However, the total amount of water leaving the Project site under existing conditions would be similar to that of the post-development conditions, as all runoff from the Project site would ultimately discharge to the receiving waters listed in Table 4.9-1, *Receiving Waters for Storm Water Runoff from the Project Site*. Thus,

the Project has no potential to result in indirect impacts due to interference with groundwater recharge by reducing total flows from the site. As indicated in the discussion and analysis of Threshold a, above, the Project has been designed to incorporate three (3) detention/water quality basins on-site. These design features would attenuate post-development runoff in a manner consistent with RCFCWCD requirements. Accordingly, the Project would not substantially decrease groundwater supplies, substantially interfere with groundwater recharge such that the Project would impede sustainable groundwater management of the basin, and a less-than-significant impact would occur.

Threshold c: ***Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner, which would:***

i) Result in substantial erosion or siltation on- or off-site;

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

iii) 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; or

iv) Impede or redirect flood flows?

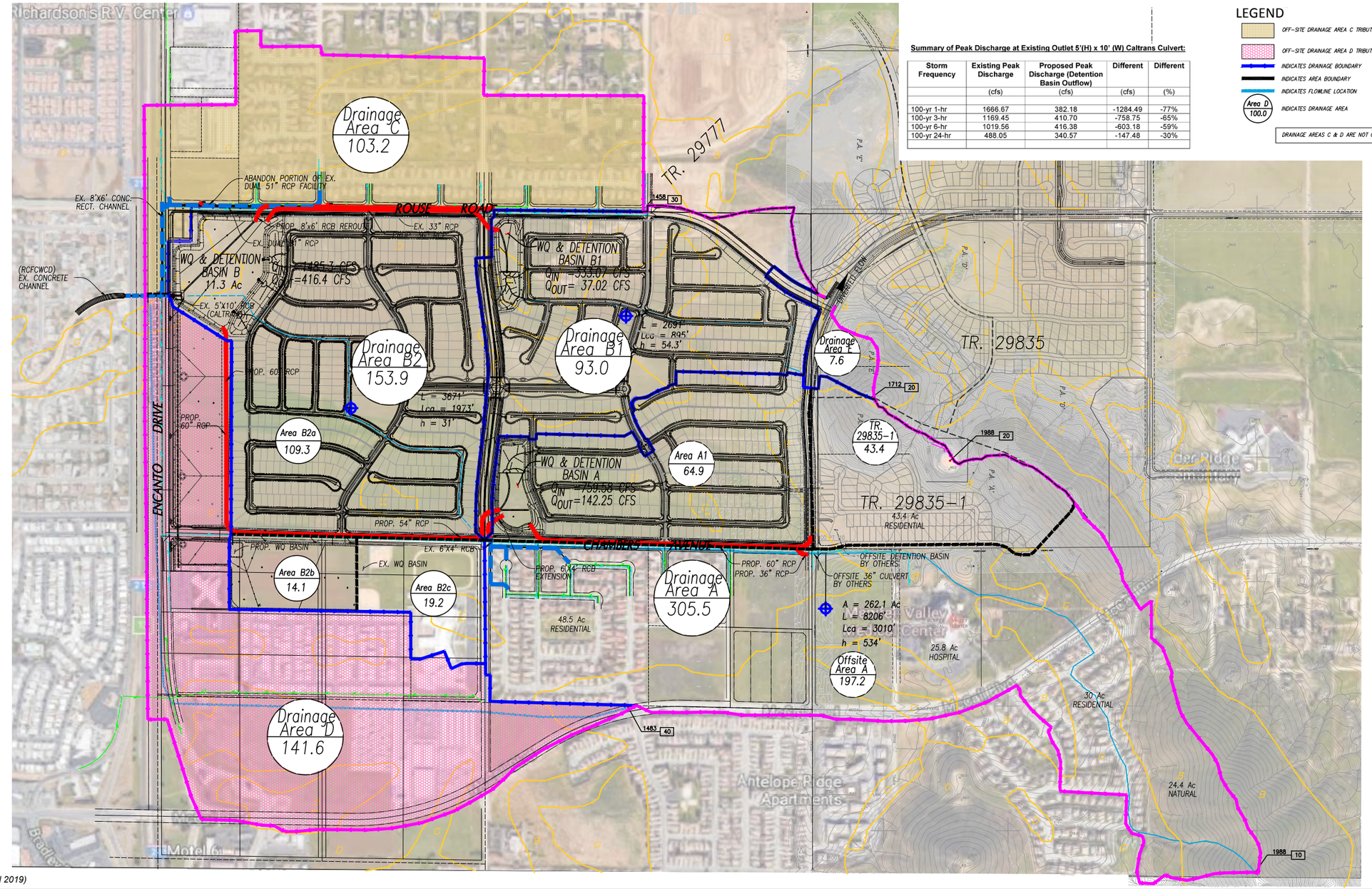
A. Construction-Related Impacts

As shown on EIR Figure 3-13, *Conceptual Grading Plan*, the Project has been designed to generally maintain the existing topography of the site, with minor modifications as necessary to accommodate site development and proposed drainage conditions. Nonetheless, construction of the Project would involve substantial ground disturbance during clearing and grading of the site. In addition, on-site erosion could occur if graded slopes are not stabilized prior to ultimate development or landscaping. The proposed grading activities would generate fair amounts of silt which could be carried off-site during a heavy rainfall event. Should such an event occur in the absence of any preventative measures to contain silt and other soils on-site, erosion and/or siltation downstream would result.

However, pursuant to requirements of the SWRCB, the Project Applicant would be required to obtain a NPDES permit for construction activities on-site. The NPDES permit is required for all projects that include construction activities, such as clearing, grading, and/or excavation that disturb at least one (1) acre of total land area. Compliance with the NPDES permit involves the preparation and implementation of a SWPPP for construction related activities. The SWPPP would specify BMPs to minimize the potential for erosion and siltation to occur and would include specific Project site measures to address the potential for the caving in of temporary excavations. Typical BMPs that are implemented at construction sites to protect water quality include the implementation of straw bale barriers, plastic sheeting/erosion control blankets, and outlet protection measures. With mandatory adherence to the SWPPP requirements during construction activities, effects associated with erosion, siltation, water quality, and flooding on downstream water sources and flood control systems would be maintained at a level below significance.

B. Operational-Related Impacts

Figure 4.9-3, previously presented, depicts the Project site's existing drainage areas, while Figure 4.9-5, *Proposed Drainage Conditions*, present the Project's proposed drainage areas and proposed drainage patterns.



Summary of Peak Discharge at Existing Outlet 5'(H) x 10' (W) Caltrans Culvert:

Storm Frequency	Existing Peak Discharge	Proposed Peak Discharge (Detention Basin Outflow)	Different	Different
	(cfs)	(cfs)	(cfs)	(%)
100-yr 1-hr	1666.67	382.18	-1284.49	-77%
100-yr 3-hr	1169.45	410.70	-758.75	-65%
100-yr 6-hr	1019.56	416.38	-603.18	-59%
100-yr 24-hr	488.05	340.57	-147.48	-30%

LEGEND

- OFF-SITE DRAINAGE AREA C TRIBUTARY TO EXISTING CALTRANS CULVERT
- OFF-SITE DRAINAGE AREA D TRIBUTARY TO EXISTING CALTRANS CULVERT
- INDICATES DRAINAGE BOUNDARY
- INDICATES EXISTING STORM DRAIN
- INDICATES AREA BOUNDARY
- INDICATES PROPOSED STORM DRAIN
- INDICATES FLOWLINE LOCATION
- Area D 100.0 INDICATES DRAINAGE AREA

DRAINAGE AREAS C & D ARE NOT OFF-SITE TRIBUTARY TO LEGADO DEVELOPMENT

Source(s): K&A Engineering (April 2019)

NOT TO SCALE

Figure 4.9-5

PROPOSED DRAINAGE CONDITIONS

Table 4.9-2, previously presented, shows the differences in peak flow rates of discharge from the Project site (via the existing 5-foot by 10-foot Caltrans RCB culvert located on the westerly Project site boundary) under existing and proposed conditions. As shown in Table 4.9-2, under post-development conditions, 100-year peak storm flows would be reduced compared to existing conditions. The Project's drainage plan has been designed to maintain existing drainage patterns to the maximum extent practicable, and all runoff from the Project site discharges to the existing Caltrans RCB culvert located along the westerly Project boundary, which ultimately discharges to the receiving waters listed in Table 4.9-1. The proposed drainage plan was previously depicted on EIR Figure 3-8 and utilizes natural water flow patterns to the extent feasible. The Project would construct three (3) water quality/detention basins, an underground storm drain system, and streets with curb opening catch basins to convey storm water flows through the Project site and towards the proposed water quality/detention basins. The four (4) drainage areas proposed on-site and the three (3) proposed water quality/detention basins are detailed below:

- **Drainage Area A**. Drainage Area A would consist of approximately 305.5 acres of land, which would include 64.9 acres of the southeast portion of the Project site, 43.4 acres of off-site lands from the proposed Tract Map 29835-1 to the east of the Project site, and 197.2 acres of off-site land to the southeast of the Project site which would be tributary to the Project site. Under post-development conditions, the portion of Drainage Area A that includes Tract Map 29835-1 would drain into the future off-site Detention Basin 1 (to the southeast of the Project site; to be constructed by others) and outlet to a proposed storm drain (36-inch reinforced concrete pipe [RCP]) in Chambers Avenue via a 36-inch RCP to be constructed by others which would convey storm water flows into the proposed Detention Basin A (proposed within Planning Area 21). The portion of Drainage Area A that includes the southeast area of the Project site ("Sub-Area A1"), would drain into Detention Basin A. The remaining off-site areas of Drainage Area 1 ("Sub-Area A") would drain into Detention Basin A via a proposed storm drain in Chambers Avenue and through the proposed extension of the existing 6-foot by 4-foot RCB located along the center of the southerly Project site boundary near the northeast corner of Chambers Avenue and Sherman Road. Detention Basin A would outlet via a proposed storm drain (48-inch RCP) running east-west along Chambers Avenue and north-south through Planning Area 16 and ultimately inlet into the proposed Detention Basin B (proposed within Planning Area 19) from the south. The proposed Detention Basin B within Planning Area 19 would discharge to the existing 5-foot by 10-foot Caltrans RCB culvert. Any potential debris that may be carried in storm water flows would be captured within the off-site basins prior to entering the Project site. Areas such as the orange groves to the east have little potential for debris due to their mature tree roots. (K&A, 2019a, p. 8)

- **Drainage Area B**. Drainage Area B would consist of approximately 246.9 acres of the western half and northeast portion of the Project site. Under post-development conditions, Drainage Area B would include Sub-Area B1 consisting of 93.0 acres of the northeast portion of the Project site which would drain into the proposed Water Quality Basin B1 (proposed within Planning Area 20). The proposed Water Quality Basin B would outlet to the proposed Detention Basin B (proposed within Planning Area 19) from the north via a proposed storm drain (48-inch RCP) within Rouse Road. The remaining areas of Drainage Area B ("Sub-Area B2") consisting of 153.9 acres would drain to the proposed Water Quality Basin B2 via proposed storm drains within the on-site roadways and via the proposed storm drain (48-inch RCP) in Chambers Avenue/Planning Area 16 prior to discharging into Detention Basin B. The proposed Detention Basin B within Planning Area 19 would discharge to the existing 5-foot by 10-foot Caltrans RCB culvert. (K&A, 2019a, pp. 8-9)

- **Drainage Area C**. Drainage Area C would consist of approximately 103.2 acres of land to the north of the Project site. Under post-development conditions, Drainage Area C would drain to the existing Sun City – Rouse Road storm drain (33-inch RCP) which discharges directly to the existing Caltrans 10-foot by 5-foot culvert located west of Project site. The Project proposes to reroute drainage from the existing Sun City – Rouse Road storm drain (via an 8-foot by 6-foot RCB) so that it would drain to the proposed Detention Basin B. Detention Basin B would discharge to the existing 5-foot by 10-foot Caltrans RCB culvert. (K&A, 2019a, p. 9)

- **Drainage Area D**. Drainage Area D would consist of approximately 141.6 acres of off-site land to the south of the Project site. Under existing conditions, Drainage Area D drains directly to the existing Caltrans RCB culvert located along the westerly Project site boundary via existing inlets to the west of Encanto Drive. The Project would reroute flows from Drainage Area D to the proposed Detention Basin B (proposed within Planning Area 19) via a proposed storm drain (48-inch RCP) that would run in a north-south orientation through proposed Planning Area 16. The proposed Detention Basin B within Planning Area 19 would discharge to the existing 5-foot by 10-foot Caltrans RCB culvert. (K&A, 2019a, p. 9)

Based on the proposed drainage facilities described above and the analysis demonstrating that the facilities have been designed in accordance with the requirements of the City of Menifee and the RCFCWCD, under interim construction conditions, all proposed basins and storm drain facilities would be built prior to the construction of any residential homes or commercial uses. Thus, during the Project's interim construction phase, storm water runoff from the site would be less than the runoff flow rates that occur under existing conditions and the storm drain facilities in place would have more capacity than needed until final Project buildout. Furthermore, upon buildout of the Project, storm water runoff from the site would be less than the runoff flow rates that occur under existing conditions. As described above, Drainage Areas A through B would ultimately discharge to the existing Caltrans RCB culvert located along the westerly Project site boundary. As shown in Table 4.9-2, peak discharge to the existing Caltrans RCB culvert located along the westerly Project site boundary under the 100-year storm 1-hour peak flow would be reduced by 1,284.49 cubic feet per second (cfs); 100-year storm 3-hour peak flow would be reduced by 758.75 cfs; 100-year storm 6-hour peak flow would be reduced by 603.18 cfs; and 100-year storm 24-hour peak flow would be reduced by 147.48 cfs. The Project's Drainage Plan has been designed to generally retain the site's existing topographic character, except as necessary to allow for proper drainage and sewer flows. Accordingly, with implementation of the Project, runoff from the Project site would not exceed the capacity of existing off-site storm water drainage sources during the construction or buildout phases, and a less-than-significant impact would occur.

In addition, with buildout of the Project, the site would generally be converted from an undeveloped site to that of a mixed-use community (including residential and commercial retail land uses) consisting of urban land uses and ornamental landscaping. As compared to existing conditions, development of the site with residential land uses would reduce the site's potential for generating substantial amounts of erosion or siltation due to the reduction in permeable surfaces. Moreover, with incorporation of water quality/detention basins that would address water quality and would reduce the amount of siltation in site runoff, impacts due to erosion or siltation would be less than significant. The proposed water quality/detention basins are designed according to the standards of the City of Menifee and the RCFCWCD to detain and slowly release storm water to allow particles and associated pollutants to settle out in the basin prior to storm water leaving the Project site. The water quality basins have been designed to treat the "first flush" of a rainfall event (generally the first 0.75-inch of precipitation) that typically generates the most polluted storm water. The water quality/detention basins are designed as shallow, vegetated basins underlain by an engineered soil media which retain storm water as well

as maximize plant uptake of storm water pollutants. When the infiltration rate of the underlying soil is exceeded, fully biotreated storm water flows are discharged via underdrains. Therefore, the proposed water quality/detention basins would maximize storm water infiltration and evapotranspiration and minimize direct discharge of runoff to the storm drain system. The on-site water quality/detention basins would ensure that the Project would not result in the production of substantial additional sources of polluted runoff. Accordingly, under long-term conditions, no significant impacts due to substantial erosion or siltation would occur, and a less-than-significant impact would occur. Because the Project has been designed to attenuate post-development runoff from the site, Project-related runoff would not substantially increase the rate or amount of surface runoff in downstream areas in a manner that would result in flooding on- or off-site and would not impede or redirect flood flows. Additionally, as demonstrated within this paragraph, the proposed on-site water quality/detention basins would ensure that the Project would not result in the production of substantial additional sources of polluted runoff, and impacts would be less than significant.

Threshold d: ***In flood hazard, tsunami, or seiche zones, would the Project risk release of pollutants due to Project inundation?***

As previously indicated in Subsection 4.8.1.C, the FEMA FIRM Flood Hazards Maps for the Project site indicate that the Project site is not located within a special flood hazard area subject to inundation by the 1 percent annual flood (100-year flood) (FEMA, 2014a). Additionally, according to Riverside County GIS, the Project site is not depicted within an area of flood sensitivity (RCIT, 2019). Thus, implementation of the Project would not place housing or structures within a 100-year flood hazard area and would not impede or redirect flood flows. Accordingly, no impact would occur.

As discussed above in Subsection 4.8.1.C, Figure 5.9-4 of the City of Menifee General Plan depicts dams located within the vicinity of the Project site, which includes the Forebay Dam (located approximately 6.1 miles southeast of the Project site) and the Lake Perris dam (located approximately 7.7 miles north of the Project site) (Menifee, 2013b, Figure 5.9-4). Additionally, based on Riverside County General Plan Figure S-10, "Dam Inundation Zones," it appears the western portion of the Project site is located within a dam inundation zone (Riverside County, 2015a, Figure S-10). In recognition of the possibility of dam inundation, the Safety Element of the Menifee General Plan includes the following "Implementation Actions" that are specifically intended to attenuate the risk of dam failure to persons or property.

- Action S-27: Prepare and distribute informational materials to owners of properties within the flood zones (Zones A, AE and X) and inundation zones (Exhibit S-2.1, Dams with the Potential to Inundate the Menifee General Plan Area) regarding the potential for flooding in their area, including the potential for flooding of access routes to and from their neighborhoods.

  Project Consistency: The Project would be required to adhere to the requirements of Action S-27. The Project would not locate structures within a dam inundation zone. As part of future implementing development approvals, the provisions of Action S-27 would be imposed as a condition of approval. The Project would not interfere with the implementation of Action S-27. Thus, the Project would be fully consistent with Action S-27.

- Action S-65: Require all essential and critical facilities (including but not limited to essential City offices and buildings, medical facilities, schools, child care centers, and nursing homes) in or within 200 feet of Flood Zones A, AE and X, or within the dam inundation pathways, to develop disaster response and evacuation plans that address the actions that will be taken in the event of flooding or inundation due to catastrophic failure of a dam.

Project Consistency: The Project does not include any essential or critical facilities under existing conditions. Essential or critical facilities have the potential to occur in the 20.1 acres of the Project site proposed for commercial uses. If essential or critical facilities are proposed as part of future implementing developments within the proposed commercial area, the provisions of Action S-65 would be imposed as a condition of approval. The Project would not interfere with the implementation of Action S-65. Thus, the Project would be fully consistent with Action S-65.

Compliance with the above-referenced City of Menifee General Plan "Implementation Actions," applied to the Project as City Regulations and Design Requirements (CRDRs) as well as the construction of the three (3) storm water quality/detention basins on-site, would ensure that any potential flood hazards, including dam inundation hazards associated with future development would be less than significant.

The Project would have no physical effects on existing water bodies. The Project site is not located near any large water bodies, including reservoirs that could result in potential indirect impacts associated with a seiche. The closest water body that has the potential to produce a seiche is Canyon Lake, which is located approximately 4.5 miles to the southwest of the Project site (Google Earth, 2016). Due to the 4.5-mile distance to Canyon Lake (a man-made feature within the City of Canyon Lake) from the Project site and the lower elevation of the lake, the Project would not be subject to inundation by seiches associated with Canyon Lake. Based on the foregoing, impacts associated with inundation by seiche would be less than significant.

The Project site is located more than 33 miles northeast of the Pacific Ocean; therefore, the potential for a tsunami to affect the Project site is non-existent (Google Earth, 2016). As such, the Project would have no impact with respect to exposing people or structures to inundation by tsunami.

Threshold e: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As discussed in Threshold a above, the Project site is located within the Santa Ana River Basin and Project-related construction and operational activities would be required to comply with the Santa Ana RWQCB's Santa Ana River Basin Water Quality Control Plan. Implementation of the Project would not conflict with or obstruct the Santa Ana River Basin Water Quality Control Plan and impacts would be less than significant.

As indicated under the discussion and analysis of Threshold b, above, the Project site is located within the San Jacinto Groundwater Basin. With development of the Project site, the site's existing undeveloped character would be converted to that of a residential and commercial development. As a result of this conversion, impervious surfaces would be introduced to the site which could adversely affect groundwater recharge that may occur on site under existing conditions. However, all runoff from the Project site would be conveyed to one of a series of water quality basins for treatment prior to discharge into the local storm drain system which eventually discharges to Lake Elsinore. Although the rate of runoff from the Project site is likely to decrease relative to existing conditions with implementation of the water quality basins, the total amount of water leaving the site would be similar to existing conditions. All runoff would discharge would ultimately discharge to the receiving waters listed in Table 4.9-1 following treatment, where groundwater recharge would continue to occur. Accordingly, the proposed Project would not conflict with or obstruct implementation of a sustainable groundwater management plan, and impacts would be less than significant.

4.9.5 CUMULATIVE IMPACT ANALYSIS

The cumulative impact analysis considers construction and operation of the Project in conjunction with other development projects in the vicinity of the Project site and resulting from full General Plan buildout in the City of Menifee and surrounding areas. The analysis of potential cumulative impacts to hydrology and water quality is divided into five general topics of discussion by combining Thresholds of Significance (as listed in Subsection 4.9.3) into groupings of like topics as follows:

A. Water Quality

During Project construction, the Project and any other development projects under construction in the San Jacinto Groundwater Basin have the potential to result in a cumulative water quality impact, including erosion and sedimentation. Pursuant to the requirements of the State Water Resources Board and the Santa Ana RWQCB, all construction projects that disturb one (1) or more acres of land are required to obtain a NPDES permit and obtain coverage for construction activities. In order to obtain coverage, an effective site-specific SWPPP for construction-related activities is required to be developed and implemented for all development projects. The SWPPP must identify potential on-site pollutants and identify and implement an effective combination of erosion control and sediment control measures (i.e., BMPs) to reduce or eliminate discharge of pollutants to surface water from storm water and non-storm water discharges during construction. In addition, the Project and all cumulative developments (refer to Table 4.0-1 of this EIR) would be required to comply with the Water Quality Control Plan for the Santa Ana Region (Basin Plan). Compliance with these mandatory regulatory requirements would ensure the Project's contribution to water quality impairments during Project construction would be less-than-cumulatively considerable and no mitigation is required.

Implementation of the Project and other cumulative development projects would permanently alter the amount of impervious surfaces as a result of newly constructed roadways, structures, and other paved surfaces such as driveways, walkways, parking lots, and other hardscapes. Therefore, the implementation of the Project and other cumulative development projects would result in an increase in storm water runoff when compared with existing conditions and could result in a potential increase in urban pollutants that could contribute to the incremental degradation of the downstream water quality. However, the Project as well as other cumulative development projects would be required to comply with the NPDES permit requirements, as stipulated in the CWA, which would reduce impacts to water quality associated with the Project and other cumulative development projects. Additionally, the NPDES permit requires the preparation of a post-construction storm water management program, such as a WQMP, to ensure ongoing protection of the watershed basin by requiring structural and programmatic storm water controls. The Project and all other cumulative development projects would be required to implement these storm water controls, design features, and BMPs for post-development Project operation. Accordingly, mandatory compliance with NPDES requirements and implementation of BMPs from project-specific WQMPs for post-development Project operation would ensure the Project would result in less-than-cumulatively considerable impacts to water quality.

B. Groundwater Supply and Recharge

As discussed under Threshold b, the City of Menifee obtains its potable water from EMWD, which sources its potable water supplies primarily through purchasing water from the Metropolitan Water District, but also extracts groundwater from the San Jacinto Groundwater Basin. The Project-specific WSA concluded that the EMWD currently has sufficient water supplies to meet existing and future demands, based on a review of the City's water supply entitlements, water rights, and water service contracts (EMWD, 2017a, p. 8; EMWD, 2019). Accordingly, because the Project has a reliable source of water and does not propose to operate any groundwater extraction wells, the Project would have no potential to decrease groundwater supplies, and would

therefore have no potential to have a cumulatively-considerable adverse impact to groundwater supplies. Cumulatively-considerable impacts due to groundwater demand would be less than significant.

Although development of the Project (similar to other development projects throughout the City of Menifee) would increase the quantity of impervious surfaces, the Project proposes to include water quality/detention basins and permeable landscape areas that would allow for the percolation of on-site storm water runoff into the groundwater basin. Additionally, the total amount of water leaving the site would be similar to existing conditions, thereby allowing for continued infiltration to pervious areas downstream (e.g., Canyon Lake). Accordingly, the Project would not result in a cumulatively-considerable impact to groundwater recharge in the San Jacinto Groundwater Basin, and impacts would be less than significant.

C. Erosion and Siltation

The Project incorporates design features (i.e., water quality/detention basins) that would ensure that the Project's post-development drainage conditions closely approximate those that occur under existing conditions, in a manner consistent with City of Menifee and RCFCWCD requirements. In addition, the Project's grading plan seeks to generally retain the site's existing topographic character. These characteristics would ensure that substantial erosion and siltation do not occur on- or off-site, and that Project-related drainage would not exceed the capacity of existing drainage systems. The Project would have less-than-significant impacts with respect to erosion and siltation. Other cumulative projects in the vicinity of the Project (see Table 4.0-1 of this EIR) would also be required to comply with regulatory requirements and implement design features and mitigation measures to reduce potential impacts associated with erosion and siltation. Accordingly, the Project would result in less-than-cumulatively considerable impacts to erosion and siltation.

D. Flood Hazards

The Project would generally maintain the existing drainage pattern of the Project site and the Project would not affect the course of any streams or rivers. In addition, the Project's storm water drainage system is designed to ensure that peak storm water runoff discharge flows are decreased compared to existing conditions and can be adequately accommodated by existing, proposed, and planned master storm drain facilities. Accordingly, because the Project would result in a decrease in the peak storm water runoff discharge flow compared to existing conditions, the Project would not have the potential to increase flooding on- or off-site. Therefore, there is no potential for the Project to result in cumulatively-considerable impacts to flooding on- or off-site when considered with other cumulative development projects (see Table 4.0-1 of this EIR). Accordingly, the Project would have a less-than-cumulatively considerable impact associated with flooding.

Furthermore, the FEMA FIRM Flood Hazards Maps for the Project site indicate that the Project site is not located within a special flood hazard area subject to inundation by the 1 percent annual flood (100-year flood) (FEMA, 2014a). Accordingly, the Project has no potential to contribute to a cumulatively-considerable impact associated with placing housing or structures within a 100-year flood zone.

The western portion of the Project site is shown as being located within a dam inundation zone by Figure 5.9-4 of the City of Menifee General Plan. However, compliance with the City of Menifee General Plan "Implementation Actions," as well as the construction of the three (3) storm water quality/detention basins on-site, would ensure that any potential dam inundation hazards associated with future development would be less than significant. The other cumulative development projects shown in Table 4.0-1 of this EIR that are located within dam inundation zones also would be required to comply with applicable regulatory requirements addressing dam inundation flood hazards, as well as implement on-site flood control measures (such as water

quality basins) in accordance with the requirements of their respective jurisdictions. As such, the Project would result in a less-than-cumulatively considerable impact associated with the failure of a levee or a dam.

E. Tsunami and Seiches

Due to the distance of the Project site from large bodies of water that could be affected by a seiche or tsunami (including the Pacific Ocean), the Project is not subject to hazards associated with seiches or tsunamis. There are no components of the Project that would increase the potential for seiches or tsunamis. Accordingly, the Project has no potential to contribute to a cumulatively-considerable impact associated with seiches or tsunamis.

F. Water Quality Control Plan and Sustainable Groundwater Management Plan

The Project site would be required to comply with the Santa Ana RWQCB's Santa Ana River Basin Water Quality Control Plan. Furthermore, as described above, the Project is located within the San Jacinto Groundwater Basin and all runoff from the Project site would be conveyed to one of a series of water quality basins for treatment prior to discharge into the local storm drain system which eventually discharges to Lake Elsinore. Although the rate of runoff from the Project site is likely to decrease relative to existing conditions with implementation of the water quality basins, the total amount of water leaving the site would be similar to existing conditions. All runoff would discharge would ultimately discharge to the receiving waters listed in Table 4.9-1 following treatment, where groundwater recharge would continue to occur. As such, the Project's construction and operation would not conflict with any water quality control plan or sustainable groundwater management plan. Similar to the Project, all cumulative developments would be required to comply with the Santa Ana RWQCB's Santa Ana River Basin Water Quality Control Plan and the San Jacinto Groundwater Basin Plan. Impacts would be less-than-cumulatively-considerable.

4.9.6 Significance of Impacts Before Mitigation

Threshold a: Less-than-Significant Impact. With implementation of the BMPs from the SWPPP during construction and the Project-specific WQMP during Project operation, included as City Regulation and Design Requirement CRDR 4.9-1, as well as implementation of the Project's drainage plan that includes three (3) water quality/detention basins, included as City Regulation and Design Requirement CRDR 4.9-2, the Project would result in less-than-significant impacts with respect to water quality.

Threshold b: Less-than-Significant Impact. The Project has a reliable source of domestic water and does not propose any new potable water wells that would directly extract groundwater. Groundwater recharge would occur in on-site detention basins and landscaped areas, and water conveyed off-site would have the ability to percolate into the groundwater table. The Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project would impede sustainable groundwater management of the basin, and the impact would be less than significant.

Threshold c: Less-than-Significant Impact. Implementation of the BMPs from the Project-specific SWPPP during construction and the on-site water quality/detention basins, included as City Regulations and Design Requirements CRDR 4.9-1 and CRDR 4.9-2, respectively, would ensure that construction and operation of the Project would not result in substantial erosion or siltation on- or off-site, substantially increase the rate or amount of surface runoff that would result in flooding on- or off-site, contribute runoff storm water which would exceed the capacity of existing or planned storm water drainage systems, or provide substantial additional sources of polluted runoff, or impede or redirect flood flows. Accordingly, the Project's impacts with respect to Threshold c would be less than significant.

Threshold d: Less-than-Significant Impact. FEMA FIRM Flood Hazards Maps do not depict the Project site as being located within a special flood hazard area subject to inundation by the 1 percent annual flood (100-year flood). Additionally, according to Riverside County GIS, the Project site is not depicted within an area of flood sensitivity. Thus, implementation of the proposed Project would not place housing or structures within a 100-year flood hazard area and would not impede or redirect flood flows. Figure S-10 of the Riverside County General Plan depicts the western portion of the Project site as being located within a dam inundation zone. Compliance with the City of Menifee General Plan "Implementation Actions" applicable to dam inundation included as City Regulation and Design Requirement CRDR 4.9-3 as well as the construction of the three (3) storm water quality/detention basins on-site included as City Regulation and Design Requirement CRDR 4.9-2 would ensure that any potential dam inundation hazards associated with future development would be less than significant.

Based on the 4.5-mile distance of Canyon Lake (the nearest large body of water) from the Project site, the Project would not be subject to inundation by seiches associated with the body of water. Impacts associated with inundation by seiche would be less than significant. Additionally, due to the approximately 33-mile distance of the Project site from the Pacific Ocean, there is no potential for a tsunami to affect the Project site, and no impact would occur. Impacts would be less than significant.

Threshold e: Less-than-Significant Impact. The Project would be required to comply with the Santa Ana RWQCB's Santa Ana River Basin Water Quality Control Plan. In addition, the Project is located within the San Jacinto Groundwater Basin, with all Project runoff ultimately discharging to the receiving waters listed in Table 4.9-1 following treatment, where groundwater recharge would continue to occur. As such, the Project's construction and operation would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant.

4.9.7 City Regulations, Design Requirements, and Mitigation

Applicable City Regulations and Design Requirements

The following are applicable regulations and design requirements within the City of Menifee. Although these requirements technically do not meet CEQA's definition for mitigation, they are imposed herein to ensure Project compliance with applicable City regulations and design requirements.

CRDR 4.9-1 The Project is required to comply with the provisions of the Project's NPDES permit, and the Project's SWPPP during construction. Compliance with the NPDES permit and the SWPPP would identify and implement an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate discharge to surface water from storm water and non-storm water discharges during Project construction.

CRDR 4.9-2 The Project shall be required to comply with the provisions of the Project's Drainage Study, the provisions of the proposed Specific Plan No. 2017-187, and the provisions of the Project's Water Quality Management Plan, which include development of three (3) water quality/detention basins with a maximum 48-hour detention period, implementation of a master drainage plan, implementation of non-structural and structural source controls, as well implementation of Project design features and BMPs for post-development Project operation. Compliance with these provisions would be assured by the City's future review of the Final Map and implementing grading and building permits for compliance with the provisions that require the development of three (3) water quality/detention basins in order to properly

attenuate Project-related drainage flows. These provisions would serve to reduce and/or avoid impacts related to hydrology and water quality.

CRDR 4.9-3 The Project was reviewed for compliance with General Plan Action S-27 and Action S-65 through the preparation of the Project's Drainage Study. The Project was found to be consistent with General Plan Action S-27 and Action S-65 as stated below. All future implementing developments on the Project site would be required to be consistent with General Plan Action S-27 and Action S-65 as a condition of approval. Compliance with General Plan Action S-27 and Action S-65 would reduce the risk of flooding as a result of dam failure on the Project site.

- Action S-27: Prepare and distribute informational materials to owners of properties within the flood zones (Zones A, AE and X) and inundation zones (Exhibit bS-2.1, Dams with the Potential to Inundate the Menifee General Plan Area) regarding the potential for flooding in their area, including the potential for flooding of access routes to and from their neighborhoods.

- Action S-65: Require all essential and critical facilities (including but not limited to essential City offices and buildings, medical facilities, schools, child care centers, and nursing homes) in or within 200 feet of Flood Zones A, AE and X, or within the dam inundation pathways, to develop disaster response and evacuation plans that address the actions that will be taken in the event of flooding or inundation due to catastrophic failure of a dam.

Mitigation

Impacts would be less than significant; therefore, mitigation is not required.

4.10 LAND USE AND PLANNING

This Subsection discusses consistency of the Project with applicable land use and planning policies adopted by the City of Menifee and other governing agencies for the purpose of reducing adverse effects on the physical environment. Information used to support the analysis in this Subsection was obtained from the City of Menifee General Plan (Menifee, 2013a), Zoning Ordinance (Menifee, 2018); the Southern California Association of Governments' (SCAG's) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (SCAG, 2016); Riverside County Airport Land Use Commission (ALUC) (ALUC, 2014); and the Regional Conservation Authority (RCA), (RCA, 2003). Refer to EIR Section 7.0, *References*, for a complete list of reference sources.

4.10.1 EXISTING CONDITIONS

A. Existing On-Site and Adjacent Land Uses

Under existing conditions, the Project site consists of 331.0 acres of undeveloped land that was historically used for dryland farming. Portions of the Project site also contain wild grass, weeds, brush, and scattered mature trees. The elevation of the property ranges from 1,654 feet above mean sea level (amsl) along the knoll in the northeast corner of the Project site to approximately 1,431 feet amsl near the western Project boundary. (Google Earth, 2016)

As previously illustrated in Figure 2-6, *Existing General Plan Land Use Designations*, the City of Menifee General Plan Land Use Map applies land use designations over the entire 331.0-acre property. As shown, the City's General Plan designates the Project site as "Fleming Ranch Specific Plan (SP)," although no Specific Plan has been adopted for the site (Menifee, 2013a, LU-2). Thus, allowable land uses per the site's existing General Plan land use designation would be established as part of the proposed Legado Specific Plan (SP 2017-0187).

Surrounding land uses were shown previously on Figure 2-5, *Surrounding Land Uses and Development*, and Figure 2-4, *Aerial Photograph*. The Project site is located in a portion of the City that is developed and developing, with residential and commercial developments occurring to the south, north, and west of the Project site. Land uses immediately north of the Project site include a mix of small and large lot residential to the west of which are commercial land uses along Encanto Drive. Land uses to the east of the Project site consist of vacant land, future residential land uses (proposed as part of TR 29835), and further east is Boulder Ridge Elementary School. Land uses to the south of the Project site consists of a mixture of undeveloped land, small lot residential, the Hans Christensen Middle School, a mobile home community, the Life Care Center, commercial retail (including a proposed Walmart), and a motel. Land uses to the west of the Project site include I-15, single-family residential uses, a mobile home community, and a golf course. (Google Earth, 2016)

Existing General Plan land use designations north of the Project site include "Commercial Office (CO)," "Commercial Retail (CR)," "2.1-5 dwelling units per acre (du/ac) Residential (2.1-5 R)," and "Rural Residential – 5 acre minimum (RR5)." Lands to the east of the Project site are designated as "2.1-5 du/ac Residential (2.1-5 R)," "5.1-8 du/ac Residential (5.1-8 R) and "Rural Residential – 5 acre minimum (RR5)." Lands to the south of the Project site are designated as "Economic Development Corridor (EDC)," "Public/Quasi Public Facilities (PF)," "Recreation (OS-R)," and "5.1-8 du/ac Residential (5.1-8 R)." Properties located to the west of the Project site are designated as "Economic Development Corridor (EDC)" and "2.1-5 du/ac Residential (2.1-5 R)." (Menifee, 2013a, LU-2)

At the time the Project's Notice of Preparation (NOP) was distributed for public review (2017), the Project's existing zoning designations were C-P-S (Scenic Highway Commercial) and R-1 (One-Family Dwellings). Approximately 75% of the Project site is zoned as "One-Family Dwellings (R-1)," and the western 25% of the Project site is zoned as "Scenic Highway Commercial (C-P-S)," pursuant to the City of Menifee Zoning Ordinance. However, on December 18, 2019 the City of Menifee adopted a new zoning map that will go into effect on January 18, 2020. Pursuant to the new zoning map, the Project site's zoning designation will be SP "Fleming Ranch Specific Plan Zone." (Menifee, 2008; Menifee, 2019)

At the time the Project's Notice of Preparation (NOP) was distributed for public review (2017) the C-P-S and R-1 zoning classifications apply to the properties located north of the Project site. Properties located to the east of the Project site are classified as "Planned Residential (R-4)" and "Open Area Combining Zone Residential Developments (R-5)." Properties located to the south of the Project site are zoned "Mobile Home Subdivisions and Mobile Home Parks (R-T)," R-1, and C-P-S. Properties located to the west of the Project site are classified as R-1. However, on December 18, 2019 the City of Menifee adopted a new zoning map that will go into effect on January 18, 2020. Pursuant to the new zoning map properties located north of the Project site will be designated for "Low Density Residential-1 (LDR-1)", Low Density Residential-2 (LDR-2)", "Commercial Office (CO)", and "Commercial Retail (CR)". Properties located to the east of the Project site will be classified as "Rural Residential, 5-acre minimum (RR 5)" and "Planned Development District (PDO-1)". Properties located to the south of the Project site will be zoned "Economic Development Corridor-McCall Boulevard (EDC-MB)", "Public/Quasi-Public Facilities (PF)", and "Low Medium Density Residential (LMDR)". Properties located to the west of the Project site will be classified as EDC-MB and LDR-2. (Menifee, 2008; Menifee, 2019)

B. Applicable Land Use and Planning Policies

1. City of Menifee General Plan

The City of Menifee General Plan (2013) is a policy document that reflects the City's vision for the future of Menifee. The General Plan is organized into eight separate elements. Each element is associated with a series of policies to guide the City's vision for future development. The following is a summary of the City of Menifee General Plan Elements.

Land Use Element

The Land Use Element focuses on preserving established land uses and accommodating the future growth and physical development of the community. The Land Use Element generally establishes the density, intensity, and location of land uses throughout the City and is complemented by the additional policy guidance provided in other elements that relate to a specific topic. The Land Use Element identifies the locations and diversity of housing types available in the City that can be used to achieve housing mandates specified by the State Office of Housing and Community Development (HCD). The City's General Plan designates the entire Project site as "Fleming Ranch Specific Plan (SP)." As stated in the General Plan, the purpose of the SP designation is to provide detailed policies, standards, and criteria for the development of an area. Land uses within the SP areas are conceptual and will be shown to provide context with surrounding uses. (Menifee, 2013a, LU-2, LU-3)

Housing Element

The Housing Element is required to address the production, preservation, and improvement of housing. Among its most important functions, the Housing Element analyzes existing and future housing needs;

addresses constraints to meeting local housing needs; identifies land, financial, and administrative resources for housing; and sets forth goals, policies, and implementation programs to meet a community's varied housing needs. The result is a housing plan that balances the City's varied needs within the overall goal of creating and sustaining a strong community. The City of Menifee's 2014-2021 Housing Element is designed to comply with requirements in California housing element law. (Menifee, 2013a)

The Housing Element has identified sites within the Specific Plan area that meet the City's affordable housing sites under the Regional Housing Need Assessment (RHNA). Recently adopted Senate Bill 166 prohibits cities from allowing their inventory of available sites to be insufficient to meet their remaining unmet RHNA share for lower and moderate-income housing. California Government Code Section 65863 requires cities to make certain findings that the remaining housing element sites can accommodate the RHNA requirements by income level.

The Menifee Housing Element states that General Plan designations in the range of 20.1-24.0 dwelling units/acre can be used to meet the City's Very Low- and Low-income requirement of 2,495 units. The Housing Element assumed the Project site would provide 344 units at the 20.1-24.0 dwelling units/acre density. The City has designated a number of parcels with that residential density to both vacant land and under-utilized sites in Romoland towards meeting the Very Low and Low RHNA numbers for 2014-2021. All these parcels provide for a total 3,063 potential units thereby exceeding the RHNA criteria by 568 units.

In addition, the Housing Element also assumes that General Plan designations in the range of 2.1 to 20R can be used to meet the City's Moderate and Above Moderate-income requirement of 3,750 units. The Housing Element assumed Project site would provide 1,384 units within the 2.1 to 14R density. The City has designated a potential of 21,134 units allowed on vacant parcels with these residential densities towards meeting the 1,140 Moderate income and the 2,610 Above Moderate income RHNA unit numbers thereby exceeding the RHNA criteria by 17,384 units.

Circulation Element

The Circulation Element provides overall guidance for the City's responsibility to satisfy the local and sub-regional circulation needs of the residents, visitors, and businesses while maintaining the City's quality of life. The Circulation Element also coordinates the circulation system with future land use patterns and levels of buildout and addresses access and connectivity among the various neighborhoods and economic development districts. Using a layered transportation network approach, the Circulation Element pays particular attention to addressing the range of mobility options in Menifee, including vehicular, pedestrian, bicycle, neighborhood electric vehicles (NEVs)/golf carts, transit, and trucks. (Menifee, 2013a)

Exhibit C-3 of the Circulation Element, *Roadway Network*, identifies long-term vehicular roadways planned throughout the City. As shown on Exhibit C-3 of the General Plan, Rouse Road is identified as a Major roadway, and Encanto Drive/Chambers Avenue are designated as Secondary Roads (4 Lanes). The Major standard is a four-lane facility with a painted median, and provides shoulders that may accommodate exclusive bike lanes or shared NEV/bike lanes. The Secondary Road (4 Lanes) provides median turn lanes, bike lanes, or shared NEV/bike lanes when median turn lanes are not needed, and a 100-foot right-of-way. The Circulation Element Policy C-1.2 depicts level of service (LOS) standards for Circulation Element roadways throughout the City, and requires development to

mitigate its traffic impacts and achieve a peak hour LOS D or better at intersections, except at constrained intersections at close proximity to I-215 where LOS E may be permitted. (Menifee, 2013a, Exhibit C-3)

Exhibit C-4 of the Circulation Element, *Bikeway and Community Pedestrian Network*, identifies the location of existing and planned bicycle facilities throughout the City. As shown in Exhibit C-4, Rouse Road/Chambers Avenue both have existing Community On-Street NEV/Bike Lanes (Class II), while Encanto Drive is shown to have existing Community On-Street Bike Lanes (Class II). In addition, a Class III bike route traverses the southwestern and northeastern portion of the Project site. (Menifee, 2013a, Exhibit C-4)

Open Space & Conservation Element

The Open Space & Conservation Element provides policy direction for Menifee's parks and open space areas, recreational trails, and the conservation, development, and utilization of the City's natural resources with an overall goal of maintaining the high quality of life Menifee residents have enjoyed for generations, while also preserving and protecting the numerous nonrenewable and unique cultural and historic resources located within the City. (Menifee, 2013a)

Exhibit OSC-1, *Proposed Recreational Trails*, identifies the locations of existing regional and community trails throughout the City. As shown in Exhibit OSC-1, there are no existing regional or community trails located within the vicinity of the Project site. (Menifee, 2013a, Exhibit OSC-1)

Community Design Element

The Community Design Element intends to enhance the current community identity through the identification of design techniques, guidelines, and features that will enhance the visual character of the City and its neighborhoods. It serves as a practical guide to City leaders, developers, business owners, and residents as they provide direction to implement new projects in Menifee and intends to stimulate design creativity in the City. (Menifee, 2013a)

Exhibit CD-1 depicts the City's planned "Community Gateways," which are intended to "[e]nhance the city's identity through the use of distinct city graphics, such as the city seal, in the design of gateways, street signs, city signage, public facilities and public gathering spaces, and other areas where appropriate." Section 3.8 of the proposed Legado Specific Plan accommodates a proposed gateway near the boundary of Planning Areas 16 and 19 along Encanto Drive; thus, the Project would be consistent with and would implement Exhibit CD-1. (Menifee, 2013a)

Exhibit CD-2 identifies proposed enhanced landscape corridors and scenic corridors. Exhibit CD-2 identifies the Project's frontage with Encanto Drive/I-15 as part of an "Enhanced Landscape Corridor." Streetscapes accommodated by the Project along Encanto Drive would be consistent with Exhibit CD-2. (Menifee, 2013a)

Economic Development Element

The Economic Development Element to establish the long-term goals for the growth and development of the local economy, elaborate the public policies needed to achieve the goals, and identify key implementation actions. The goals, policies, and actions are targeted to the community-defined desires

for more and better-paying jobs, quality of life improvements, and sound fiscal management. (Menifee, 2013a)

Safety Element

The Safety Element of the General Plan provides a strategy for City staff, residents, developers, and business owners to effectively address natural and man-made hazards in Menifee, including seismic and geological issues; flood hazards; fire hazards; hazardous materials; wind hazards; and disaster preparedness, response, and recovery. The policies and action items provided herein can help create a community that is minimally at risk from natural hazards and that responds quickly, effectively, and efficiently to those hazards. It is the primary goal of this document that as the policies and actions are implemented over the next 20 years, the City will be increasingly less impacted by disasters, and in the process, become more self-reliant, sustainable, and prosperous. (Menifee, 2013a)

Noise Element

The Noise Element is a mandatory component of the General Plan pursuant to the California Planning and Zoning Law, Section 65302(f). This element also follows guidelines adopted by the Office of Planning and Research in the State of California General Plan Guidelines. The primary function of the Noise Element is to ensure that considerations of noise are incorporated into the land use planning and decision-making process. The Noise Element of the General Plan is directly related to both the land use and circulation elements. It identifies the major noise sources in the City and contains goals and policies to protect citizens from excessive noise exposure. These goals and policies are consistent with applicable State and local noise standards and guidelines to control noise exposure and to promote land use compatibility with the noise environment. (Menifee, 2013a)

2. City of Menifee Zoning Ordinance

At the time the Project's Notice of Preparation (NOP) was distributed for public review (2017), the City of Menifee Zoning Ordinance applied the zoning designation of "One Family Dwellings (R-1)" to the majority of the site and zoned the western portion of the Project site for "Scenic Highway Commercial (C-P-S)." The R-1 zoning classification allows for a minimum 7,200 square foot lot size, and allows for mobile homes on permanent foundation, limited agriculture, and non-commercial keeping of horses with a minimum lot of 20,000 square feet. The C-P-S zoning classification includes wholesale and retail commercial uses with an approved Plot Plan, and limited commercial uses with an approved Conditional Use Permit. However, on December 18, 2019 the City of Menifee adopted a new zoning map that will go into effect on January 18, 2020. Pursuant to the new zoning map, the Project site's zoning designation will be SP "Fleming Ranch Specific Plan Zone." The SP zoning designation allows for the policies and development standards to be established by a Specific Plan document.

3. City of Menifee Parks, Trails, Open Space and Recreation Master Plan

The Project site is subject to the City of Menifee Parks, Trails, Open Space and Recreation Master Plan ("PTOSR Master Plan"). The PTOSR Master Plan includes a service area analysis which identified residential areas within 0.5-mile of existing and planned park facilities. The PTOSR Master Plan determined that areas within 0.5-mile (a reasonable walking distance) of a park had adequate access to recreation facilities. As shown in Figure 3.4-1 of the PTOSR Master Plan, the existing and planned parks within the vicinity of the Project site adequately serve the Project area under existing conditions and would meet the needs of future residents in the area. The PTOSR Master Plan identifies one existing City Park in the vicinity of the Project,

the Rancho Ramona Park, located 0.4 mile south of the Project site at the southeast corner of Encanto Drive and Alta Vista Way. The PTOSR Master Plan also identifies three "City Parks in Progress" in the Project area, including recreational facilities proposed on site by the Project; the Talvera Park, which is planned northeast of the Project site within Tract 29777; and the CV Communities Park, which is planned to the east of the Project site within Tract 29835. It should be noted that the "City Park in Progress" identified in the PTOSR Master Plan on the Project site are different sizes and configurations as compared to what is currently proposed by the Project. Although the Project would modify the sizes and configuration of the on-site park identified by the PTOSR Master Plan, the Project would continue to provide a community park/community center and other recreational amenities on-site. (Menifee, 2016, p. 65, Figure 3.4-1)

A proposed bikeway and community pedestrian network were identified for the Project site by the PTOSR Master Plan. The trail designations in the Master Plan vary from the designations identified in the General Plan. The PTOSR Master Plan calls for the provision of a Community Trail (Hiking, Biking & Equestrian) along Rouse Road, Sherman Road, Antelope Road, and the segment of Chambers Avenue located east of Sherman Road. The PTOSR Master Plan also calls for a Community Bike Lane – Class II along Encanto Drive and the segment of Chambers Avenue located west of Sherman Road. (Menifee, 2016, p. 43, Figure 2.7-1; Google Earth, 2016)

4. Southern California of Association of Governments (SCAG)

The Southern California Association of Governments (SCAG) is a regional agency established pursuant to CA Gov. Code § 6500, Joint Powers Authority law. SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO). SCAG serves as an area-wide clearinghouse for regionally significant projects. SCAG reviews the consistency of local plans, projects, and programs with regional plans. Guidance provided by this review process is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of regional goals and policies.

The Project site is located within the Western Riverside Council of Governments (WRCOG) sub-region of SCAG. The applicable SCAG policy documents include the Regional Comprehensive Plan and Guide (2016), the Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), and Compass Growth Vision. Because the Project meets the CEQA definition of having a statewide, regional, or area-wide significance, the Project is subject to an individual consistency evaluation with regional plans such as those published by SCAG.

5. South Coast Air Quality Management District Air Quality Management Plan (SCAQMD AQMP)

California Health & Safety Code § 40702 *et seq.*, the California Clean Air Act, requires that an Air Quality Management Plan (AQMP) be developed and then updated every three years for air basins with non-attainment status. As discussed in EIR Subsection 4.2, *Air Quality*, the Project site is located in the South Coast Air Basin (SCAB). The SCAB is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD), the agency charged with bringing air quality in the SCAB into conformity with federal and State air quality standards. Air quality within the SCAB is regulated by the SCAQMD and standards for air quality are documented in the SCAQMD's 2016 AQMP. Although air quality in the SCAB has improved over the past several decades, according to the SCAQMD, the SCAB currently does not meet the National Air Quality Standards (NAAQS) attainment status for ozone (O_3) and particulate matter less than 2.5 microns ($PM_{2.5}$). The SCAB's designation for lead is currently nonattainment (partial) and the attainment determination is to be

requested. The SCA does not meet the California Ambient Air Quality Standards (CAAQS) attainment status for ozone (O_3), particulate matter <2.5 microns ($PM_{2.5}$), and particulate matter <10 microns (PM_{10}) as nonattainment. (SCAQMD, 2017a)

The SCAQMD AQMP is a plan for the regional improvement of air quality. Projects such as the Project relate to the air quality planning process through the growth forecasts that were used as inputs into the regional transportation model. If a Project is consistent with these growth forecasts, and if all available emissions reduction strategies are implemented as effectively as possible on a project-specific basis, then the project is consistent with the AQMP.

6. Riverside County Airport Land Use Compatibility Plan Policy Document – March Air Reserve Base

Within the State of California, Government Code Section 65302.3(a) requires that general plans, specific plans, and amendments must be consistent with the airport land use plans adopted or amended pursuant to Section 21675 of the Public Utilities Code (PUC). The intent behind Comprehensive Land Use Plans for Airports within the County of Riverside is to protect and promote the safety and welfare of residents within the airport vicinity, as well as airport patrons. The land use plans are also intended to ensure the continued operation of the airports. Specifically, these plans seek to protect the public from the adverse effects of aircraft noise, to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, and to ensure that no structures or activities encroach upon or adversely affect the use of navigable airspace. Implementation of the Comprehensive Land Use Plans promotes compatible urban development within an airport's vicinity and incompatible development is restricted; thus, allowing for the continued operation of the airports. (ALUC, 2004)

The Project site is located within the Airport Influence Area (AIA) for the March Air Reserve Base and is therefore subject to review and approval by the Riverside County Airport Land Use Commission (ALUC) for conformance to the Riverside County Airport Land Use Compatibility Plan Policy Document (CPPD). The airport land use compatibility concerns of the ALUC (and the CPPD) fall under two broad headings identified in State law: noise and safety. Land use compatibility is mapped as a series of Compatibility Zones (A thru E), with Compatibility Zone A being the closest to the runways and therefore restricts uses to those associated with airport operations and aeronautical activities, and Zone E being the furthest from airport operations and therefore the least restrictive zone. The entire Project site falls within Zone E of the existing mapped March Air Reserve Base/Inland Port Airport Land Use Compatibility Map. Prohibited land uses within Compatibility Zone E include hazards to flight, and requires notification of aircraft overflights as part of future real estate transactions. Compatibility Zone E does not have any restrictions on residential density or number of people per acre. (ALUC, 2014, Map MA-1 and Table MA-2)

7. Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

The Multiple Species Habitat Conservation Plan (MSHCP) is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) adopted by Riverside County. The MSHCP promotes conservation of species and their associated habitats in Riverside County through implementation of several HCPs that affect lands within the County. The Western Riverside County MSHCP and the Coachella Valley MSHCP are the two dominant plans that impact the largest portions of the county. These plans coordinate multi-jurisdictional habitat-planning and conservation efforts in the region to promote biological and ecological diversity while accommodating the appropriate construction of new development and infrastructure projects. Riverside County catalogs acquisitions and conservation of lands with respect to the HCPs, and periodically updates the

General Plan Land Use maps accordingly. The Project site is located within the Western Riverside County MSHCP and is not designated as part of the MSHCP Reserve System, although individual MSHCP policies would apply to the Project. (Riverside County, 2015b, p. 4.2-27)

8. Stephen's Kangaroo Rat Habitat Conservation Plan (SKR HCP)

The Stephens' Kangaroo Rat Habitat Conservation Plan (SKR HCP) was prepared under the direction of the Riverside County Habitat Conservation Agency (RCHCA) Board of Directors, in consultation with USFWS and CDFW. The County of Riverside is a member agency of the RCHCA. The 30-year SKR HCP was designed to acquire and permanently conserve, maintain and fund the conservation, preservation, restoration, and enhancement of Stephens' kangaroo rat-occupied habitat. The SKR HCP covers approximately 534,000 acres within the member jurisdictions and includes an estimated 30,000 acres of occupied Stephens' kangaroo rat habitat. The SKR HCP requires members to preserve and manage 15,000 acres of occupied habitat in seven Core Reserves encompassing over 41,000 acres. (RCHCA, n.d.)

On May 3, 1996, the USFWS issued a permit to the Riverside County Habitat Conservation Agency to incidentally take the federally endangered Stephens' kangaroo rat (*Dipodomys stephensi*). Similarly, the CDFW issued a California Endangered Species Act Management Authorization for Implementation of the Stephens' kangaroo rat on May 6, 1996. To date, more than $50 million has been dedicated to the establishment and management of a system of regional preserves designed to ensure the survival of SKR in the plan area. This effort resulted in the permanent conservation of approximately 50% of the SKR-occupied habitat remaining in the HCP area. Through direct funding and in-kind contributions, SKR habitat in the regional reserve system is managed to ensure its continuing ability to support the species. Core reserves were deemed complete in December of 2003. (RCHCA, n.d.)

C. Applicable Environmental Regulations

The following is a brief description of the federal, State and local environmental laws and related regulations associated with land use and planning.

1. Federal Clean Water Act

The Clean Water Act (CWA) is the principal federal law that provides for the protection of water quality. The primary objectives of the CWA are to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," and to make all surface waters "fishable" and "swimmable." The Environmental Protection Agency (EPA) is the designated federal agency responsible for implementing the CWA and it has further delegated authority to the State Water Resources Control Board (SWRCB) and associated Regional Water Quality Control Boards (RWQCB) for compliance with the CWA. Relevant programs identified in the CWA include the National Pollution Discharge Elimination System (NDPES) program which regulates discharge of pollutants from known sources (point sources), as well as non-point sources, into waters of the United States through the issuance of permits. As part of the NPDES program, a Storm Water Pollution Prevention Plan (SWPPP) must be prepared for construction activities affecting greater than one acre because the discharge of storm water during construction is considered a non-point source of water pollution.

Under Section 404 of the CWA, the U.S. Army Corps of Engineers (ACOE) is delegated the authority to regulate discharges of dredged or fill material into "Waters of the United States," including wetlands. A discussion of Waters of the United States on the Project site is included in EIR Subsection 4.3, *Biological Resources*.

2. California Porter-Cologne Water Control Act

The California Porter-Cologne Water Control Act provides the SWRCB with the authority to adopt, review, and revise policies for all waters of the State as well as directing the RWQCB to develop regional Basin plans. The basin plan applicable to the Project site is the Water Quality Control Plan for the Santa Ana Basin, which is administered by the Santa Ana Regional Water Quality Control Board.

3. California Water Code

The California Water Code is the principle State law regulating water quality in California. Water quality provisions must be complied with as contained in numerous code sections including: 1) the Health and Safety Code for the protection of ground and surface waters from hazardous waste and other toxic substances; 2) the Fish and Game Code for the prevention of unauthorized diversions of any surface water and discharge of any substance that may be deleterious to fish, plant, animal, or bird life; 3) the Harbors and Navigation Code for the prevention of the unauthorized discharge of waste from vessels into surface waters; and 4) the Food and Agriculture Code for the protection of groundwater which may be used for drinking water supplies.

The California Department of Fish and Wildlife (CDFW), through provisions of the Fish & Game Code (§§1601 - 1603) is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

Surface water quality is the responsibility of the RWQCB, water supply and wastewater treatment agencies, and city and county governments. The principal means of enforcement by the RWQCB is through the development, adoption, and issuance of water discharge permits. RWQCB basin plans establish water quality objectives that are defined as the limits or levels of water quality constituents or characteristics for the reasonable protection of beneficial uses of water.

4. Federal Aviation Regulations Part 77

Private developments located near airport facilities are regulated by Part 77 of the Federal Aviation Regulations, which requires notification to the Federal Aviation Administration (FAA) of any proposal which would exceed certain elevations with respect to the ground and neighboring airports. Code of Federal Regulations (CFR) Title 14 Part 77.13 also requires that any person or organization who intends to sponsor certain construction or alteration projects within close proximity to public use or military airports, regardless of proposed structure heights, must also notify the Administrator of the FAA. The FAA is charged with reviewing applications for developments falling under its purview to ensure that proposed structures would not pose a safety hazard either by obstructing designated flight paths or by being located in an area with a high risk of accidents due to proximity to designated flight paths.

4.10.2 Basis for Determining Significance

Section XI of Appendix G to the CEQA Guidelines addresses typical adverse effects to land use and planning, and includes the following threshold questions to evaluate the Project's impacts on land use and planning (OPR, 2018):

a. *Physically divide an established community; or*

b. *Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.*

4.10.3 Impact Analysis

Threshold a: ***Would the Project physically divide an established community?***

Under existing conditions, the entire Project site consists of undeveloped land. The proposed construction and operation of residential and commercial uses would not physically disrupt or divide the arrangement of an established community. Existing and proposed residential communities abut the Project site to the north and south as previously shown on Figure 2-5, *Surrounding Land Uses and Development*; however, there are no components of the Project with the potential to physically divide any of these existing communities. Upon completion of the Project, pedestrian pathways and public roadways would be accommodated throughout the development, which would ensure that access to and between surrounding residential neighborhoods would not be affected. Therefore, the Project would not physically divide an established or planned community and impacts would be less than significant.

Threshold b: ***Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?***

The Project has the potential to conflict with the City of Menifee General Plan, City of Menifee Zoning Ordinance, City of Menifee PTSOR Master Plan, the SCAG *2016-2040 RTP/SCS*, the SCAQMD *Final 2016 AQMP*, and the MARB Airport Land Use Compatibility Plan. Each is discussed below.

❑ City of Menifee General Plan

A discussion of the Project's consistency with each element of the City of Menifee General Plan is provided below.

Land Use Element

The Land Use Element generally establishes the density, intensity, and location of land uses throughout the city and is complemented by the additional policy guidance provided in other elements that relate to a specific topic. The General Plan Land Use Map (General Plan Exhibit LU-2) designates the Project site for development with the Fleming Ranch Specific Plan, although a Specific Plan has not yet been adopted. The Project proposes to establish a specific plan for the approximately 331.0-acre site, which would ensure Project consistency with the General Plan Land Use Map designation for the site. Additionally, General Plan Land Use Element Exhibit LU-4 provides the City's Land Use Buildout Summary. Exhibit LU-4 indicates that the Fleming Ranch Specific Plan would be developed with up to 1,588 dwelling units, 71,176 s.f. of commercial retail, and 160,300 s.f. of non-retail space. The Project generally would be consistent with Exhibit LU-4, although the Project proposes up to 1,061 dwelling units and 225,000 s.f. of commercial retail space. Although

the Project proposes fewer dwelling units and more retail than assumed by Exhibit LU-4, there are no adverse environmental effects associated with such changes that have not already been evaluated and addressed throughout this EIR. The Project would be consistent with all of the policies contained within the Land Use Element. Accordingly, the Project would not conflict with the General Plan Land Use Element exhibits or policies, and impacts would be less than significant. (Menifee, 2013a)

Housing Element

The Housing Element is required to address the production, preservation, and improvement of housing. The City of Menifee's 2014-2021 housing element is designed to comply with requirements in California housing element law. The Housing Element is separated into four key sections: Housing Needs; Constraint Analysis; Housing Resources; and Housing Plan. The Project would relate directly to the Housing Plan portion of the Housing Element. Included within the Housing Goals are a series of goals relating to housing diversity, neighborhood quality, and housing assistance.

As noted above, Housing Element has identified sites within the Specific Plan area that meet the City's affordable housing sites under the RHNA. Recently adopted Senate Bill 166 prohibits cities from allowing their inventory of available sites to be insufficient to meet their remaining unmet RHNA share for lower and moderate-income housing. California Government Code Section 65863 requires cities to make certain findings that the remaining housing element sites can accommodate the RHNA requirements by income level.

The Menifee Housing Element states that General Plan designations in the range of 20.1-24.0 dwelling units/acre can be used to meet the City's Very Low- and Low-income requirement of 2,495 units. The City has designated a number of parcels with that residential density to both vacant land and under-utilized sites in Romoland towards meeting the Very Low and Low RHNA numbers for 2014-2021. All these parcels provide for a total 3,063 potential units thereby exceeding the RHNA criteria by 568 units. The Housing Element assumed the Project site would provide 344 units at the 20.1-24.0 dwelling units/acre density. If these 344 units were removed from the available site inventory, there would still be a remaining extra capacity of 224 planned Very Low- and Low-income units within the City of Menifee above the City's requirement of 2,495 Very Low- and Low-income units. Thus, implementation of the Project would not conflict with the City's ability to meet the affordable housing sites as identified in the Housing Element.

In addition, the Housing Element also assumes that General Plan designations in the range of 2.1 to 20R can be used to meet the City's Moderate and Above Moderate-income requirement of 3,750 units. The City has designated a potential of 21,134 units allowed on vacant parcels with these residential densities towards meeting the 1,140 Moderate income and the 2,610 Above Moderate income RHNA unit numbers for 2014-2021. The Housing Element assumed Project site would provide 1,384 units within the 2.1 to 14R density. The Project allows up to 1,061 dwelling units in the 2.1-5R density designation. If 304 units were removed from the vacant land inventory, there would still be remaining extra capacity of 20,830 planned Moderate and Above Moderate-income units. Thus, implementation of the Project would not conflict with the City's ability to meet the affordable housing sites as identified in the Housing Element.

The Project would be consistent with or otherwise would not conflict with any of the adopted Housing Goals. Additionally, the Project would provide for up to 1,061 residential homes on lot sizes ranging from 5,000 s.f. to 10,000 s.f. in size, which would assist the City in meeting its share of the Moderate and Above Moderate regional housing need. Additionally, open space has been set aside to preserve a knoll in the northeast corner of the site and densely planned landscape is provided along Encanto Drive. A community park/community center and paseos/neighborhood parks proposed by the Project would provide community trails and paths that

encourage an active, healthy lifestyle. Infrastructure and transportation plans have been coordinated in the proposed Legado Specific Plan to ensure phasing of facilities with development. Furthermore, implementation of the Project would not conflict with the City's ability to meet the affordable housing requirements due to the extra capacity of potential sites in the City of Menifee. Accordingly, the Project would not conflict with the Housing Element, and impacts would be less than significant. (Menifee, 2013a)

Circulation Element

The Circulation Element provides overall guidance for the City's responsibility to satisfy the local and subregional circulation needs of our residents, visitors, and businesses while maintaining the city's quality of life. In addition, it coordinates the circulation system with future land use patterns and levels of buildout and addresses access and connectivity among the various neighborhoods and economic development districts. Exhibit C-3 of the Circulation Element depicts the City's planned Roadway Network, and identifies Rouse Road and Chambers Avenue for improvements as "Secondary (4 Lanes, Undivided)" roadways, and designates Encanto Drive, Sherman Road, and Antelope Road for improvements as "Major (4 Lanes, Divided)" roadways. Circulation Element Exhibit C-2 identifies the required improvements for these roadways. As shown previously on EIR Figure 3-3, *Vehicular Circulation Diagram*, the Project proposes to improve Encanto Drive as a "Modified Major Roadway (93-foot ROW);" Sherman Road and Antelope Road would be improved as "Major Roadway (138-foot ROW and 118- to 128-foot ROW, respectively); and Chambers Avenue and Rouse Road would be improved as "Secondary Roadway (100-foot ROW)." Thus, the Project would be fully consistent with Exhibits C-2 and C-3 of the Circulation Element. (Menifee, 2013a)

Additionally, Exhibit C-4 of the Circulation Element depicts the City's planned Bikeway and Community Pedestrian Network. Exhibit C-4 identifies "Community On-Street Bike Lanes (Class II)" facilities along Encanto Drive and the portion of Chambers Avenue west of Sherman Avenue. Exhibit C-4 also identifies "Community On-Street NEV/Bike Lanes (Class II)" facilities along Sherman Road, the portion of Chambers Avenue located east of Sherman Road, Antelope Road, and the portion of Rouse Road east of Myles Court. A "Community Off-Road Bike Trail (Class I) "also is planned along the segment of Rouse Road located west of Myles Court. As shown previously on EIR Figure 3-7, the Project would accommodate all of the required facilities along these roadways; thus, the Project would not conflict with these exhibits. (Menifee, 2013a)

Circulation Element Exhibit C-6 identifies the City's planned NEV Network. "NEV/Bike Lanes (Class II Routes)" are planned along Sherman Road, the portion of Chambers Avenue located east of Sherman Road, Antelope Road, and the portion of Rouse Road east of Myles Court, while an "Off-Road NEV/Bike Trail (Class I)" is planned along the segment of Rouse Road located west of Myles Court. As shown previously on EIR Figure 3-7, the Project would accommodate the planned NEV/Bike Lanes on these roadways; thus, the Project would not conflict with these exhibits. (Menifee, 2013a)

Additionally, the Project would be consistent with or otherwise would not conflict with the goals and policies set forth in the Circulation Element (Menifee, 2013a). Accordingly, the Project would not conflict with the Circulation Element, and impacts would be less than significant.

Open Space and Recreation Element

The General Plan Open Space and Recreation Element provides policy direction for Menifee's parks and open space areas, recreational trails, and the conservation, development, and utilization of the city's natural resources with an overall goal of maintaining the high quality of life Menifee residents have enjoyed for generations, while also preserving and protecting the numerous nonrenewable and unique cultural and historic resources

located within the City. The Open Space and Recreation Element includes a goal to provide a comprehensive system of high-quality parks and recreation programs and policies related to parks and recreation programs, including a policy requiring a minimum of five acres of public open space be provided for every 1,000 residents. Based on the required parkland policy, the Project would require a total of 16.8 acres of usable parkland. (Menifee, 2015b) The Project proposes the construction of 20.8 acres of public parkland, including a 12.9-acre community park/community center, and approximately 7.9 acres of paseos/neighborhood parks. In addition, a 1.9-acre private recreation facility would be provided on-site; however, the private recreation center is not accounted for in the public parkland calculation for the Project because it would not be available for public use. Thus, the Project would exceed the City of Menifee parkland provision requirement by 4.0 acres. Exhibit OSC-1 of the Open Space and Recreation Element identifies proposed recreational trails throughout the City; however, the Project site is not identified for any recreational trails. Although no trails were identified for the site by the City of Menifee General Plan, the Project site is subject to the City of Menifee PTOSR Master Plan, discussed under a separate heading below. Accordingly, the Project would be consistent with or otherwise would not conflict with the goals and policies of the Open Space Recreation Element, and impacts would be less than significant. (Menifee, 2013a)

Community Design Element

The City of Menifee's Community Design Element is intended to enhance the current community identity through the identification of design techniques, guidelines, and features that will enhance the visual character of the city and its neighborhoods. It serves as a practical guide to city leaders, developers, business owners, and residents as they provide direction to implement new projects in Menifee and is intended to stimulate design creativity in the city. Exhibit CD-1 depicts the City's planned "Community Gateways," which are intended to "[e]nhance the city's identity through the use of distinct city graphics, such as the city seal, in the design of gateways, street signs, city signage, public facilities and public gathering spaces, and other areas where appropriate." Section 5.2 of the proposed Legado Specific Plan accommodates a proposed gateway near the boundary of Planning Areas 16 and 19 along Encanto Drive; thus, the Project would be consistent with and would implement Exhibit CD-1. Exhibit CD-2 identifies proposed enhanced landscape corridors and scenic corridors. Exhibit CD-2 identifies the Project's frontage with Encanto Drive/I-15 as part of an "Enhanced Landscape Corridor." Streetscapes accommodated by the Project along Encanto Drive would be consistent with Exhibit CD-2. Additionally, the Project would be consistent with or otherwise would not conflict with the goals and policies of the Community Design Element. Accordingly, impacts would be less than significant. (Menifee, 2013a)

Economic Development Element

The Economic Development Element stablishes the long-term goals for the growth and development of the local economy, elaborates on the public policies needed to achieve the goals, and identifies key implementation actions. The goals, policies, and actions are targeted to the community-defined desires for more and better-paying jobs, quality of life improvements, and sound fiscal management. The Project would be consistent with the Economic Development Element through the provision of up to 225,000 s.f. of freeway-oriented commercial retail. Additionally, the Project would be consistent with or otherwise would not conflict with the goals and policies of the Economic Development Element. Therefore, impacts due to a conflict with the Economic Development Element would be less than significant. (Menifee, 2013a)

Safety Element

The Safety Element of the General Plan provides a strategy for city staff, residents, developers, and business owners to effectively address natural and man-made hazards in Menifee. The Safety Element covers 6 general

topics: seismic and geological issues; flood hazards; fire hazards; hazardous materials; wind hazards; and disaster preparedness, response, and recovery. These topical areas have been evaluated throughout this EIR, and where potential impacts associated with safety hazards are identified the EIR identifies mitigation measures, standard regulatory requirements, or Project design features that would reduce impacts to less-than-significant levels. There are no potential safety hazards affecting the Project site or surrounding areas that have not already been addressed by this EIR. Additionally, the Project would be consistent with or otherwise would not conflict with the goals and policies of the Safety Element. Therefore, impacts due to a conflict with the Safety Element would be less than significant. (Menifee, 2013a)

Noise Element

The primary function of the Noise Element is to ensure that considerations of noise are incorporated into the land use planning and decision-making process. A detailed evaluation of the Project's potential to result in or contribute to substantial noise impacts is presented in EIR Subsection 4.11, *Noise*. Subsection 4.11 demonstrates that, with the implementation of mitigation, the Project's near- and long-term noise impacts would be consistent with the City's noise standards, as established by the Noise Element. Additionally, the Project would be consistent with or otherwise would not conflict with the goals and policies of the Noise Element. Accordingly, impacts due to a conflict with the Noise Element would be less than significant.

Conclusion

As demonstrated in the preceding analysis, the Project would not conflict with any General Plan goals, policies, or requirements. Additionally, the Project would not result in any significant environmental impacts resulting from a conflict with the General Plan. Accordingly, impacts due to a conflict with the General Plan would be less than significant.

City of Menifee Zoning Ordinance

Change of Zone No. 2017-188 (CZ 2017-188) proposes to modify the zoning boundaries on the Project site to reflect the Legado Specific Plan land use plan for the approximately 331.0-acre Project site. At the time the Project's Notice of Preparation (NOP) was distributed for public review (2017), the Project's existing zoning designations were C-P-S (Scenic Highway Commercial) and R-1 (One-Family Dwellings) and , CZ No. 2017-188 would change the site's existing zoning designations from R-1 and C-P-S to Specific Plan Zone (SP). This change of zone is proposed in order bring the site's zoning into conformance with the existing General Plan designation of "Specific Plan." However, on December 18, 2019 the City of Menifee adopted a new zoning map that will go into effect on January 18, 2020. Pursuant to the new zoning map, the Project site's zoning designation will be SP "Fleming Ranch Specific Plan Zone." Thus, CZ No. 2017-188 would change the site's updated existing zoning designation from "Fleming Ranch Specific Plan Zone" to "Legado Specific Plan Zone" as well as establish permitted uses and development standards as proposed by the Specific Plan.

Although the Project would be inconsistent with the Zoning Ordinance's existing R-1 and C-P-S zoning designations and the Zoning Ordinance's new 2020 SP zoning designation, such an inconsistency would only be significant if it were to result in significant, adverse physical effects to the environment that would not likely otherwise occur with implementation of the proposed rezones. As disclosed in this EIR, implementation of the Project would develop the subject property with a medium-density residential community and freeway-oriented commercial uses, which would result in adverse effects to the environment. This EIR provides mitigation measures for each EIR issue area, were necessary, to reduce the Project's effects on the environment to the maximum feasible extent. Accordingly, the Project's inconsistency with the City of Menifee Zoning

Ordinance's current R-1 and C-P-S zoning designations and new 2020 SP zoning designation is considered a less-than-significant land use impact.

City of Menifee Parks, Trails, Open Space, and Recreation Master Plan

The PTOSR Master Plan identifies a City park in progress on the Project site and also identifies the future parkland needs within the City of Menifee. The PTOSR also notes the General Plan's policy requiring a minimum of five acres of public open space be provided for every 1,000 residents. Based on the required parkland policy, the Project would require a total of 16.8 acres of usable parkland. (Menifee, 2015b) The Project proposes the construction of 20.8 acres of public parkland, including a 12.9-acre community park/community center, and approximately 7.9 acres of paseos/neighborhood parks. In addition, a 1.9-acre private recreation facility would be provided on-site; however, the private recreation center is not accounted for in the public parkland calculation for the Project because it would not be available for public use. The Project would exceed the City of Menifee parkland provision requirement by 4.0 acres. Thus, the Project would be consistent with or otherwise would not conflict with the PTSOR Master Plan and impacts would be less than significant.

Although no trails were identified for the site by the City of Menifee General Plan, the Project site is subject to the City of Menifee PTOSR Master Plan. A proposed bikeway and community pedestrian network were identified for the Project site by the PTOSR Master Plan. The trail designations in the Master Plan vary from the designations identified in the General Plan. The PTOSR Master Plan calls for the provision of a Community Trail (Hiking, Biking & Equestrian) along Rouse Road, Sherman Road, Antelope Road, and the segment of Chambers Avenue located east of Sherman Road. The PTOSR Master Plan also calls for a Community Bike Lane – Class II along Encanto Drive and the segment of Chambers Avenue located west of Sherman Road. In accordance with the PTOSR Master Plan, the Project includes Class II Bike/NEV Lanes along Sherman Road, Chambers Avenue (east of Sherman Road), Antelope Road, and Rouse Road; and Class II Bike Lanes along Chambers Avenue (west of Sherman Road) and Encanto Drive. In addition, the Project proposes the construction of Class III Bike Lanes within the internal roadways of the Project site. Thus, the Project would be consistent with or otherwise would not conflict with the PTSOR Master Plan and impacts would be less than significant. (Menifee, 2016, p. 43, Figure 2.7-1; Google Earth, 2016)

SCAG 2016-2040 RTP/SCS

The SCAG Regional Council adopted the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)* in April 2016. The *2016 RTP/SCS* seeks to improve mobility, promote sustainability, facilitate economic development and preserve the quality of life for the residents in the region. The long-range visioning plan balances future mobility and housing needs with goals for the environment, the regional economy, social equity and environmental justice, and public health. The goals included in the *2016 RTP/SCS* are pertinent to the Project. These goals are meant to provide guidance for considering the Project within the context of regional goals and policies. An analysis of the Project's consistency with the relevant goals of the *2016 RTP/SCS* are presented below in Table 4.10-1, *Analysis of Consistency with SCAG 2016-2040 RTP/SCS Goals*. As indicated the Project would not conflict with any of the RTP/SCS goals, and impacts due to a conflict would be less than significant.

Table 4.10-1 Analysis of Consistency with SCAG 2016-2040 RTP/SCS Goals

RTP/SCS GOAL	GOAL STATEMENT	PROJECT CONSISTENCY DISCUSSION
G1	Align the plan investments and policies with improving regional economic development and competitiveness.	No inconsistency identified. This policy would be implemented by cities and the counties within the SCAG region as part of comprehensive local and regional planning efforts.
G2	Maximize mobility and accessibility for all people and goods in the region.	No inconsistency identified. EIR Subsection 4.14, *Transportation*, evaluates Project-related traffic impacts and specifies mitigation measures to ensure that roadway and intersection and intersection improvements needed to accommodate Project traffic volumes are implemented concurrent with proposed development, to the extent feasible.
G3	Ensure travel safety and reliability for all people and goods in the region.	No inconsistency identified. As disclosed in Section 4.14, *Transportation*, there is no component of the Project that would result in a substantial safety hazard to motorists (refer to analysis under Threshold e. Furthermore, EIR Subsection 4.14 specifies mitigation measures to ensure that roadway and intersection improvements meet safety standards and operate as efficiently as is feasible.
G4	Preserve and ensure a sustainable regional transportation system.	No inconsistency identified. This policy would be implemented by cities and the counties within the SCAG region as part of the overall planning and maintenance of the regional transportation system. The Project would have no adverse effect on such planning or maintenance efforts.
G5	Maximize the productivity of our transportation system.	No inconsistency identified. This policy would be implemented by cities and the counties within the SCAG region as part of comprehensive transportation planning efforts. The Project would be consistent with the City of Menifee General Plan Circulation Element, which meets this goal to maximize productivity.
G6	Protect the environment and health for our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).	No inconsistency identified. An analysis of the Project's environmental impacts is provided throughout this EIR, and mitigation measures are specified where warranted. Air quality is addressed in EIR Subsection 4.2, *Air Quality*, and mitigation measures are specified to reduce the Project's air quality impacts to the extent feasible. Additionally, and as discussed in EIR Subsection 4.7, *Greenhouse Gas Emissions*, the Project proposes to incorporate various measures related to building design, landscaping, and energy systems to promote the efficient use of energy. Additionally, the Project proposes to implement sidewalk and bike lane improvements along public roadway rights-of-way in a manner that is consistent with the City of Menifee General Plan. The Project study area is within the service area of the Riverside Transit Authority (RTA), a public transit agency serving various jurisdictions within Riverside County, although no bus service exists in the Project vicinity under existing conditions. As described in EIR Subsection 4.14, Threshold f., the Project would not conflict with any existing or planned RTA routes.
G7	Actively encourage and create incentives for energy efficiency, where possible.	No inconsistency identified. This policy provides guidance to City staff to establish local incentive programs to encourage and promote energy efficient development. The Project's proposed design features related to building design, landscaping, and energy systems to promote the efficient use of energy are discussed throughout this EIR.
G8	Encourage land use and growth patterns that facilitate transit and non-motorized transportation.	No inconsistency identified. This policy provides guidance to the City to establish a regional land use plan that facilitates the use of transit and non-motorized forms of transportation. Although the Project proposes a Change of Zone to establish the Legado Specific Plan (SP 2017-187), the

RTP/SCS GOAL	GOAL STATEMENT	PROJECT CONSISTENCY DISCUSSION
		land uses planned as part of SP 2017-187 are consistent with the site's existing General Plan land use designations (as discussed above under Threshold a). Additionally, the Project proposes to implement sidewalk and bike lane improvements along public roadway rights-of-way in a manner that is consistent with the City of Menifee General Plan. Based on the foregoing analysis, the Project would not conflict with this RTP/SCS goal.
G9	Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	No inconsistency identified. This policy provides guidance to the City of Menifee to monitor the transportation network and to coordinate with other agencies as appropriate.

SCAQMD AQMP

The 2016 SCAQMD AQMP is the applicable air quality plan for the Project area, and the SCAQMD has established two criteria for determining consistency with the 2016 AQMP pursuant to Chapter 12, Sections 12.2 and 12.3 of the SCAQMD CEQA Air Quality Handbook, which 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.*

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

As evaluated under EIR Subsection 4.2, *Air Quality*, Threshold a, the Project's development intensity is consistent with the development intensities allowed by the City General Plan. However, the Project would result in or cause violations of the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). As stated in Subsection 4.2, mitigation measures would reduce, but not eliminate the Project's impacts. Thus, impacts were found to be significant and unavoidable. Project impacts due to a conflict with the 2016 AQMP were addressed and accounted for under EIR Subsection 4.2 and no additional impacts would occur. Thus, for purposes of analysis in this EIR Subsection, impacts would be less than significant. Please refer to EIR Subsection 4.2 for the analysis of the Project's impacts due to a conflict with the 2016 AQMP.

MARB Airport Land Use Compatibility Plan

The entire Project site is located within the Airport Influence Area (AIA) for March Air Reserve Base, located approximately 9.7 miles northwest of the Project site. According to the ALUCP for March Air Reserve Base, the Project site is located within Compatibility Zone E, which does not have any restrictions on residential density or number of people per acre. Prohibited land uses within Compatibility Zone E include hazards to flight, and developments in Zone E are required to provide notification of aircraft overflights as part of future real estate transactions. (ALUC, 2014, Table MA-2 and Map MA-1) The Project proposes to construct up to 1,061 medium-density residential homes with freeway-oriented commercial land uses that would not exceed a height of 50 feet; therefore, the Project would be developed in consistency to Compatibility Zone E of the March Air Reserve Base Airport Land Use Compatibility Plan. Furthermore, as fully discussed in EIR

Subsection 4.8, the Project would be subject to ALUC conditions of approval, as applied to the Project through City Regulation and Design Requirement CRDR 4.8-10, which would ensure the Project fully complies with the MARB Airport Land Use Compatibility Plan. Impacts would be less than significant.

4.10.4 Cumulative Impact Analysis

The entire Project site consists of undeveloped land under existing conditions. There are no components of the Project with the potential to physically divide any of these existing communities, and the Project would provide pedestrian pathways and public roadways throughout the development that would ensure access to and between surrounding residential neighborhoods would not be affected. As such, the Project has no potential to result in cumulatively-considerable impacts associated with the physical arrangement of an established community.

As discussed in the analysis discussion under Threshold b. above, the Project would be consistent with SCAG's RTP/SCS, MARB Airport Land Use Compatibility Plan, and the policies of the City of Menifee General Plan. The Project would conflict with the 2016 AQMP, however impacts are fully addressed in EIR Subsection 4.2. As such, the Project has no potential to result in cumulatively-considerable impacts due to a conflict with applicable land use policies, and impacts would be less than significant.

4.10.5 Significance of Impacts Before Mitigation

Threshold a: Less-than-Significant Impact. The Project would not physically disrupt or divide any established communities.

Threshold b: Less-than-Significant Impact. Although the Project would change the site's existing zoning classifications, the Project would not result in a significant environmental effect due to an inconsistency with the site's existing or proposed zoning. Furthermore, the Project would be consistent with the General Plan, SCAG RTP/SCS goals, and MARB ALUCP. As discussed in EIR Subsection 4.8, the Project would be subject to ALUC conditions of approval, as applied to the Project through City Regulation and Design Requirement CRDR 4.8-10, which would ensure the Project complies with the MARB Airport Land Use Compatibility Plan. The Project would conflict with the 2016 AQMP, however impacts are fully addressed in EIR Subsection 4.2. Impacts due to a conflict with the land use designations and policies of the General Plan and other planning documents would be less than significant.

4.10.6 City Regulations, Design Requirements, and Mitigation

Impacts to Land Use and Planning as a result of Project implementation would be less than significant, and mitigation is not required.

4.11 NOISE

This Subsection addresses the environmental issue of noise. The information in this Subsection is based in part on a technical report titled, "Legado Noise Impact Analysis, City of Menifee" ("NIA") dated May 24, 2019 and appended to this EIR as *Technical Appendix J*. (Urban Crossroads, 2019c)

4.11.1 ACOUSTICAL FUNDAMENTALS

A. Noise Definitions

Noise has been simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm, or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear. (Urban Crossroads, 2019c, p. 13)

B. Noise Descriptors

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most commonly used figure is the equivalent level (Leq). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (Leq) represents a steady-state sound level containing the same total energy as a time-varying signal over a given sample period and is commonly used to describe the "average" noise levels within the environment. (Urban Crossroads, 2019c, p. 14)

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Day-Night Average Noise Level (LDN) and the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level are utilized. The LDN and CNEL are weighted averages of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The LDN time of day corrections includes the addition of 10 decibels to dBA Leq (Equivalent Continuous Sound Level) sound levels at night between 10:00 p.m. and 7:00 a.m. The CNEL time of day corrections requires the addition of 5 decibels to dBA Leq sound levels in the evening from 7:00 p.m. to 10:00 p.m., in addition to the corrections for the LDN. These additions are made to account for the noise-sensitive time periods during the evening and night hours when sound appears louder. LDN and CNEL do not represent the actual sound level heard at any particular time, but rather represents the total sound exposure. The City of Menifee relies on the 24-hour CNEL level to assess land use compatibility with transportation-related noise sources, and therefore, the analysis in this subsection uses the CNEL noise level to apply the more conservative evening hour corrections to the 24-hour noise levels. (Urban Crossroads, 2019c, p. 14)

C. Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner in which noise reduces with distance depends on the factors discussed below.

1. Geometric Spreading

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB 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 3 dB for each doubling of distance from a line source. (Urban Crossroads, 2019c, p. 14)

2. Ground Absorption of Noise

The propagation path of noise from a highway to a receptor is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receptor, such as a parking lot or 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 receptor such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (Urban Crossroads, 2019c, p. 15)

3. 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) 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. (Urban Crossroads, 2019c, p. 15)

4. Shielding

A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an "out of sight, out of mind" effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby residents. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of-sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The Federal Highway Administration (FHWA) does not consider the planting of vegetation to be a noise-abatement measure. (Urban Crossroads, 2019c, p. 15)

D. Noise Control

Noise control is the process of obtaining an acceptable noise environment for a particular observation point or receptor by controlling the noise source, transmission path, and/or receptor. This concept is known as the source-path-receptor concept. In general, noise control measures can be applied to any and all of these three elements. (Urban Crossroads, 2019c, p. 15)

E. Noise Barrier Attenuation

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receptor. Noise barriers, however,

do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. (Urban Crossroads, 2019c, p. 16)

F. Land Use Compatibility with Noise

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop, and/or work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (Urban Crossroads, 2019c, p. 16)

G. Community Response to Noise

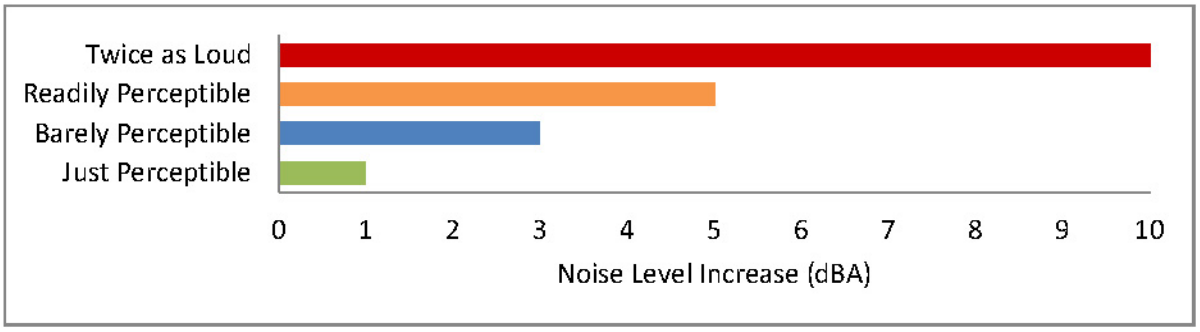
Community responses to noise may range from registering a complaint by telephone or letter, to initiating court action, depending upon each individual's susceptibility to noise and personal attitudes about noise. Several factors are related to the level of community annoyance including (Urban Crossroads, 2019c, p. 16):

- Fear associated with noise producing activities;
- Socio-economic status and educational level;
- Perception that those affected are being unfairly treated;
- Attitudes regarding the usefulness of the noise-producing activity; and/or
- Belief that the noise source can be controlled.

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Another twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. (Urban Crossroads, 2019c, p. 16)

Despite this variability in behavior on an individual level, the population as a whole can be expected to exhibit responses to changes in noise levels as summarized on Table 4.11-1, *Noise Level Increase Perception*. An increase or decrease of 1 dBA cannot be perceived except in carefully controlled laboratory experiments, a change of 3 dBA is considered barely perceptible, and changes of 5 dBA are considered readily perceptible. (Urban Crossroads, 2019c, p. 16)

Table 4.11-1 Noise Level Increase Perception



(Urban Crossroads, 2019c, Exhibit 2-B)

H. Exposure to High Noise Levels

The Occupational Safety and Health Administration (OSHA) sets legal limits on noise exposure in the workplace. The permissible exposure limit (PEL) for a worker over an eight-hour day is 90 dBA. The OSHA standard uses a 5-dBA exchange rate. This means that when the noise level is increased by 5 dBA, the amount of time a person can be exposed to a certain noise level to receive the same dose is cut in half. The National Institute for Occupational Safety and Health (NIOSH) has recommended that all worker exposures to noise should be controlled below a level equivalent to 85 dBA for eight hours to minimize occupational noise-induced hearing loss. NIOSH also recommends a 3-dBA exchange rate so that every increase by 3 dBA doubles the amount of the noise and halves the recommended amount of exposure time. (Urban Crossroads, 2019c, p. 17)

OSHA has implemented requirements to protect all workers in general industry (e.g. the manufacturing and the service sectors) for employers to implement a Hearing Conservation Program where workers are exposed to a time-weighted average noise level of 85 dBA or higher over an eight-hour work shift. Hearing Conservation Programs require employers to measure noise levels, provide free annual hearing exams and free hearing protection, provide training, and conduct evaluations of the adequacy of the hearing protectors in use unless changes to tools, equipment, and schedules are made so that they are less noisy and worker exposure to noise is less than the 85 dBA. This noise study does not evaluate the noise exposure of workers within a project or construction site based on CEQA requirements, and instead, evaluates Project-related operational and construction noise levels at the nearby sensitive receiver locations in the Project study area. Further, periodic exposure to high noise levels in short duration, such as Project construction, is typically considered an annoyance and not impactful to human health. It would take several years of exposure to high noise levels to result in hearing impairment. (Urban Crossroads, 2019c, p. 17)

I. Vibration

Vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called "structure-borne noise." Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency. (Urban Crossroads, 2019c, pp. 17-18)

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to

describe vibration impacts to buildings, but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal, and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure RMS, and serves to reduce the range of numbers used to describe human response to vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receivers for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment. (Urban Crossroads, 2019c, p. 18)

The background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. (Urban Crossroads, 2019c, p. 18)

4.11.2 EXISTING CONDITIONS

A. Existing Ambient Noise Environment

To assess the existing noise level environment, Urban Crossroads, Inc. collected eight 24-hour noise level measurements at sensitive receiver locations in the Project study area (L1 through L8). The receiver locations were selected to describe and document the existing noise environment within the Project study area. Figure 4.11-1, *Noise Measurement Locations*, depicts the locations of the noise level measurement locations with respect to the Project site. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Wednesday, November 8, 2017. (Urban Crossroads, 2019c, p. 35)

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. To describe the existing noise environment, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. (Urban Crossroads, 2019c, p. 35)

Receivers represent a location of noise-sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby sensitive receiver locations allows for a comparison of the before and after Project noise levels and is necessary to assess the potential Project-related noise level contributions. (Urban Crossroads, 2019c, pp. 35-36)

The noise measurements presented below focus on the average or equivalent sound levels (Leq). The equivalent sound level (Leq) represents a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. (Urban Crossroads, 2019c, p. 36)

Source(s): Urban Crossroads (12-12-17)

Figure 4.11-1

NOT TO SCALE

NOISE MEASUREMENT LOCATIONS

- Location L1 represents the noise levels at the northwest corner of the Project site near the existing Evans Brown Mortuary at the southeast corner of Encanto Drive and Rouse Road. The noise level measurements collected show an overall 24-hour exterior noise level of 71.8 dBA CNEL. The hourly noise levels measured at location L1 ranged from 63.7 to 68.1 dBA Leq during the daytime hours and from 58.2 to 68.5 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 66.4 dBA Leq with an average nighttime noise level of 64.8 dBA Leq. (Urban Crossroads, 2019c, p. 36)

- Location L2 represents the noise levels north of the Project site across Rouse Road near existing residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 61.4 dBA CNEL. The hourly noise levels measured at location L2 ranged from 51.3 to 57.3 dBA Leq during the daytime hours and from 47.1 to 59.0 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 54.6 dBA Leq with an average nighttime noise level of 54.8 dBA Leq. (Urban Crossroads, 2019c, p. 36)

- Location L3 represents the noise levels east of the Project site on Palomar Road near a residential home and the Boulder Ridge Elementary School. The 24-hour CNEL indicates that the overall exterior noise level is 55.3 dBA CNEL. At location L3 the background ambient noise levels ranged from 43.1 to 60.7 dBA Leq during the daytime hours to levels of 40.6 to 53.0 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 52.9 dBA Leq with an average nighttime noise level of 47.5 dBA Leq. (Urban Crossroads, 2019c, p. 36)

- Location L4 represents the noise levels east of the Project site at the end of Aspel Road near the existing Menifee Valley Medical Center. The noise level measurements collected show an overall 24-hour exterior noise level of 54.8 dBA CNEL. The hourly noise levels measured at location L4 ranged from 44.6 to 57.0 dBA Leq during the daytime hours and from 39.6 to 52.2 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 50.4 dBA Leq with an average nighttime noise level of 47.6 dBA Leq. (Urban Crossroads, 2019c, p. 36)

- Location L5 represents the noise levels south of the Project site across Chambers Avenue adjacent to an existing 6-foot high noise barrier for residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 58.5 dBA CNEL. The hourly noise levels measured at location L5 ranged from 50.6 to 58.7 dBA Leq during the daytime hours and from 45.1 to 55.7 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 54.2 dBA Leq with an average nighttime noise level of 51.3 dBA Leq. (Urban Crossroads, 2019c, p. 36)

- Location L6 represents the noise levels south of the Project site adjacent to the baseball and athletic fields of Hans Christensen Middle School on Chambers Avenue. The 24-hour CNEL indicates that the overall exterior noise level is 60.6 dBA CNEL. At location L6 the background ambient noise levels ranged from 46.3 to 61.2 dBA Leq during the daytime hours to levels of 48.8 to 56.6 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 53.8 dBA Leq with an average nighttime noise level of 54.0 dBA Leq. (Urban Crossroads, 2019c, p. 37)

- Location L7 represents the noise levels south of the Project site adjacent to the Bell Air Estates mobile home park and Life Care Center. The noise level measurements collected show an overall 24-hour exterior noise level of 61.3 dBA CNEL. The hourly noise levels measured at location L7 ranged from

51.3 to 59.2 dBA Leq during the daytime hours and from 48.2 to 58.7 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 55.3 dBA Leq with an average nighttime noise level of 54.4 dBA Leq. (Urban Crossroads, 2019c, p. 37)

- Location L8 represents the noise levels west of the Project site across I-215 on Bradley Road near an existing mobile home park and residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 69.8 dBA CNEL. The hourly noise levels measured at location L8 ranged from 61.4 to 68.1 dBA Leq during the daytime hours and from 56.3 to 67.3 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 66.2 dBA Leq with an average nighttime noise level of 62.3 dBA Leq. (Urban Crossroads, 2019c, p. 37)

Table 4.11-2, *Twenty-Four Hour Noise Level Measurements*, provides the (energy average) noise levels used to describe the existing daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with the surrounding arterial roadway network. This includes the auto and heavy truck activities near the noise level measurement locations on I-215. (Urban Crossroads, 2019c, p. 37)

B. Existing Ground-Borne Vibration

Ground-borne vibration levels from automobile traffic are generally overshadowed by vibration generated by heavy trucks that roll over the same uneven roadway surfaces. However, due to rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity. As the existing Project site is undeveloped, no ground-borne vibration is generated by the Project site in the existing condition. (Urban Crossroads, 2019c, p. 47)

C. Airport Noise

The Project site is located approximately 2.5 miles southeast of the Perris Valley Airport, and approximately 9.7 miles southeast of the March Air Reserve Base (MARB). The Riverside County Airport Land Use Compatibility Plan (ALUCP) indicates that the Project site is located outside of the 55 dBA CNEL noise level contour boundaries of the Perris Valley Airport and outside of the 60 dBA CNEL noise level contour boundaries of MARB. Regardless, the existing background ambient noise levels in the Project study area are affected by noise associated with the Perris Valley Airport and the MARB.

Table 4.11-2 Twenty-Four Hour Noise Level Measurements

Location[1]	Distance to Project Boundary (Feet)	Description	Energy Average Hourly Noise Level (dBA L_{eq})[2]		CNEL
			Daytime	Nighttime	
L1	30'	Located at the northwest corner of the Project site near the existing Evans Brown Mortuary at the southeast corner of Encanto Drive and Rouse Road.	66.4	64.8	71.8
L2	100'	Located north of the Project site across Rouse Road near existing residential homes.	54.6	54.8	61.4
L3	2,600'	Located east of the Project site on Palomar Road near a residential home and the Boulder Ridge Elementary School.	52.9	47.5	55.3
L4	780'	Located east of the Project site at the end of Aspel Road near the existing Menifee Valley Medical Center.	50.4	47.6	54.8
L5	30'	Located south of the Project site across Chambers Avenue adjacent to an existing 6-foot high noise barrier for residential homes.	54.2	51.3	58.5
L6	40'	Located south of the Project site adjacent to the baseball and athletic fields of Hans Christensen Middle School on Chambers Avenue.	53.8	54.0	60.6
L7	155'	Located south of the Project site adjacent to the Bell Air Estates mobile home park and Life Care Center.	55.3	54.4	61.3
L8	335'	Located west of the Project site across Interstate 215 on Bradley Road near an existing mobile home park and residential homes.	66.2	62.3	69.8

1. See Figure 4.11-1 for the noise level measurement locations.
2. Energy (logarithmic) average hourly levels. The long-term 24-hour measurement printouts are included in Appendix 5.2 of the Project's NIA (*Technical Appendix J*).

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.
(Urban Crossroads, 2019c, Table 5-1)

4.11.3 APPLICABLE REGULATORY REQUIREMENTS

The following is a brief description of the federal, state, and local environmental laws and related regulations related to noise.

A. Federal Regulations

1. Noise Control Act of 1972

The Noise Control Act of 1972 establishes a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. The Act also serves to (1) establish a means for effective coordination of Federal research and activities in noise control; (2) authorize the establishment of Federal noise emission standards for products distributed in commerce; and (3) provide information to the public respecting the noise emission and noise reduction characteristics of such products. (EPA, 2017g)

While primary responsibility for control of noise rests with State and local governments, Federal action is essential to deal with major noise sources in commerce, control of which require national uniformity of treatment. The Environmental Protection Agency (EPA) is directed by Congress to coordinate the programs of all Federal agencies relating to noise research and noise control. (EPA, 2017g)

2. Federal Transit Administration

The Federal Transit Administration (FTA) has published a Noise and Vibration Impact Assessment (NVIA), which provides guidance for preparing and reviewing the noise and vibration sections of environmental documents. In the interest of promoting quality and uniformity in assessments, the manual is used by project sponsors and consultants in performing noise and vibration analyses for inclusion in environmental documents. The manual sets forth the methods and procedures for determining the level of noise and vibration impact resulting from most federally-funded transit projects and for determining what can be done to mitigate such impact. (FTA, 2006, p. 1-1)

The NVIA also establishes criteria for acceptable ground-borne vibration, which are expressed in terms of root mean square (RMS) velocity levels in decibels and the criteria for acceptable ground-borne noise are expressed in terms of A-weighted sound levels. As shown in Table 4.11-3, *Ground-Borne Vibration and Ground-Borne Noise Impact Criteria for General Assessment*, the FTA identifies three categories of land uses and provides Ground-Based Vibration (GBV) and Ground-Based Noise (GBN) criteria for each category of land use. (FTA, 2006, pp. 8-3 and 8-4)

3. Federal Aviation Administration

The Federal Aviation Administration (FAA) regulates the maximum noise level that an individual civil aircraft can emit through requiring aircraft to meet certain noise certification standards. These standards designate changes in maximum noise level requirements by "stage" designation. The standard requires that the aircraft meet or fall below designated noise levels. For civil jet aircraft, there are four stages identified, with Stage 1 being the loudest and Stage 4 being the quietest. For helicopters, two different stages exist, Stage 1 and Stage 2. As with civil jet aircraft, Stage 2 is quieter than Stage 1. In addition, the FAA is currently working to adopt the latest international standards for helicopters, which will be called Stage 3 and will be quieter than Stage 2. (FAA, 2016c)

Table 4.11-3 Ground-Borne Vibration and Ground-Borne Noise Impact Criteria for General Assessment

Land Use Category	GBV Impact Levels (VdB re 1 micro-inch /sec)			GBN Impact Levels (dB re 20 micro Pascals)		
	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB[4]	65 VdB[4]	65 VdB[4]	N/A[4]	N/A[4]	N/A[4]
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB	35 dBA	38 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB	40 dBA	43 dBA	48 dBA

Notes:

1. "Frequent Events" is defined as more than 70 vibration events of the same source per day. Most rapid transit projects fall into this category.
2. "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have this many operations.
3. "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.
4. This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors.
5. Vibration-sensitive equipment is generally not sensitive to ground-borne noise.

(FTA, 2006, Table 8-1)

The FAA has undertaken a phase-out of older, noisier civil aircraft, resulting in some stages of aircraft no longer being in the fleet. Currently, within the contiguous US, civil jet aircraft over 75,000 pounds maximum take-off weight must meet Stage 3 and Stage 4 to fly. In addition, aircraft at or under 75,000 pounds maximum take-off weight must meet Stage 2, 3, or 4 to operate within the U.S. In addition, by December 31, 2015, all civil jet aircraft, regardless of weight must meet Stage 3 or Stage 4 to fly within the contiguous U.S. Both Stage 1 and Stage 2 helicopters are allowed to fly within the U.S. (FAA, 2016c)

The U.S. noise standards are defined in the Code of Federal Regulations (CFR) Title 14 Part 36 – *Noise Standards: Aircraft Type and Airworthiness Certification* (14 CFR Part 36). The FAA publishes certificated noise levels in the advisory circular, *Noise Levels for U.S Certificated and Foreign Aircraft.* This advisory circular provides noise level data for aircraft certificated under 14 CFR Part 36 and categorizes aircraft into their appropriate "stages."

Any aircraft that is certified for airworthiness in the U.S. needs to also comply with noise standard requirements to receive a noise certification. The purpose of the noise certification process is to ensure that the latest available safe and airworthy noise reduction technology is incorporated into aircraft design and enables the noise reductions offered by those technologies to be reflected in reductions of noise experienced by

communities. As noise reduction technology matures, the FAA works with the international community to determine if a new stringent noise standard is needed. If so, the international community through the International Civil Aviation Organization (ICAO) embarks on a comprehensive analysis to determine what that new standard will be. (FAA, 2016b)

The current FAA noise standards applicable to new type certifications of jet and large turboprop aircraft is Stage 4. It is equivalent to the ICAO Annex 16, Volume 1 Chapter 4 standards. Recently, the international community has established and approved a more stringent standard within the ICAO Annex 16, Volume 1 Chapter 14, which became effective July 14, 2014. The FAA is adopting this standard and promulgating the rule for Stage 5 that is anticipated to be effective for new type certificates after December 31, 2017 and December 31, 2020, depending on the weight of the aircraft. The Notice of Proposed Rule Making (NPRM) for Stage 5 was published on January 14, 2016. (FAA, 2016b)

For helicopters, the FAA has noise standards for a Stage 3 helicopter that became effective on May 5, 2014. These more stringent standards apply to new type helicopters and are consistent with ICAO Annex 16, Volume 1 Chapter 8 and Chapter 11. (FAA, 2016b)

The FAA Modernization and Reform Act of 2012, in Section 513, had a prohibition on operating certain aircraft weighing 75,000 pounds or less not complying with Stage 3 noise levels, and on July 2, 2013, the FAA published a Final Rule in the Federal Register for the *Adoption of Statutory Prohibition the Operation of Jets Weighing 75,000 Pounds or Less That Are Not Stage 3 Noise Compliant*. In 1990, Congress passed the Aviation Noise and Capacity Act, which required that by the year 2000 all jet and large turboprop aircraft at civilian airports be Stage 3. (FAA, 2016b)

4. Federal Highway Administration

The Federal Highway Administration (FHWA) is the agency responsible for administering the Federal-aid highway program in accordance with Federal statutes and regulations. The FHWA developed the noise regulations as required by the Federal-Aid Highway Act of 1970 (Public Law 91-605, 84 Stat. 1713). The regulation, 23 CFR 772 *Procedures for Abatement of Highway Traffic Noise and Construction Noise*, applies to highway construction projects where a State department of transportation has requested Federal funding for participation in the project. The regulation requires the highway agency to investigate traffic noise impacts in areas adjacent to federally-aided highways for proposed construction of a highway on a new location or the reconstruction of an existing highway to either significantly change the horizontal or vertical alignment or increase the number of through-traffic lanes. If the highway agency identifies impacts, it must consider abatement. The highway agency must incorporate all feasible and reasonable noise abatement into the project design. (FHWA, 2017)

The FHWA regulations for mitigation of highway traffic noise in the planning and design of federally aided highways are contained in Title 23 of the United States Code of Federal Regulations Part 772. The regulations require the following during the planning and design of a highway project:

- Identification of traffic noise impacts;
- Examination of potential mitigation measures;
- The incorporation of reasonable and feasible noise mitigation measures into the highway project; and
- Coordination with local officials to provide helpful information on compatible land use planning and control. (FHWA, 2017)

The regulations contain noise abatement criteria, which represent the upper limit of acceptable highway traffic noise for different types of land uses and human activities. The regulations do not require meeting the abatement criteria in every instance. Rather, they require highway agencies make every reasonable and feasible effort to provide noise mitigation when the criteria are approached or exceeded. Compliance with the noise regulations is a prerequisite for the granting of Federal-aid highway funds for construction or reconstruction of a highway. (FHWA, 2017)

5. Construction-Related Hearing Conservation

The OSHA hearing conservation program is designed to protect workers with significant occupational noise exposures from hearing impairment even if they are subject to such noise exposures over their entire working lifetimes. Standard 29 CFR, Part 1910 indicates the noise levels under which a hearing conservation program is required to be provided to workers exposed to high noise levels. (OHSA, 2002) This analysis does not evaluate the noise exposure of construction workers within the Project site based on CEQA requirements, and instead, evaluates the Project-related construction noise levels at the nearby sensitive receiver locations in the Project study area. Further, periodic exposure to high noise levels in short duration, such as Project construction, is typically considered an annoyance and not impactful to human health. It would take several years of exposure to high noise levels to result in hearing impairment.

B. State Regulations

1. State of California Noise Requirements

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared according to guidelines adopted by the Governor's Office of Planning and Research. The purpose of the Noise Element is to limit the exposure of the community to excessive noise levels. (Urban Crossroads, 2019c, p. 21)

2. Building Standards Code

The State of California's noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, and the California Building Standards Code. These noise standards are applied to new construction in California for the purpose of controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are developed near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans for noise-sensitive land uses must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL. (Urban Crossroads, 2019c, p. 21)

The 2016 State of California's Green Building Standards Code contains mandatory measures for non-residential building construction in Section 5.507 on Environmental Comfort. These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, railroad, and other areas where noise contours are not readily available. If the development falls within an airport or freeway 65 dBA CNEL noise contour, the combined sound transmission class (STC)

rating of the wall and roof-ceiling assemblies must be at least 50. For those developments in areas where noise contours are not readily available, and the noise level exceeds 65 dBA Leq for any hour of operation, a wall and roof-ceiling combined STC rating of 45, and exterior windows with a minimum STC rating of 40 are required (Section 5.507.4.1). Alternatively, if the interior noise levels of non-residential buildings satisfy the performance criteria of 50 dBA Leq (1 hour), then the performance method as defined by California's Green Building Standards Code can be used. Since no interior noise level standards are identified in the City of Menifee General Plan Noise Element for commercial uses, this analysis relies on an interior noise level threshold of 50 dBA CNEL, is used consistent with the California Green Building Standards Code. The CNEL is used in place of a 1-hour Leq since it represents a more conservative analysis which applies the noise fundamental previously discussed in Subsection 4.11.1B CNEL adjustment factors to the evening and nighttime hours. (Urban Crossroads, 2019c, pp. 21-22)

3. California Noise Insulation Standards

The California Noise Insulation Standards (CCR Title 25 Section 1092) establish uniform minimum noise insulation performance standards for new hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family dwellings. Specifically, Title 25 specifies that interior noise levels attributable to exterior sources shall not exceed 45 dBA Ldn/CNEL (i.e., the same levels that the EPA recommends for residential interiors) in any habitable room of a new dwelling. An acoustical study must be prepared for proposed multiple-unit residential and hotel/motel structures where outdoor Ldn/CNEL is 60 dBA or greater. The study must demonstrate that the design of the building would reduce interior noise to 45 dBA Ldn/CNEL or lower. Because noise levels can increase over time in developing areas, Title 25 also specifies that dwellings are to be designed so that interior noise levels will meet this standard for at least ten years from the time of building permit application.

4. OPR General Plan Guidelines

Though not adopted by law, the 2017 California General Plan Guidelines, published by the California Governor's Office of Planning and Research (OPR), provides guidance for local agencies in preparing or updating General Plans. The Guidelines provide direction on the required Noise Element portion of the General Plans. The purpose of the Noise Element is to limit the exposure of the community to excessive noise levels. Local governments must "analyze and quantify" noise levels and the extent of noise exposure through actual measurement or the use of noise modeling. Technical data relating to mobile and point sources must be collected and synthesized into a set of noise control policies and programs that "minimizes the exposure of community residents to excessive noise." Noise level contours must be mapped and the conclusions of the element used as a basis for land use decisions. The element must include implementation measures and possible solutions to existing and foreseeable noise problems. Furthermore, the policies and standards must be sufficient to serve as a guideline for compliance with sound transmission control requirements. The noise element directly correlates to the Land Use, Circulation, and Housing Elements. The Noise Element must be used to guide decisions concerning land use and the location of new roads and transit facilities since these are common sources of excessive noise levels. The noise levels from existing land uses, including mining, agricultural, and industrial activities, must be closely analyzed to ensure compatibility, especially where residential and other sensitive receptors have encroached into areas previously occupied by these uses. (OPR, 2017, pp. 131-132)

C. Local Regulations

1. Riverside County Airport Land Use Compatibility Plan

The Riverside County ALUCP establishes compatibility criteria for land uses in relation to the noise contour boundaries of airports within the City of Menifee. Table 2B of the ALUCP indicates that residential, commercial, and recreational uses, such as those within the Project, are considered "clearly acceptable" when located within the 50 to 55 dBA CNEL noise contour of an airport, and are considered "normally acceptable" when located within the 55 dBA to 60 dBA CNEL noise contour of an airport. As shown on Figure 4.11-2, *Airport Noise Level Contour Boundaries*, the Project site is located outside of the 55 dBA CNEL noise level contour boundaries of the Perris Valley Airport and outside of the 60 dBA CNEL noise level contour boundaries of MARB. (Urban Crossroads, 2019c, p. 27)

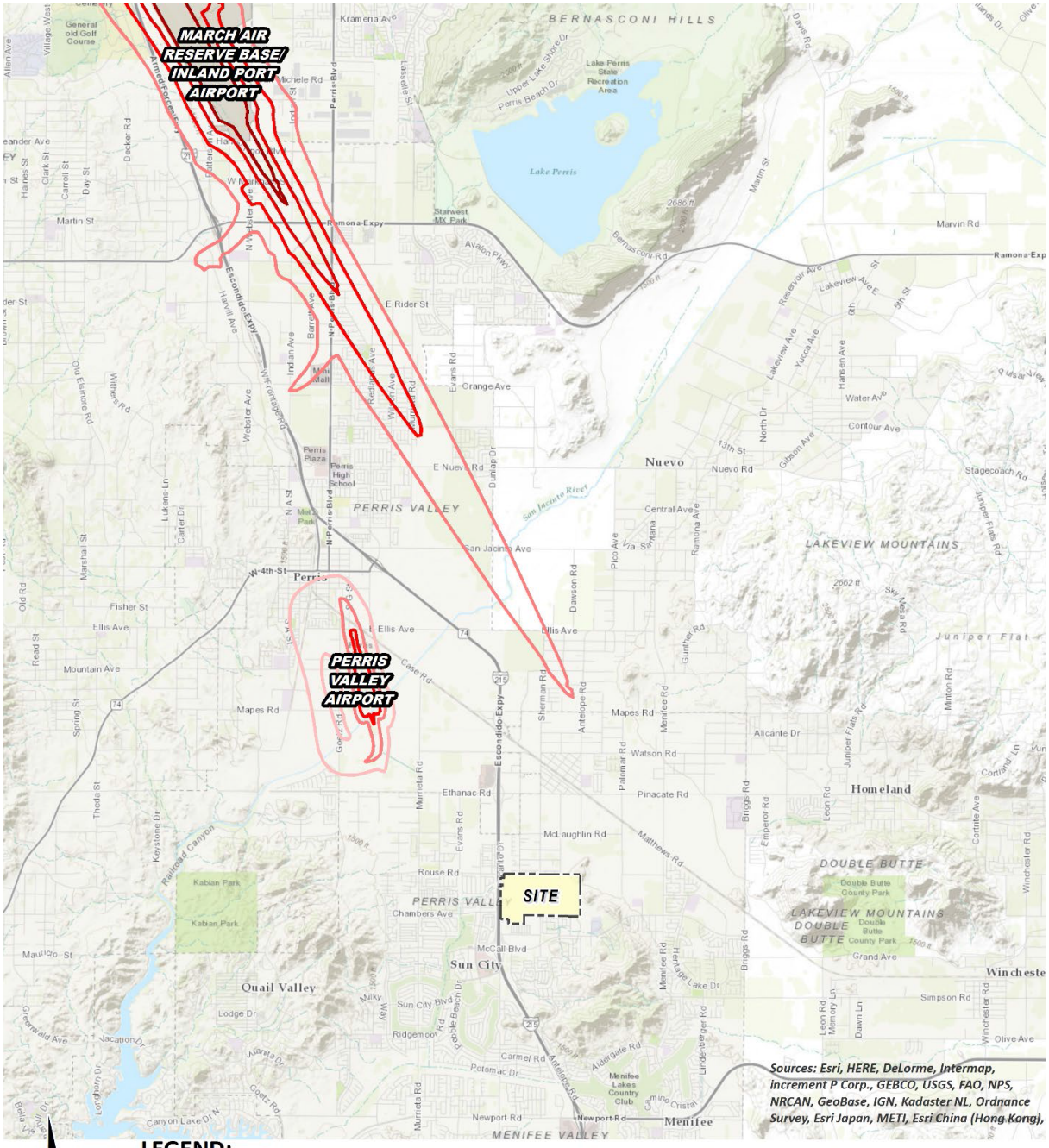
2. City of Menifee General Plan Noise Element

The intent of the Noise Element of the City of Menifee General Plan is to control and abate noise, and protect the citizens of Menifee from excessive exposure to noise. The Noise Element specifies the maximum allowable unmitigated exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports and railroads. In addition, the Noise Element identifies several policies to minimize the impacts of excessive noise levels throughout the community, and establishes noise level requirements for all land uses. To protect City of Menifee residents from excessive noise, the Noise Element contains the following goal related to the Project (Urban Crossroads, 2019c, p. 22; Menifee, 2013a):

> *N-1 Noise-sensitive land uses are protected from excessive noise and vibration exposure.*

The noise policies specified in the City of Menifee Noise Element provide the guidelines necessary to satisfy this goal. Policy N-1.2 states that new developments are required to comply with the noise standards of local, regional, and state building code regulations, including the City's Municipal Code, Title 24 of the California Code of Regulations, and the California Green Building Code. The Noise Element provides Policy N-1.11 to reduce excessive noise impacts from transportation and discourages the siting of noise-sensitive uses in areas in excess of 65 dBA CNEL without appropriate mitigation. (Urban Crossroads, 2019c, p. 22; Menifee, 2013a)

The noise criteria identified in the City of Menifee Noise Element are guidelines to evaluate the land use compatibility of transportation-related noise. The compatibility criteria, shown on Table 4.11-4, *Land Use Compatibility for Community Noise Exposure*, provides the City with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels. Per the City's Noise Element Background Document and Definitions, *Land Use Compatibility for Community Noise Environments* (Table N-b3), single-family residential land uses are considered normally acceptable with noise levels below 60 dBA CNEL. Conditionally acceptable single-family residential land uses experience noise levels approaching 70 dBA CNEL. Commercial uses are considered normally acceptable with exterior noise levels below 70 dBA CNEL, and conditionally acceptable with exterior noise levels approaching 75 dBA CNEL. Playground and park uses are considered normally acceptable with exterior noise levels below 70 dBA CNEL, and conditionally acceptable with exterior noise levels approaching 75 dBA CNEL. For conditionally acceptable land use, new construction or development is only to be undertaken after a detailed analysis of the noise reduction requirements is made and the needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning normally suffice to reduce noise levels to below the City of Menifee standards. (Urban Crossroads, 2019c, pp. 22-23)



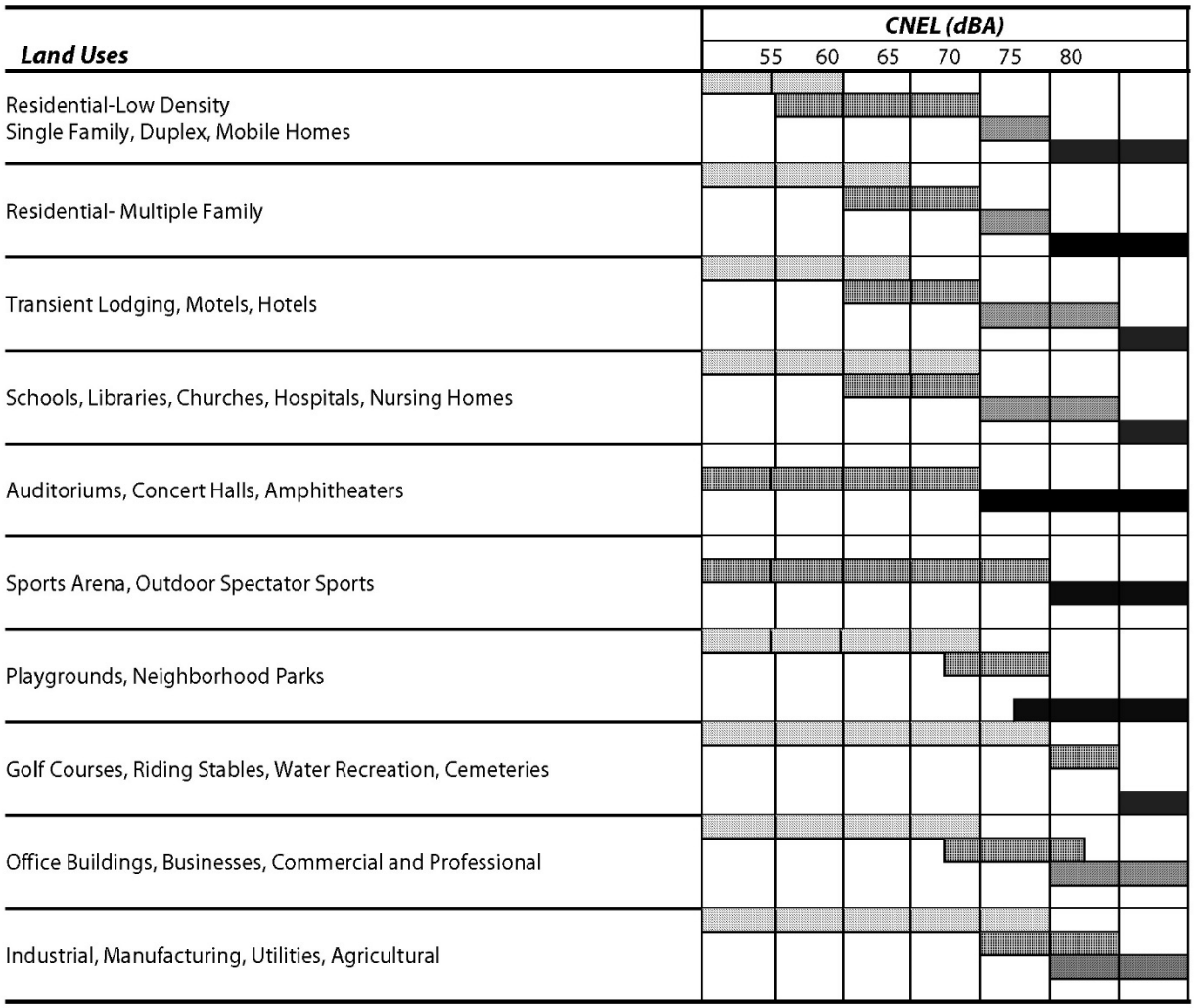
Source(s): Urban Crossroads (12-12-17)

Figure 4.11-2

NOT TO SCALE

AIRPORT NOISE LEVEL CONTOUR BOUNDARIES

Table 4.11-4 Land Use Compatibility for Community Noise Exposure



Source: California Office of Noise Control. Guidelines for the Preparation and Content of Noise Elements of the General Plan. February 1976. Adapted from the US EPA Office of Noise Abatement Control, Washington D.C. Community Noise. Prepared by Wyle Laboratories. December 1971.

Source: City of Menifee General Plan, Noise Background Document and Definitions, Table N-b3.

(Urban Crossroads, 2019c, Exhibit 3-A)

Consistent with the land use compatibility guidelines and Noise Element Policy N-1.11, this Project's Noise Impact Analysis was prepared to satisfy an exterior noise level of less than 65 dBA CNEL for single-family residential land uses. An interior noise level of less than 45 dBA CNEL would be required for residential uses within the Project. The 65 dBA CNEL exterior noise standards typically apply to outdoor areas where people congregate. In the case of residential projects, the standards typically apply to outdoor living areas (backyards) of single-family homes. Additional exterior noise analysis is provided for commercial and community park uses adjacent to major transportation noise sources in the Project study area. As previously described in Subsection 4.11.3.B.2, an interior noise level threshold of 50 dBA CNEL is used in the analysis to evaluate potential impacts at the commercial uses within the Project site, consistent with California Green Building Standards Code requirements for non-residential buildings. (Urban Crossroads, 2019c, p. 23)

3. City of Menifee Noise Control Regulations

❑ Operational Noise Standards – City of Menifee Municipal Code Chapter 9.09

To analyze noise impacts originating from a designated fixed location or private property such as Legado Specific Plan Project, stationary-source (operational) noise such as the expected roof-top air conditioning units, parking lot vehicle movements, community park activities, and open space activities are typically evaluated against standards established under a jurisdiction's Municipal Code or General Plan. The City of Menifee Municipal Code Chapter 9.09, *Noise Control Regulations*, Section 9.09.050 Table 1, establishes the permissible noise level that may intrude into a neighbor's property. The Municipal Code establishes the exterior noise level criteria for noise-sensitive residential properties affected by stationary noise sources. For purposes of this analysis, the City of Menifee residential exterior noise levels apply and are shown in Table 4.11-5, *Operational Noise Standards*. As shown in Table 4.11-5, residential exterior noise levels should not exceed 65 dBA Leq during daytime hours (7:00 a.m. to 10:00 p.m.) and should not exceed 45 dBA Leq during the nighttime hours (10:00 p.m. to 7:00 a.m.). Because existing uses in the Project study area include non-residential, medical/hospital, and school uses, and the City of Menifee does not identify exterior noise level standards specific to these uses, the residential exterior noise level limits are applied to all noise-sensitive receiver locations in the Project study area. (Urban Crossroads, 2019c, p. 25)

Table 4.11-5 Operational Noise Standards

Jurisdiction	Land Use	Time Period	Exterior Noise Level Standards (dBA Leq)[2]
City of Menifee[1]	Residential	Daytime (7:00 a.m. - 10:00 p.m.)	65
		Nighttime (10:00 p.m. - 7:00 a.m.)	45

1. Source: City of Menifee Municipal Code, Section 9.09.050 (See Appendix 3.1 to the NIA, EIR *Technical Appendix J*).
2. Leq represents a steady-state sound level containing the same total energy as a time-varying signal over a given sample period.

(Urban Crossroads, 2019c, Table 3-1)

❑ Construction Noise Standards – City of Menifee Municipal Code Chapter 8.01

To control noise impacts associated with the construction of the Project, the City has established limits to the hours of operation. Section 8.01.010 of the City's Municipal Code indicates that any construction within the City located within one-fourth mile from an occupied residence, are permitted to occur Monday through Saturday, except nationally recognized holidays, 6:30 a.m. to 7:00 p.m. Section 8.01.010 also indicates that

there shall be no construction permitted on Sunday or nationally recognized holidays unless approval is obtained from the City Building Official or City Engineer. (Urban Crossroads, 2019c, p. 25)

❑ Construction Noise Standards – City of Menifee Municipal Code Chapter 9.09

To control noise impacts associated with the construction of the Project, the City has established limits to the hours of operation. Section 9.09.030(B) of the City's Municipal Code indicates that private construction projects, located within one-quarter of a mile from an occupied residence, are considered exempt from the Municipal Code noise standards if they occur within the permitted hours of 6:00 a.m. and 6:00 p.m. from June to September, and 7:00 a.m. to 6:00 p.m. from October to May, with no activity allowed on Sundays and nationally recognized holidays. (Urban Crossroads, 2019c, p. 25)

❑ Construction Noise Level Compliance Threshold

The City of Menifee General Plan and Municipal Code do not establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a substantial temporary or periodic noise increase. Therefore, to evaluate whether the Project would generate a substantial periodic increase in short-term noise levels at off-site sensitive receiver locations, a construction-related noise level threshold is adopted from the Criteria for Recommended Standard: Occupational Noise Exposure prepared by the NIOSH. A division of the U.S. Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The construction-related noise level threshold starts at 85 dBA for more than eight hours per day, and for every 3-dBA increase, the exposure time is cut in half. This results in noise level thresholds of 88 dBA for more than four hours per day, 92 dBA for more than one hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. For the purposes of this analysis, the lowest, more conservative construction noise level threshold of 85 dBA Leq is used as an acceptable threshold for construction noise at the nearby sensitive receiver locations. Since this construction-related noise level threshold represents the energy average of the noise source over a given time period, they are expressed as Leq noise levels. Therefore, the noise level threshold of 85 dBA Leq over a period of eight hours or more is used to evaluate the potential Project-related construction noise level impacts at the nearby sensitive receiver locations. (Urban Crossroads, 2019c, pp. 25-26)

The 85 dBA Leq threshold is also consistent with the FTA Transit Noise and Vibration Impact Assessment criteria for construction noise which identifies an hourly construction noise level threshold of 90 dBA Leq during daytime hours, and 80 dBA Leq during nighttime hours for construction for general assessment at sensitive land uses (e.g., residential, medical/hospital, school, etc.). Detailed assessment, according to the FTA, identifies an 8-hour dBA Leq noise level threshold specific to noise-sensitive uses of 80 dBA Leq. Therefore, the Project Noise Impact Analysis (*Technical Appendix J*) relies on the NIOSH 85 dBA Leq threshold, consistent with FTA general and detailed assessment criteria for noise-sensitive uses, and represents an appropriate threshold for construction noise analysis. (Urban Crossroads, 2019c, p. 26)

❑ Construction-Related Hearing Conservation

The OSHA requires hearing protection be provided by employers in workplaces where the noise levels may, over long periods of exposure to high noise levels, endanger the hearing of their employees. Standard 29 CFR, Part 1910 indicates the noise levels under which a hearing conservation program is required to be provided to workers exposed to high noise levels. This analysis does not evaluate the noise exposure of construction workers within the Project site based on CEQA requirements, and instead, evaluates the Project-related construction noise levels at the nearby sensitive receiver locations in the Project study area. Further, periodic

exposure to high noise levels in short duration, such as Project construction, is typically considered an annoyance and not impactful to human health. It would take several years of exposure to high noise levels to result in hearing impairment. (Urban Crossroads, 2019c, p. 26)

❑ Construction Vibration Standards

The City of Menifee has not identified or adopted vibration standards. However, the United States Department of Transportation FTA provides guidelines for maximum-acceptable vibration criteria for different types of land uses. These guidelines allow 80 VdB for human annoyance and 90 VdB for building damage at noise-sensitive uses and buildings where people normally sleep. (Urban Crossroads, 2019c, pp. 26-27)

Construction activity can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment, such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration. Occasionally large bulldozers and loaded trucks can cause perceptible vibration levels at close proximity. While not enforceable regulations within the City of Menifee, the FTA guidelines of 80 VdB for annoyance and 90 VdB for building damage at sensitive land uses provide the basis for determining the relative significance of potential Project-related vibration impacts. (Urban Crossroads, 2019c, p. 27)

4.11.4 Basis for Determining Significance

Section XIII of Appendix G to the CEQA Guidelines addresses typical adverse effects to noise, and includes the following threshold questions to evaluate the Project's impacts on noise (OPR, 2018):

a. *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;*

b. *Generation of excessive groundborne vibration or groundborne noise levels; or*

c. *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.*

As previously indicated, the FTA guideline of 80 VdB for human annoyance and 90 VdB for building damage at sensitive land uses is used in this analysis to assess the human perception of vibration levels due to Project-related construction activities; thus, the analysis under Threshold b. determines whether vibration-related impacts associated with the Project's construction or long-term operation would be significant. (Urban Crossroads, 2019c, p. 27)

The CEQA Guidelines and the City of Menifee General Plan Guidelines provide direction on noise compatibility and establish noise standards by land use type that are sufficient to assess the significance of noise impacts, they do not define the levels at which increases are considered "substantial" for use under Threshold a.. CEQA Threshold c. applies to nearby public and private airports, if any, and the Project's land use compatibility. (Urban Crossroads, 2019c, p. 29)

Noise-Sensitive Receivers

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above, at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes that there is no single noise increase that renders the noise impact significant. Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding human reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and 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." (Urban Crossroads, 2019c, p. 29)

In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged. The Federal Interagency Committee on Noise (FICON) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on 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) or hourly logarithmic average noise levels (L_{eq}). (Urban Crossroads, 2019c, p. 29)

For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, FICON identifies a readily perceptible 5 dBA or greater project-related noise level increase is considered a significant impact when the noise criteria for a given land use are exceeded. According to the FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA barely perceptible noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. Table 4.11-6, *Significance of Noise Level Increases*, provides a summary of the potential noise impact significance criteria, based on guidance from FICON, and serves to define a "substantial" increase in noise that would be regarded as a potentially significant impact. (Urban Crossroads, 2019c, p. 30)

Table 4.11-6 Significance of Noise Level Increases

Without Project Noise Level	Potential Significant Impact
< 60 dBA	5 dBA or more
60 - 65 dBA	3 dBA or more
> 65 dBA	1.5 dBA or more

Federal Interagency Committee on Noise (FICON), 1992.

(Urban Crossroads, 2019c, Table 4-1)

Due to the temporary, short-term nature of noise-generating construction activities, the temporary or periodic noise level increases over the existing ambient conditions must be considered under Threshold a., consistent with the legal case, *Friends of Riverside's Hills v. Riverside Transportation Commission, et al.* Therefore, for purposes of analysis under Threshold a., the Caltrans Traffic Noise Analysis Protocol was utilized. Noise level increases greater than 12 dBA Leq are considered substantial temporary noise level increases. If the Project-

related construction noise levels generate a temporary noise level increase above the existing ambient noise levels of up to 12 dBA Leq, then the Project construction noise level increases would be considered a potentially significant impact. Although the Caltrans recommendations were specifically developed to assess traffic noise impacts, the 12 dBA Leq substantial noise level increase threshold is used in California for temporary construction noise to address noise level increases with the potential to exceed existing conditions. (Urban Crossroads, 2019c, p. 30)

Non-Noise-Sensitive Receivers

The City of Menifee General Plan Noise Background Document and Definitions, Table N-b3, L*and Use Compatibility for Community Noise Environments*, matrix is used to establish the satisfactory noise levels of significance for non-noise-sensitive land uses in the Project study area. As indicated on Table N-b3 of the City of Menifee General Plan Noise Background Document and Definitions, the criteria for normally acceptable non-noise-sensitive land use, such as commercial use, allows for exterior noise levels of up to 70 dBA CNEL. Noise levels greater than 67.5 dBA CNEL are considered conditionally acceptable per the City of Menifee General Plan Noise Background Document and Definitions, Table N-b3. (Urban Crossroads, 2019c, p. 30)

To determine if Project-related traffic noise level increases are significant at off-site non-noise sensitive land uses, a readily perceptible 5 dBA and barely perceptible 3 dBA criteria were used. When the "without Project" noise levels at the non-noise-sensitive land uses are below the normally acceptable 70 dBA CNEL compatibility criteria, a readily perceptible 5 dBA or greater noise level increase is considered a significant impact if the resulting "with Project" noise level exceeds the 70 dBA CNEL threshold. When the "without Project" noise levels are greater than the normally acceptable 70 dBA CNEL land use compatibility criteria, a barely perceptible 3 dBA or greater noise level increase is considered a significant impact since the noise level criteria is already exceeded. The noise level increases used to determine significant impacts for non-noise-sensitive land uses are generally consistent with the FICON noise level increase thresholds for noise-sensitive land uses but instead rely on the City of Menifee General Plan Noise Background Document and Definitions, Table N-b3, 70 dBA CNEL exterior noise level criteria. Table 4.11-7, *Significance Criteria Summary*, provides a summary of the noise impact significance criteria. (Urban Crossroads, 2019c, p. 31)

Based on the significance of noise impacts outlined in Table 4.11-7, noise impacts shall be considered significant if any of the following occur as a direct result of the Project:

Table 4.11-7 Significance Criteria Summary

Analysis	Receiving Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Off-Site	Noise-Sensitive[1]	If ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase	
		If ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase	
		If ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL Project increase	
	Non-Noise-Sensitive[2]	if ambient is < 70 dBA CNEL	≥ 5 dBA CNEL Project increase	
		if ambient is > 70 dBA CNEL	≥ 3 dBA CNEL Project increase	
On-Site	Single-Family Residential	Exterior Noise Level Criteria[2]	65 dBA CNEL	
		Interior Noise Level Standard[3]	45 dBA CNEL	
	Commercial & Recreation	Exterior Noise Level Criteria[2]	See Exhibit 3-A	
		Interior Noise Level Standard[4]	50 dBA CNEL (Commercial)	
Operational	Noise-Sensitive	Hourly L_{eq}[5]	65	45
		if ambient is < 60 dBA L_{eq}[1]	≥ 5 dBA L_{eq} Project increase	
		if ambient is 60 - 65 dBA L_{eq}[1]	≥ 3 dBA L_{eq} Project increase	
		if ambient is > 65 dBA L_{eq}[1]	≥ 1.5 dBA L_{eq} Project increase	
Construction	Noise-Sensitive	Permitted hours of 6:00 a.m. and 6:00 p.m. from June to September, and 7:00 a.m. to 6:00 p.m. from October to May, with no activity allowed on Sundays and nationally recognized holidays.[6]		
		Noise Level Threshold[7]	85 dBA L_{eq}	n/a
		Vibration Level Threshold (Annoyance)[8]	80 VdB	n/a
		Vibration Level Threshold (Building Damage)[8]	90 VdB	n/a

[1] Source: FICON, 1992.
[2] Source: City of Menifee General Plan Noise Background Document and Definitions, Table N-b3.
[3] Source: California Code of Regulations, Title 24, Building Standards Administrative Code.
[4] Source: California Green Building Standards Code, Section 5.507.4.2.
[5] Source: City of Menifee Municipal Code, Section 9.09.050, Table 1 (Appendix 3.1).
[6] Source: City of Menifee Municipal Code, Section 9.09.030(B) (Appendix 3.1).
[7] Source: NIOSH, Criteria for Recommended Standard: Occupational Noise Exposure, June 1998.
[8] Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.; "n/a" = No nighttime construction activity is permitted, so no nighttime construction noise level limits are identified.

(Urban Crossroads, 2019c, Table 4-2)

Off-Site Traffic-Related Noise

- When the noise levels at existing and future noise-sensitive land uses (e.g. residential, medical/hospital, school, etc.):
  - are less than 60 dBA CNEL and the Project creates a "readily perceptible" 5 dBA CNEL or greater Project-related noise level increase that results in a total exterior noise level of 65 dBA CNEL or greater; or
  - range from 60 to 65 dBA CNEL and the Project creates a "barely perceptible" 3 dBA CNEL or greater Project-related noise level increase; or
  - already exceed 65 dBA CNEL, and the Project creates a community noise level increase of greater than 1.5 dBA CNEL. (Urban Crossroads, 2019c, p. 31)
- When the noise levels at existing and future non-noise-sensitive land uses (e.g. commercial, etc.):
  - are less than the City of Menifee General Plan Noise Background Document and Definitions, Table N-b3, 70 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater Project-related noise level increase; or
  - are greater than the City of Menifee General Plan Noise Background Document and Definitions, Table N-b3, 70 dBA CNEL and the Project creates a barely perceptible 3 dBA CNEL or greater Project-related noise level increase. (Urban Crossroads, 2019c, p. 31)

On-Site Traffic-Related Noise

- If the on-site exterior noise levels:
  - exceed 65 dBA CNEL at outdoor living areas (backyards) of the single-family residential land uses within the Project site. Interior noise levels shall not exceed 45 dBA CNEL for residential land uses;
  - exceed the exterior noise land use compatibility criteria for commercial and recreation uses within the Project site (City of Menifee General Noise Element).
  - exceed an interior noise level limit of 50 dBA CNEL for commercial uses (Based on the California Green Building Standards Code, Section 5.507.4.2.). (Urban Crossroads, 2019c, p. 31)

Operational Noise

- If Project-related operational (stationary-source) noise levels exceed the daytime 65 dBA Leq or nighttime 45 dBA Leq operational noise level standards at nearby noise-sensitive residential receiver locations (City of Menifee Municipal Code, Section 9.09.050, Table 1) (Urban Crossroads, 2019c, p. 32); or

- If the existing ambient noise levels at the nearby noise-sensitive receivers near the Project site:
  - are less than 60 dBA Leq and the Project creates a readily perceptible 5 dBA Leq or greater Project-related noise level increase; or
  - range from 60 to 65 dBA Leq and the Project creates a barely perceptible 3 dBA Leq or greater Project-related noise level increase; or
  - already exceed 65 dBA Leq, and the Project creates a community noise level impact of greater than 1.5 dBA Leq. (Urban Crossroads, 2019c, p. 32)

Construction Noise and Vibration

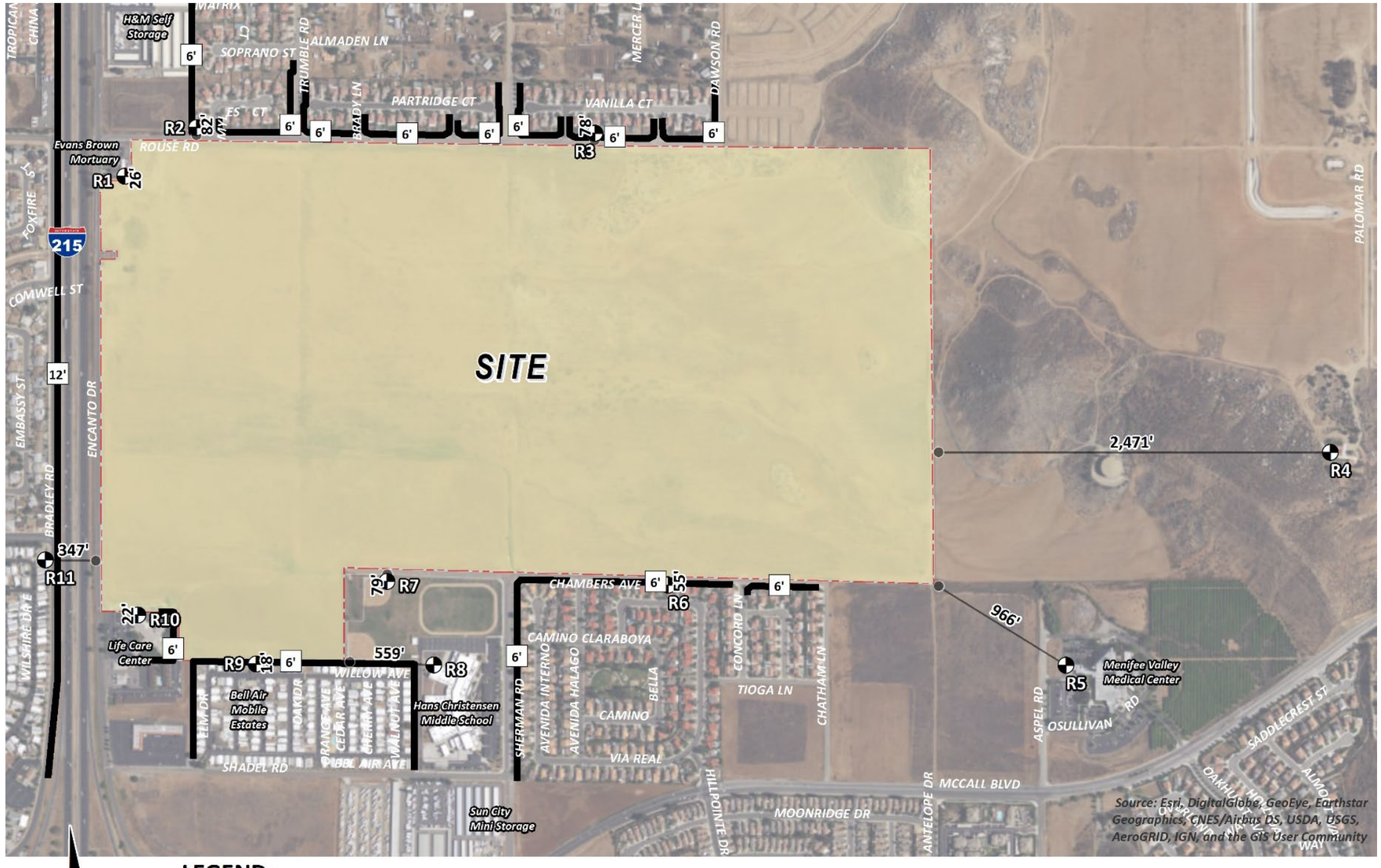
- If Project-related construction activities:
  - occur at any time other than the permitted hours of 6:00 a.m. to 6:00 p.m. June to September, 7:00 a.m. to 6:00 p.m. October to May, with no activity allowed on Sundays and national holidays (City of Menifee Municipal Code, Section 9.09.030(B)); or
  - generate noise levels which exceed the 85 dBA Leq acceptable noise level threshold at the nearby sensitive receiver locations (NIOSH, Criteria for Recommended Standard: Occupational Noise Exposure); or
  - generate temporary Project construction-related noise level increases which exceed the 12 dBA Leq substantial noise level increase threshold at noise-sensitive receiver locations (Caltrans, Traffic Noise Analysis Protocol). (Urban Crossroads, 2019c, p. 32)

- If short-term Project generated construction vibration levels exceed FTA vibration thresholds of 80 VdB for annoyance at sensitive receiver locations or 90 VdB for building damage at sensitive buildings (FTA Transit Noise and Vibration Impact Assessment). (Urban Crossroads, 2019c, p. 32)

4.11.5 Methodology for Calculating Project-Related Noise Impacts

A. Sensitive Receptors

Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of land. Noise-sensitive land uses are generally considered to include schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Sensitive receivers in the vicinity of the Project site include the existing single-family residential homes located at receiver locations R2 to R4, R6 and R11. Additionally, receiver location R9 represents the Bell Air Mobile Home Estates. The Evans Brown Mortuary is represented at receiver location R1, and the Menifee Medical Center is represented by receiver location R5. Receiver location R6 represents the closest athletic field at the Hans Christensen Middle School to the Project site, while receiver location R7 represents the buildings at the Hans Christensen Middle School. Receiver location R10 represents the Life Care Center. The closest sensitive receiver is represented by location R9 at a distance of approximately 18 feet south of the Project site boundary. The 11 noise-sensitive receivers are depicted on Figure 4.11-3, *Construction Activity and Receiver Locations*, and identified by Urban Crossroads, Inc. as follows (Urban Crossroads, 2019c, pp. 87-88):



Source(s): Urban Crossroads (12-12-17)

Figure 4.11-3

NOT TO SCALE

CONSTRUCTION ACTIVITY AND RECEIVER LOCATIONS

- R1: Located approximately 26 feet north of the Project site, R1 represents the existing Evans Brown Mortuary on the southeast corner of Encanto Drive and Rouse Road. A 24-hour noise level measurement was taken near this location, L1, to describe the existing ambient noise environment.

- R2: Location R2 represents existing residential homes located approximately 82 feet north of the Project site across Rouse Road.

- R3: Location R3 represents the future single-family residential homes located roughly 78 feet north of the Project site across Rouse Road. A 24-hour noise level measurement was taken near this location, L2, to describe the existing ambient noise environment.

- R4: Location R4 represents the existing single-family residential home located approximately 2,471 feet east of the Project site. A 24-hour noise level measurement was taken near this location, L3, to describe the existing ambient noise environment.

- R5: Located approximately 966 feet southeast of the Project site, R5 represents the existing Menifee Valley Medical Center on Aspel Road. A 24-hour noise level measurement was taken near this location, L4, to describe the existing ambient noise environment.

- R6: Location R6 represents existing residential homes located approximately 55 feet south of the Project site across Chambers Avenue. A 24-hour noise level measurement was taken near this location, L5, to describe the existing ambient noise environment.

- R7: Location R7 represents the existing community fields of the Hans Christensen Middle School located roughly 79 feet south of the Project site on Chambers Avenue. A 24-hour noise level measurement was taken near this location, L6, to describe the existing ambient noise environment.

- R8: Location R8 represents the closest building of the Hans Christensen Middle School to the Project site boundaries at approximately 559 feet.

- R9: Located approximately 18 feet south of the Project site, R9 represents the existing Bell Air Mobile Home Estates. A 24-hour noise level measurement was taken near this location, L7, to describe the existing ambient noise environment.

- R10: Location R10 represents existing Life Care Center approximately 22 feet south of the Project site on Encanto Drive.

- R11: Location R11 represents the existing single-family residential homes located roughly 347 feet west of the Project site across I-215. A 24-hour noise level measurement was taken near this location, L8, to describe the existing ambient noise environment.

B. Federal Highway Administration Traffic Noise Prediction Model

The estimated roadway noise impacts from vehicular traffic were calculated using a computer program that replicates the FHWA Traffic Noise Prediction Model- FHWA-RD-77-108. The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California, the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission

Levels. 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. (Urban Crossroads, 2019c, p. 41)

1. Off-Site Traffic Noise Calculation Model Inputs

The roadway parameters used by Urban Crossroads, Inc. to assess the Project's off-site transportation noise impacts are shown in Table 6-1 of the Project's Noise Impact Analysis (EIR *Technical Appendix J*), which identifies the 40 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Menifee General Plan Circulation Element, and the posted vehicle speeds. Consistent with the City of Menifee General Plan Draft EIR, soft site conditions were used to analyze the traffic noise impacts within the Project study area. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used to calculate off-site traffic noise generated by the Project. (Urban Crossroads, 2019c, p. 41)

The Existing, Opening Year 2020, Opening Year 2023, Opening Year 2025, and Horizon Year 2040 average daily traffic volumes used for the Noise Impact Analysis are presented on Tables 6-2 and 6-3 of the Noise Impact Analysis (EIR *Technical Appendix J*), and were provided by the Legado Specific Plan Traffic Impact Analysis prepared by Urban Crossroads, Inc. (EIR *Technical Appendix K*). Table 6-4 of *Technical Appendix J* presents the time of day vehicle splits and Table 6-5 of *Technical Appendix J* presents the traffic flow distributions (vehicle mix) used for the analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA noise prediction model. (Urban Crossroads, 2019c, p. 42)

C. On-Site Traffic Noise Prediction Model Inputs

Table 6-6 of the Project's Noise Impact Analysis (*Technical Appendix J*) presents the on-site roadway parameters (including the ADT volumes used for the Noise Impact Analysis). Based on Exhibit C-3 of the City of Menifee General Plan Circulation Element, Encanto Drive, Sherman Road, and Antelope Road are classified as 4-Lane Major roadways. Rouse Road and Chambers Avenue are classified as 4-Lane Secondary roadways. The traffic volumes shown on Table 6-6 of *Technical Appendix J* reflect future long-range traffic conditions needed to assess the future on-site traffic noise environment and to identify the appropriate noise attenuation measures that address the worst-case future noise conditions. Consistent with the methodology used in the City of Menifee General Plan Draft EIR, soft site conditions were used to analyze the on-site traffic noise impacts for the Project study area. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in the Project's Noise Impact Analysis. (Urban Crossroads, 2019c, p. 46)

To predict the future noise environment at Planning Areas within the Project site, coordinate information was collected to identify the noise transmission path between the noise source and receiver. The coordinate information is based on the Project site plan (included as Exhibit 1-B of *Technical Appendix J*), which shows the plotting of the Project uses in relationship to I-215, Encanto Drive, Sherman Road, Antelope Road, Rouse

Road, and Chambers Avenue. The site plan is used to identify the relationship between the roadway centerline elevation, the pad elevation, and the centerline distance to the noise barrier and the building façade. The exterior noise level impacts at the outdoor living area receivers were placed five feet above the pad elevation and ten feet from the proposed barrier location and at the proposed building façade for first-floor exterior noise levels. All second-floor receivers were located 14 feet above the proposed finished floor elevation. (Urban Crossroads, 2019c, p. 47)

D. Vibration Assessment

The Project's Noise Impact Analysis calculates the potential ground-borne vibration associated with vehicular traffic and construction activities. Ground-borne vibration levels from automobile traffic are generally overshadowed by vibration generated by heavy trucks that roll over the same uneven roadway surfaces. However, due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity. (Urban Crossroads, 2019c, p. 47)

However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with various types of construction equipment are summarized on Table 4.11-8, *Vibration Source Levels for Construction Equipment*. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the human response (annoyance) using the following vibration assessment methods defined by the FTA. To describe the human response (annoyance) associated with vibration impacts the FTA provides the following equation: (Urban Crossroads, 2019c, p. 47)

$$L_{VdB}(D) = L_{VdB}(25\text{ ft}) - 30\log(D/25).$$

Table 4.11-8 Vibration Source Levels for Construction Equipment

Equipment	Vibration Decibels (VdB) at 25 feet
Small bulldozer	58
Jackhammer	79
Loaded Trucks	86
Large bulldozer	87

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.

(Urban Crossroads, 2019c, Table 6-7)

E. Construction Noise Analysis Methodology

To describe the Project construction noise levels, Urban Crossroads, Inc. collected noise measurements for similar activities at 17 construction sites, which are shown in Table 11-1 of the Noise Impact Analysis (*Technical Appendix J*). Noise levels generated by heavy construction equipment range from approximately 62 dBA to 80 dBA when measured at 50 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA with each doubling of distance. For example, a noise level of 80 dBA measured at 50 feet from the noise source to the receiver would be reduced to 74 dBA at 100 feet from the source to the receiver, and would be further reduced to 68 dBA at 200 feet from the source to the receiver.

Tables 11-2 to 11-6 of *Technical Appendix J* show the Project construction stages and the reference construction noise levels used for each stage. The construction stages used in the analysis are consistent with the data used to support the construction emissions in the Project's Air Quality Impact Analysis (*Technical Appendix B*). Table 4.11-9, *Unmitigated Construction Equipment Noise Level Summary (dBA Leq)*, provides a summary of the noise levels from each stage of construction at each of the sensitive receiver locations in the City of Menifee. (Urban Crossroads, 2019c, pp. 101-109)

Table 4.11-9 Unmitigated Construction Equipment Noise Level Summary (dBA Leq)

Receiver Location[1]	Construction Hourly Noise Level (dBA L_{eq})					
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Peak Activity[2]
R1	81.9	75.8	70.5	74.0	69.8	81.9
R2	68.4	62.3	57.0	60.4	56.3	68.4
R3	68.0	61.9	56.6	60.1	55.9	68.0
R4	45.6	39.5	34.2	37.6	33.5	45.6
R5	53.4	47.3	42.0	45.4	41.3	53.4
R6	69.4	63.3	58.0	61.4	57.3	69.4
R7	73.3	67.2	61.9	65.3	61.2	73.3
R8	57.9	51.8	46.5	49.9	45.8	57.9
R9	78.5	72.4	67.1	70.5	66.4	78.5
R10	79.6	73.5	68.2	71.6	67.5	79.6
R11	52.3	46.2	40.9	44.3	40.2	52.3

1. Noise receiver locations are shown on Figure 4.11-3.
2. Estimated construction noise levels during peak operating conditions.
(Urban Crossroads, 2019c, Table 11-7)

4.11.6 Impact Analysis

Threshold a: ***Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?***

During near-term construction activities, the Project has the potential to expose surrounding land uses to construction-related noise levels in excess of the NIOSH standard, which is the applicable standard to evaluate if the Project would cause the generation a substantial temporary increase in ambient noise levels of excess noise levels. The Project also has the potential to contribute to temporary noise level increases that exceed the Caltrans substantial noise level increase criteria. The use of the Caltrans Traffic Noise Analysis Protocol is utilized to evaluate if the Project would result in a substantial temporary or periodic noise increase above ambient noise levels in the Project vicinity. Additionally, the Project has the potential to expose future on-site residences to noise levels in excess of the City's General Plan Noise Element standards, including noise from traffic on surrounding roadways. In addition, Project-related traffic has the potential to expose sensitive receptors to operation-related noise levels in excess of City standards, and Project operations have the potential to contribute to noise level increases affecting sensitive receptors. Each is discussed below.

A. Construction-Related Noise Effects

1. Construction Noise Analysis

Construction equipment operating on the Project site would create intermittent periods of noise when construction equipment is in operation, which would cause short-term increases in ambient noise levels. As discussed in EIR Subsection 4.11.5, the Project's Noise Impact Analysis (*Technical Appendix J*) modeled and analyzed construction noise levels for each stage of construction, which includes the following (Urban Crossroads, 2019c, p. 101):

- Site Preparation;
- Grading;
- Building Construction;
- Paving; and
- Architectural Coating.

To assess the potential for short-term construction noise impacts, analysis of the Project's construction noise level impacts was completed by Urban Crossroads Inc. for 11 representative noise receiver locations (R1 through R11), which represent the nearest noise-sensitive receivers to the Project site. Figure 4.11-3 depicts the distance between the receiver locations and the limits of construction activities. As shown previously in Table 4.11-9, when the peak reference noise level is operating at the closest point to the nearest the sensitive receiver location, noise levels would range from 45.6 to 81.9 dBA Leq at the sensitive receiver locations in the City of Menifee. As shown in Table 4.11-10, *Construction Noise Level Compliance (DBA Leq)*, Project-related construction noise would not exceed the NIOSH construction noise standard of 85 dBA Leq. (Urban Crossroads, 2019c, p. 109)

Table 4.11-10 Construction Noise Level Compliance (DBA Leq)

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})		
	Highest Construction Noise Levels[2]	Threshold[3]	Threshold Exceeded?[4]
R1	81.9	85	No
R2	68.4	85	No
R3	68.0	85	No
R4	45.6	85	No
R5	53.4	85	No
R6	69.4	85	No
R7	73.3	85	No
R8	57.9	85	No
R9	78.5	85	No
R10	79.6	85	No
R11	52.3	85	No

1. Noise receiver locations are shown on Figure 4.11-3.
2. Estimated construction noise levels during peak operating conditions, as shown on Table 4.11-9.
3. Construction noise standards as shown on Table 4.11-7.
4. Do the estimated Project construction noise levels satisfy the construction noise level threshold?

(Urban Crossroads, 2019c, Table 11-8)

2. *Construction Noise Level Increases*

To describe the temporary Project construction noise level contributions to the existing ambient noise environment, the Project construction noise levels were combined with the existing ambient noise levels measurements at the off-site receiver locations. The difference between the combined Project-construction and ambient noise levels are used to describe the construction noise level contributions. Temporary noise level increases that would be experienced at sensitive receiver locations when Project construction-source noise is added to the ambient daytime conditions are presented on Table 4.11-11, *Unmitigated Construction Temporary Noise Level Increases (Dba Leq)*. A temporary noise level increase of 12 dBA Leq is considered a potentially significant impact based on the Caltrans substantial noise level increase criteria which is used to assess the Project-construction noise level increases. No nighttime construction activity is permitted in the City of Menifee Municipal Code, and therefore, nighttime noise level increases are not analyzed. (Urban Crossroads, 2019c, p. 110)

Table 4.11-11 Unmitigated Construction Temporary Noise Level Increases (Dba Leq)

Receiver Location[1]	Unmitigated Construction Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Contribution[6]	Threshold Exceeded?[7]
R1	81.9	L1	66.4	82.1	15.7	Yes
R2	68.4	L1	66.4	70.5	4.1	No
R3	68.0	L2	54.6	68.2	13.6	Yes
R4	45.6	L3	52.9	53.6	0.7	No
R5	53.4	L4	50.4	55.2	4.8	No
R6	69.4	L5	54.2	69.5	15.3	Yes
R7	73.3	L6	53.8	73.3	19.5	Yes
R8	57.9	L6	53.8	59.3	5.5	No
R9	78.5	L7	55.3	78.5	23.2	Yes
R10	79.6	L7	55.3	79.6	24.3	Yes
R11	52.3	L8	66.2	66.4	0.2	No

1. See Figure 4.11-3 for the sensitive receiver locations.
2. Construction noise levels as shown on Table 4.11-10.
3. Reference noise level measurement locations as shown on Figure 4.11-1.
4. Observed daytime ambient noise levels as shown on Table 4.11-2.
5. Represents the combined ambient conditions plus the Project activities.
6. The noise level increase expected with the addition of the proposed Project activities.
7. Significance Criteria as defined in subsection 4.11.4.

(Urban Crossroads, 2019c, Table 11-9)

As indicated in Table 4.11-11, the Project would contribute unmitigated, worst-case construction noise level increases between 0.2 to 24.3 dBA Leq at the adjacent sensitive receiver locations during the daytime hours. Since the worst-case temporary noise level increase of up to 24.3 dBA Leq during Project construction would exceed the 12 dBA Leq significance threshold at receiver locations R1, R3, R6, R7, R9, and R10, the unmitigated construction noise level increases are considered potentially significant temporary noise impacts for which mitigation would be required. (Urban Crossroads, 2019c, p. 110)

B. Off-Site Transportation-Related Noise Impact Analysis

Urban Crossroads, Inc. used noise contours to assess the Project's incremental traffic-related noise impacts at land uses within the vicinity of the Project site. Noise contour boundaries represent equal levels of noise exposure and are measured in CNEL from the center of the roadway for the 70, 65, and 60 dBA noise levels. Tables 7-1 through 7-12 of the Project's Noise Impact Analysis (*Technical Appendix J*) present a summary of the unmitigated exterior traffic noise levels for the 40 study area roadway segments analyzed for the "without Project" and the "with Project" conditions for each of the five scenarios presented below. A summary of the traffic noise level contours for each of the traffic scenarios is included in Appendix 7.1 of EIR *Technical Appendix J*. To evaluate off-site noise increases that could result from Project-related traffic, Urban Crossroads, Inc. developed noise contours for the following traffic scenarios (Urban Crossroads, 2019c, p. 49):

- Existing Conditions:
  - Without Project: This scenario refers to the existing present-day noise conditions without the Project.
  - With Phase 1 of the Project: This scenario refers to the existing present-day noise conditions with Phase 1 of the Project.
  - With Phase 2 of the Project: This scenario refers to the existing present-day noise conditions with Phase 2 of the Project.
  - With Project Buildout: This scenario refers to the existing present-day noise conditions with Buildout of the Project.

- Opening Year 2020 Without / With Phase 1 of the Project: This scenario refers to Year 2020 noise conditions without and with Phase 1 of the Project. This scenario includes all cumulative projects identified in the Traffic Impact Analysis (*Technical Appendix K*).

- Opening Year 2023 Without / With Phase 2 of the Project: This scenario refers to Year 2023 noise conditions without and with Phase 2 of the Project. This scenario includes all cumulative projects identified in the Traffic Impact Analysis (*Technical Appendix K*).

- Opening Year 2025 Without / With Buildout of the Project: This scenario refers to Year 2025 noise conditions without and with Buildout of the Project. This scenario includes all cumulative projects identified in the Traffic Impact Analysis (*Technical Appendix K*).

- Horizon Year 2040 Without / With Project: This scenario refers to the background noise conditions at future Year 2040 without and with the Project. This scenario corresponds to 2040 conditions, and includes all cumulative projects identified in the Traffic Impact Analysis (*Technical Appendix K*).

1. Existing Plus Project Conditions

An analysis of existing traffic noise levels plus traffic noise generated by the proposed Project (Existing plus Project conditions) has been included in this report for information purposes, consistent with the Traffic Impact Analysis (EIR *Technical Appendix K*). The analysis of existing traffic noise levels plus traffic noise generated by the proposed Project Existing plus Project scenario would not actually occur because the Existing plus Project scenario assumes that full buildout of the Project would be combined with existing conditions. Additionally, prior to the Project's operation, cumulative development and ambient growth would occur in the Project area that would contribute noise to existing conditions. In reality, this scenario would not occur since

the Project would not be fully constructed and operational until the Opening Year conditions, would be developed in phases, and does not include noise from cumulative developments. The Existing plus Project scenario is provided for informational purposes only.

Although the Existing plus Project scenario is provided for informational purposes only for the analysis of impacts in this EIR Subsection, it should be noted that the analysis of impacts in EIR Subsection 4.14, *Transportation*, does rely on the Existing plus Project scenario in order to distinguish between the Project's direct and cumulatively-considerable impacts for the purpose of identifying appropriate mitigation for each phase of the proposed Project. As it relates to impacts to noise, intersection and roadway deficiencies would not result in any new or additional impacts as compared to the analysis of noise impacts under the Opening Year scenarios (discussed in further detail below).

Table 7-1 of the Noise Impact Analysis (*Technical Appendix J*) shows that the unmitigated exterior noise levels are expected to range from 41.0 to 83.8 dBA CNEL for Existing without Project conditions. The following sections describe the Existing with Project traffic noise level conditions under each Phase of Project development. (Urban Crossroads, 2019c, p. 63)

❑ Existing Plus Project Phase 1

Table 4.11-12, *Existing Off-Site Phase 1 Project-Related Traffic Noise Impacts*, presents a comparison of the Existing without and with Phase 1 Project conditions CNEL noise levels. As shown on Table 4.11-12, Existing with Phase 1 Project conditions noise level contours are expected to range from 41.0 to 84.0 dBA CNEL. As shown on Table 4.11-12 the Project is expected to generate exterior noise level increases ranging from 0.0 to 4.5 dBA CNEL. However, this scenario is provided solely for informational purposes and would not occur since the Project would not be built and occupied under Existing conditions, and future noise conditions would include ambient and cumulative growth. Refer instead to the analysis of Project impacts under Opening Year 2020 with Phase 1, Opening Year 2023 with Phase 2, and Opening Year 2025 with Project Buildout conditions. (Urban Crossroads, 2019c, p. 63)

❑ Existing Plus Project Phase 2

Table 4.11-13, *Existing Off-Site Phase 2 Project-Related Traffic Noise Impacts*, presents a comparison of the Existing without and with Phase 2 Project conditions CNEL noise levels. Table 4.11-13 presents the Existing with Phase 2 Project conditions noise level contours that are expected to range from 41.0 to 84.0 dBA CNEL. As shown on Table 4.11-13 the Project is expected to generate exterior noise level increases ranging from 0.0 to 5.8 dBA CNEL, which exceeds significance thresholds identified in Table 4.11-7 at two of 40 off-site roadway segments: Rouse Road east of Street A (Segment 29) and Rouse Road east of Sherman Road (Segment 30). However, this scenario is provided solely for informational purposes and would not occur since the Project would not be built and occupied under Existing conditions, and future noise conditions would include ambient and cumulative growth. Refer instead to the analysis of Project impacts under Opening Year 2020 with Phase 1, Opening Year 2023 with Phase 2, and Opening Year 2025 with Project Buildout conditions. (Urban Crossroads, 2019c, p. 63)

Table 4.11-12 Existing Off-Site Phase 1 Project-Related Traffic Noise Impacts

ID	Road	Segment	Adjacent Planned Land Use[1]	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive?
				No Project	With Project	Project Addition	
1	I-215	n/o Ethanac Rd.	Commercial	83.7	83.8	0.1	No
2	I-215	s/o Ethanac Rd.	Commercial	83.8	83.9	0.1	No
3	I-215	s/o McCall Bl.	EDC/Residential	83.8	84.0	0.2	Yes
4	Encanto Dr.	n/o McLaughlin Rd.	Commercial	63.7	65.1	1.4	No
5	Encanto Dr.	s/o McLaughlin Rd.	Commercial	63.3	64.9	1.6	No
6	Encanto Dr.	s/o Chambers Av.	EDC	64.9	65.1	0.2	No
7	Encanto Dr.	s/o Shadel Rd.	Commercial	60.3	60.5	0.2	No
8	Sherman Rd.	s/o SR-74	EDC/Business Park	61.8	61.8	0.0	No
9	Sherman Rd.	s/o Ethanac Rd.	Business Park	52.0	52.0	0.0	No
10	Sherman Rd.	s/o McLaughlin Rd.	Residential	46.0	46.0	0.0	Yes
11	Antelope Rd.	s/o Ethanac Rd.	Business Park	53.7	53.7	0.0	No
12	Antelope Rd.	s/o Chambers Av.	EDC	n/a	n/a	n/a	n/a
13	Palomar Rd.	n/o SR-74	Business Park	60.6	60.6	0.0	No
14	Menifee Rd.	n/o SR-74	Business Park	65.1	65.2	0.1	No
15	Menifee Rd.	s/o SR-74	Residential	67.4	67.6	0.2	Yes
16	Menifee Rd.	s/o Rouse Rd.	Residential	67.6	67.7	0.1	Yes
17	SR-74	e/o I-215	EDC	72.2	72.2	0.0	No
18	SR-74	e/o Trumble Rd.	EDC	70.8	70.8	0.0	No
19	SR-74	e/o Sherman Rd.	Commercial	70.0	70.0	0.0	No
20	SR-74	w/o Palomar Rd.	Open Space	70.9	70.9	0.0	No
21	SR-74	e/o Palomar Rd.	Business Park	71.8	71.8	0.0	No
22	SR-74	e/o Menifee Rd.	Commercial/School	72.8	72.9	0.1	Yes
23	Ethanac Rd.	w/o Goetz Rd.	EDC (Residential)	61.3	61.3	0.0	Yes
24	Ethanac Rd.	e/o Goetz Rd.	EDC (Residential)	68.7	68.8	0.1	Yes
25	Ethanac Rd.	w/o Barnett Rd.	EDC (Residential)	69.4	69.5	0.1	Yes
26	Ethanac Rd.	e/o Trumble Rd.	Commercial	67.1	67.1	0.0	No
27	Ethanac Rd.	e/o Sherman Rd.	Business Park (Res.)	65.4	65.4	0.0	Yes

Table 4.11-12 Existing Off-Site Phase 1 Project-Related Traffic Noise Impacts (Cont'd)

ID	Road	Segment	Adjacent Planned Land Use[1]	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive?
				No Project	With Project	Project Addition	
28	Rouse Rd.	e/o Encanto Dr.	Residential	53.8	56.6	2.8	Yes
29	Rouse Rd.	e/o Street A	Residential	49.5	53.8	4.3	Yes
30	Rouse Rd.	e/o Sherman Rd.	Residential	48.0	52.5	4.5	Yes
31	Rouse Rd.	e/o Antelope Rd.	Residential	n/a	n/a	n/a	n/a
32	Chambers Av.	e/o Sherman Rd.	Residential	48.0	48.0	0.0	Yes
33	Chambers Av.	e/o Street C	Residential	41.0	41.0	0.0	Yes
34	McCall Bl.	w/o Sun City Bl.	Residential	64.7	64.9	0.2	Yes
35	McCall Bl.	e/o I-215	EDC (Commercial)	68.5	68.9	0.4	No
36	McCall Bl.	e/o Sherman Rd.	Residential	67.5	67.7	0.2	Yes
37	McCall Bl.	e/o Antelope Rd.	Residential	69.8	70.0	0.2	Yes
38	McCall Bl.	e/o Menifee Rd.	Residential	66.0	66.1	0.1	Yes
39	Trumble Rd.	s/o Ethanac Rd.	Commercial	61.7	63.1	1.4	No
40	Encanto Dr.	s/o A Street	Commercial	63.1	64.8	1.7	No

1. The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
2. Significance Criteria (subsection 4.11.4).

"n/a" = Roadway segment represents unpaved, dirt road under the given scenario.
(Urban Crossroads, 2019c, Table 7-13)

Table 4.11-13 Existing Off-Site Phase 2 Project-Related Traffic Noise Impacts

ID	Road	Segment	Adjacent Planned Land Use[1]	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive?
				No Project	With Project	Project Addition	
1	I-215	n/o Ethanac Rd.	Commercial	83.7	83.8	0.1	No
2	I-215	s/o Ethanac Rd.	Commercial	83.8	83.9	0.1	No
3	I-215	s/o McCall Bl.	EDC/Residential	83.8	84.0	0.2	Yes
4	Encanto Dr.	n/o McLaughlin Rd.	Commercial	63.7	65.9	2.2	No
5	Encanto Dr.	s/o McLaughlin Rd.	Commercial	63.3	65.6	2.3	No
6	Encanto Dr.	s/o Chambers Av.	EDC	64.9	65.3	0.4	No
7	Encanto Dr.	s/o Shadel Rd.	Commercial	60.3	60.7	0.4	No
8	Sherman Rd.	s/o SR-74	EDC/Business Park	61.8	61.8	0.0	No
9	Sherman Rd.	s/o Ethanac Rd.	Business Park	52.0	52.0	0.0	No
10	Sherman Rd.	s/o McLaughlin Rd.	Residential	46.0	46.0	0.0	Yes
11	Antelope Rd.	s/o Ethanac Rd.	Business Park	53.7	53.7	0.0	No
12	Antelope Rd.	s/o Chambers Av.	EDC	n/a	n/a	n/a	n/a
13	Palomar Rd.	n/o SR-74	Business Park	60.6	60.6	0.0	No
14	Menifee Rd.	n/o SR-74	Business Park	65.1	65.3	0.2	No
15	Menifee Rd.	s/o SR-74	Residential	67.4	67.6	0.2	Yes
16	Menifee Rd.	s/o Rouse Rd.	Residential	67.6	67.8	0.2	Yes
17	SR-74	e/o I-215	EDC	72.2	72.2	0.0	No
18	SR-74	e/o Trumble Rd.	EDC	70.8	70.8	0.0	No
19	SR-74	e/o Sherman Rd.	Commercial	70.0	70.0	0.0	No
20	SR-74	w/o Palomar Rd.	Open Space	70.9	70.9	0.0	No
21	SR-74	e/o Palomar Rd.	Business Park	71.8	71.8	0.0	No
22	SR-74	e/o Menifee Rd.	Commercial/School	72.8	72.9	0.1	Yes
23	Ethanac Rd.	w/o Goetz Rd.	EDC (Residential)	61.3	61.3	0.0	Yes
24	Ethanac Rd.	e/o Goetz Rd.	EDC (Residential)	68.7	68.8	0.1	Yes
25	Ethanac Rd.	w/o Barnett Rd.	EDC (Residential)	69.4	69.6	0.2	Yes
26	Ethanac Rd.	e/o Trumble Rd.	Commercial	67.1	67.1	0.0	No
27	Ethanac Rd.	e/o Sherman Rd.	Business Park (Res.)	65.4	65.4	0.0	Yes

Table 4.11-13 Existing Off-Site Phase 2 Project-Related Traffic Noise Impacts (Cont'd)

ID	Road	Segment	Adjacent Planned Land Use[1]	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive?
				No Project	With Project	Project Addition	
28	Rouse Rd.	e/o Encanto Dr.	Residential	53.8	57.6	3.8	Yes
29	Rouse Rd.	e/o Street A	Residential	49.5	55.3	5.8	Yes
30	Rouse Rd.	e/o Sherman Rd.	Residential	48.0	53.8	5.8	Yes
31	Rouse Rd.	e/o Antelope Rd.	Residential	n/a	n/a	n/a	n/a
32	Chambers Av.	e/o Sherman Rd.	Residential	48.0	48.8	0.8	Yes
33	Chambers Av.	e/o Street C	Residential	41.0	41.0	0.0	Yes
34	McCall Bl.	w/o Sun City Bl.	Residential	64.7	65.0	0.3	Yes
35	McCall Bl.	e/o I-215	EDC (Commercial)	68.5	69.0	0.5	No
36	McCall Bl.	e/o Sherman Rd.	Residential	67.5	67.9	0.4	Yes
37	McCall Bl.	e/o Antelope Rd.	Residential	69.8	70.1	0.3	Yes
38	McCall Bl.	e/o Menifee Rd.	Residential	66.0	66.2	0.2	Yes
39	Trumble Rd.	s/o Ethanac Rd.	Commercial	61.7	63.8	2.1	No
40	Encanto Dr.	s/o A Street	Commercial	63.1	65.6	2.5	No

1. The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
2. Significance Criteria (subsection 4.11.4).

"n/a" = Roadway segment represents unpaved, dirt road under the given scenario.
(Urban Crossroads, 2019c, Table 7-14)

❑ Existing Plus Project Buildout

Table 4.11-14, *Existing Off-Site Project Buildout-Related Traffic Noise Impacts*, presents a comparison of the Existing without and with Project Buildout conditions CNEL noise levels. Table 4.11-14 presents the Existing with Project Buildout conditions noise level contours that are expected to range from 41.0 to 84.1 dBA CNEL. As shown on Table 4.11-14 the Project is expected to generate exterior noise level increases ranging from 0.0 to 6.4 dBA CNEL, which exceeds significance thresholds identified in Table 4.11-7 at nine of 40 off-site roadway segments: Encanto Drive north of McLaughlin Road (Segment 4), Encanto Drive south of McLaughlin Road (Segment 5), Encanto Drive south of Chambers Avenue (Segment 6), Encanto Drive south of Shadel Road (Segment 7), Rouse Road east of Street A (Segment 29), Rouse Road east of Sherman Road (Segment 30), Chambers Avenue east of Sherman Road (Segment 32), Trumble Road south of Ethanac Road (Segment 39) and Encanto Drive south of "A" Street (Segment 40).

However, this scenario is provided solely for informational purposes and will not occur since the Project would not be built and occupied under Existing conditions. Refer instead to the analysis of Project impacts under Opening Year 2020 with Phase 1, Opening Year 2023 with Phase 2, and Opening Year 2025 with Project Buildout conditions. (Urban Crossroads, 2019c, pp. 63-64)

Table 4.11-14 Existing Off-Site Project Buildout-Related Traffic Noise Impacts

ID	Road	Segment	Adjacent Planned Land Use[1]	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive?
				No Project	With Project	Project Addition	
1	I-215	n/o Ethanac Rd.	Commercial	83.7	84.0	0.3	No
2	I-215	s/o Ethanac Rd.	Commercial	83.8	84.0	0.2	No
3	I-215	s/o McCall Bl.	EDC/Residential	83.8	84.1	0.3	Yes
4	Encanto Dr.	n/o McLaughlin Rd.	Commercial	63.7	67.3	3.6	No
5	Encanto Dr.	s/o McLaughlin Rd.	Commercial	63.3	67.1	3.8	No
6	Encanto Dr.	s/o Chambers Av.	EDC	64.9	68.1	3.2	No
7	Encanto Dr.	s/o Shadel Rd.	Commercial	60.3	63.4	3.1	No
8	Sherman Rd.	s/o SR-74	EDC/Business Park	61.8	61.8	0.0	No
9	Sherman Rd.	s/o Ethanac Rd.	Business Park	52.0	52.0	0.0	No
10	Sherman Rd.	s/o McLaughlin Rd.	Residential	46.0	46.0	0.0	Yes
11	Antelope Rd.	s/o Ethanac Rd.	Business Park	53.7	53.7	0.0	No
12	Antelope Rd.	s/o Chambers Av.	EDC	n/a	n/a	n/a	n/a
13	Palomar Rd.	n/o SR-74	Business Park	60.6	60.6	0.0	No
14	Menifee Rd.	n/o SR-74	Business Park	65.1	65.4	0.3	No
15	Menifee Rd.	s/o SR-74	Residential	67.4	67.8	0.4	Yes
16	Menifee Rd.	s/o Rouse Rd.	Residential	67.6	67.9	0.3	Yes
17	SR-74	e/o I-215	EDC	72.2	72.2	0.0	No
18	SR-74	e/o Trumble Rd.	EDC	70.8	70.8	0.0	No
19	SR-74	e/o Sherman Rd.	Commercial	70.0	70.0	0.0	No
20	SR-74	w/o Palomar Rd.	Open Space	70.9	70.9	0.0	No
21	SR-74	e/o Palomar Rd.	Business Park	71.8	71.8	0.0	No
22	SR-74	e/o Menifee Rd.	Commercial/School	72.8	72.9	0.1	Yes
23	Ethanac Rd.	w/o Goetz Rd.	EDC (Residential)	61.3	61.5	0.2	Yes
24	Ethanac Rd.	e/o Goetz Rd.	EDC (Residential)	68.7	68.9	0.2	Yes
25	Ethanac Rd.	w/o Barnett Rd.	EDC (Residential)	69.4	69.6	0.2	Yes
26	Ethanac Rd.	e/o Trumble Rd.	Commercial	67.1	67.1	0.0	No
27	Ethanac Rd.	e/o Sherman Rd.	Business Park (Res.)	65.4	65.4	0.0	Yes

Table 4.11-14 Existing Off-Site Project Buildout-Related Traffic Noise Impacts (Cont'd)

ID	Road	Segment	Adjacent Planned Land Use[1]	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive?
				No Project	With Project	Project Addition	
28	Rouse Rd.	e/o Encanto Dr.	Residential	53.8	57.8	4.0	Yes
29	Rouse Rd.	e/o Street A	Residential	49.5	55.9	6.4	Yes
30	Rouse Rd.	e/o Sherman Rd.	Residential	48.0	53.6	5.6	Yes
31	Rouse Rd.	e/o Antelope Rd.	Residential	n/a	n/a	n/a	n/a
32	Chambers Av.	e/o Sherman Rd.	Residential	48.0	54.0	6.0	Yes
33	Chambers Av.	e/o Street C	Residential	41.0	41.0	0.0	Yes
34	McCall Bl.	w/o Sun City Bl.	Residential	64.7	65.1	0.4	Yes
35	McCall Bl.	e/o I-215	EDC (Commercial)	68.5	69.2	0.7	No
36	McCall Bl.	e/o Sherman Rd.	Residential	67.5	68.1	0.6	Yes
37	McCall Bl.	e/o Antelope Rd.	Residential	69.8	70.3	0.5	Yes
38	McCall Bl.	e/o Menifee Rd.	Residential	66.0	66.3	0.3	Yes
39	Trumble Rd.	s/o Ethanac Rd.	Commercial	61.7	65.1	3.4	No
40	Encanto Dr.	s/o A Street	Commercial	63.1	67.0	3.9	No

1. The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
2. Significance Criteria (subsection 4.11.4).

"n/a" = Roadway segment represents unpaved, dirt road under the given scenario.
(Urban Crossroads, 2019c, Table 7-15)

2. Opening Year Cumulative 2020 Without / With Phase 1 of the Project

Table 4.11-15, *Opening Year Cumulative 2020 Project-Related Traffic Noise Impacts*, presents a comparison of the Opening Year 2020 without and with Phase 1 Project conditions CNEL noise levels. Table 4.11-15 shows that the unmitigated exterior noise levels are expected to range from 41.0 to 84.1 dBA CNEL for Opening Year Cumulative 2020 without Project conditions. Table 4.11-15 presents the Opening Year Cumulative 2020 with Phase 1 Project conditions noise level contours that are expected to range from 41.0 to 84.2 dBA CNEL. As shown on Table 4.11-15 the Project is expected to generate an exterior noise level increase of up to 2.2 dBA CNEL, which is below the significance thresholds identified in Table 4.11-7. Therefore, the Phase 1 Project-related off-site traffic noise level increases are considered less than significant for Opening Year Cumulative 2020 conditions. (Urban Crossroads, 2019c, p. 64)

3. Opening Year Cumulative 2023 Without / With Phase 2 of the Project

Table 4.11-16, *Opening Year Cumulative 2023 Phase 2 Project-Related Traffic Noise Impacts*, presents a comparison of the Opening Year Cumulative 2023 without and with Phase 2 Project conditions CNEL noise levels. Table 4.11-16 shows that the unmitigated exterior noise levels are expected to range from 41.0 to 84.3 dBA CNEL for Opening Year Cumulative 2023 without Project conditions. Table 4.11-16 presents the Opening Year Cumulative 2023 with Phase 2 Project conditions noise level contours that are expected to range from 41.0 to 84.5 dBA CNEL. As shown on Table 4.11-16 the Project is expected to generate an exterior noise level increase of up to 2.9 dBA CNEL, which is below the significance thresholds identified in Table 4.11-7. Therefore, the Phase 2 Project-related off-site traffic noise level increases are considered less than significant for Opening Year Cumulative 2023 conditions. (Urban Crossroads, 2019c, p. 64)

4. Opening Year Cumulative 2025 Without / With Buildout of the Project

Table 4.11-17, *Opening Year Cumulative 2025 Project Buildout-Related Traffic Noise* Impacts, presents a comparison of the Opening Year Cumulative 2025 without and with Project Buildout conditions CNEL noise levels. Table 4.11-17 shows that the unmitigated exterior noise levels are expected to range from 41.0 to 84.7 dBA CNEL for Opening Year Cumulative 2025 without Project conditions. Table 4.11-17 presents the Opening Year 2025 with Project Buildout conditions noise level contours that are expected to range from 41.0 to 84.9 dBA CNEL. As shown on Table 4.11-17 the Project is expected to generate an exterior noise level increase of up to 4.7 dBA CNEL, which is below the significance thresholds identified in Table 4.11-7. Therefore, the Project Buildout-related off-site traffic noise level increases are considered less than significant for Opening Year Cumulative 2025 conditions. (Urban Crossroads, 2019c, p. 64)

5. Horizon Year 2040 Without / With Project

Table 4.11-18, *Horizon Year 2040 Project-Related Traffic Noise Impacts*, presents a comparison of the Horizon Year 2040 without and with Project conditions CNEL noise levels. Table 4.11-18 shows that the unmitigated exterior noise levels are expected to range from 55.8 to 85.6 dBA CNEL for Horizon Year 2040 without Project conditions. Table 4.11-18 presents the Horizon Year 2040 with Project conditions noise level contours that are expected to range from 57.6 to 85.8 dBA CNEL. As shown on Table 4.11-18 the Project is expected to generate an exterior noise level increase of up to 3.0 dBA CNEL, which is below the significance thresholds identified in Table 4.11-7. Therefore, the Project-related off-site traffic noise level increases are considered less than significant for Horizon Year 2040 conditions. (Urban Crossroads, 2019c, p. 65)

Table 4.11-15 Opening Year Cumulative 2020 Project-Related Traffic Noise Impacts

ID	Road	Segment	Adjacent Planned Land Use[1]	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive?	Threshold Exceeded?[2]
				No Project	With Project	Project Addition		
1	I-215	n/o Ethanac Rd.	Commercial	84.0	84.1	0.1	No	No
2	I-215	s/o Ethanac Rd.	Commercial	84.1	84.2	0.1	No	No
3	I-215	s/o McCall Bl.	EDC/Residential	84.1	84.2	0.1	Yes	No
4	Encanto Dr.	n/o McLaughlin Rd.	Commercial	65.7	66.7	1.0	No	No
5	Encanto Dr.	s/o McLaughlin Rd.	Commercial	65.5	66.5	1.0	No	No
6	Encanto Dr.	s/o Chambers Av.	EDC	66.5	66.7	0.2	No	No
7	Encanto Dr.	s/o Shadel Rd.	Commercial	61.0	61.1	0.1	No	No
8	Sherman Rd.	s/o SR-74	EDC/Business Park	63.8	63.8	0.0	No	No
9	Sherman Rd.	s/o Ethanac Rd.	Business Park	64.8	64.8	0.0	No	No
10	Sherman Rd.	s/o McLaughlin Rd.	Residential	46.0	46.0	0.0	Yes	No
11	Antelope Rd.	s/o Ethanac Rd.	Business Park	63.0	63.0	0.0	No	No
12	Antelope Rd.	s/o Chambers Av.	EDC	60.9	60.9	0.0	No	No
13	Palomar Rd.	n/o SR-74	Business Park	63.9	63.9	0.0	No	No
14	Menifee Rd.	n/o SR-74	Business Park	66.7	66.7	0.0	No	No
15	Menifee Rd.	s/o SR-74	Residential	69.4	69.5	0.1	Yes	No
16	Menifee Rd.	s/o Rouse Rd.	Residential	69.0	69.1	0.1	Yes	No
17	SR-74	e/o I-215	EDC	73.2	73.2	0.0	No	No
18	SR-74	e/o Trumble Rd.	EDC	71.7	71.7	0.0	No	No
19	SR-74	e/o Sherman Rd.	Commercial	70.6	70.6	0.0	No	No
20	SR-74	w/o Palomar Rd.	Open Space	72.3	72.3	0.0	No	No
21	SR-74	e/o Palomar Rd.	Business Park	73.3	73.3	0.0	No	No
22	SR-74	e/o Menifee Rd.	Commercial/School	73.9	73.9	0.0	Yes	No
23	Ethanac Rd.	w/o Goetz Rd.	EDC (Residential)	63.3	63.3	0.0	Yes	No
24	Ethanac Rd.	e/o Goetz Rd.	EDC (Residential)	70.0	70.1	0.1	Yes	No
25	Ethanac Rd.	w/o Barnett Rd.	EDC (Residential)	71.0	71.1	0.1	Yes	No
26	Ethanac Rd.	e/o Trumble Rd.	Commercial	71.1	71.1	0.0	No	No
27	Ethanac Rd.	e/o Sherman Rd.	Business Park (Res.)	67.5	67.5	0.0	Yes	No

Table 4.11-15 Opening Year Cumulative 2020 Project-Related Traffic Noise Impacts (Cont'd)

ID	Road	Segment	Adjacent Planned Land Use[1]	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive?	Threshold Exceeded?[2]
				No Project	With Project	Project Addition		
28	Rouse Rd.	e/o Encanto Dr.	Residential	55.3	57.5	2.2	Yes	No
29	Rouse Rd.	e/o Street A	Residential	54.4	56.3	1.9	Yes	No
30	Rouse Rd.	e/o Sherman Rd.	Residential	53.6	55.5	1.9	Yes	No
31	Rouse Rd.	e/o Antelope Rd.	Residential	58.8	58.8	0.0	Yes	No
32	Chambers Av.	e/o Sherman Rd.	Residential	48.0	48.0	0.0	Yes	No
33	Chambers Av.	e/o Street C	Residential	41.0	41.0	0.0	Yes	No
34	McCall Bl.	w/o Sun City Bl.	Residential	65.7	65.8	0.1	Yes	No
35	McCall Bl.	e/o I-215	EDC (Commercial)	70.0	70.2	0.2	No	No
36	McCall Bl.	e/o Sherman Rd.	Residential	70.1	70.2	0.1	Yes	No
37	McCall Bl.	e/o Antelope Rd.	Residential	71.0	71.2	0.2	Yes	No
38	McCall Bl.	e/o Menifee Rd.	Residential	67.4	67.5	0.1	Yes	No
39	Trumble Rd.	s/o Ethanac Rd.	Commercial	66.5	67.0	0.5	No	No
40	Encanto Dr.	s/o A Street	Commercial	68.8	69.3	0.5	No	No

1. The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
2. Significance Criteria (subsection 4.11.4).
(Urban Crossroads, 2019c, Table 7-16)

Table 4.11-16 Opening Year Cumulative 2023 Phase 2 Project-Related Traffic Noise Impacts

ID	Road	Segment	Adjacent Planned Land Use[1]	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive?	Threshold Exceeded?[2]
				No Project	With Project	Project Addition		
1	I-215	n/o Ethanac Rd.	Commercial	84.2	84.3	0.1	No	No
2	I-215	s/o Ethanac Rd.	Commercial	84.3	84.4	0.1	No	No
3	I-215	s/o McCall Bl.	EDC/Residential	84.3	84.5	0.2	Yes	No
4	Encanto Dr.	n/o McLaughlin Rd.	Commercial	66.5	67.8	1.3	No	No
5	Encanto Dr.	s/o McLaughlin Rd.	Commercial	66.3	67.7	1.4	No	No
6	Encanto Dr.	s/o Chambers Av.	EDC	67.2	67.5	0.3	No	No
7	Encanto Dr.	s/o Shadel Rd.	Commercial	61.3	61.7	0.4	No	No
8	Sherman Rd.	s/o SR-74	EDC/Business Park	64.2	64.2	0.0	No	No
9	Sherman Rd.	s/o Ethanac Rd.	Business Park	66.5	66.5	0.0	No	No
10	Sherman Rd.	s/o McLaughlin Rd.	Residential	46.0	46.0	0.0	Yes	No
11	Antelope Rd.	s/o Ethanac Rd.	Business Park	63.0	63.0	0.0	No	No
12	Antelope Rd.	s/o Chambers Av.	EDC	60.9	60.9	0.0	No	No
13	Palomar Rd.	n/o SR-74	Business Park	64.0	64.0	0.0	No	No
14	Menifee Rd.	n/o SR-74	Business Park	67.3	67.4	0.1	No	No
15	Menifee Rd.	s/o SR-74	Residential	70.1	70.3	0.2	Yes	No
16	Menifee Rd.	s/o Rouse Rd.	Residential	69.5	69.7	0.2	Yes	No
17	SR-74	e/o I-215	EDC	73.5	73.5	0.0	No	No
18	SR-74	e/o Trumble Rd.	EDC	71.9	71.9	0.0	No	No
19	SR-74	e/o Sherman Rd.	Commercial	70.8	70.8	0.0	No	No
20	SR-74	w/o Palomar Rd.	Open Space	72.5	72.5	0.0	No	No
21	SR-74	e/o Palomar Rd.	Business Park	73.7	73.7	0.0	No	No
22	SR-74	e/o Menifee Rd.	Commercial/School	74.4	74.4	0.0	Yes	No
23	Ethanac Rd.	w/o Goetz Rd.	EDC (Residential)	63.9	63.9	0.0	Yes	No
24	Ethanac Rd.	e/o Goetz Rd.	EDC (Residential)	70.6	70.7	0.1	Yes	No
25	Ethanac Rd.	w/o Barnett Rd.	EDC (Residential)	71.7	71.8	0.1	Yes	No
26	Ethanac Rd.	e/o Trumble Rd.	Commercial	71.2	71.2	0.0	No	No
27	Ethanac Rd.	e/o Sherman Rd.	Business Park (Res.)	68.3	68.3	0.0	Yes	No

Table 4.11-16 Opening Year Cumulative 2023 Phase 2 Project-Related Traffic Noise Impacts (Cont'd)

ID	Road	Segment	Adjacent Planned Land Use[1]	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive?	Threshold Exceeded?[2]
				No Project	With Project	Project Addition		
28	Rouse Rd.	e/o Encanto Dr.	Residential	56.1	58.7	2.6	Yes	No
29	Rouse Rd.	e/o Street A	Residential	54.4	57.3	2.9	Yes	No
30	Rouse Rd.	e/o Sherman Rd.	Residential	53.6	56.3	2.7	Yes	No
31	Rouse Rd.	e/o Antelope Rd.	Residential	58.8	58.8	0.0	Yes	No
32	Chambers Av.	e/o Sherman Rd.	Residential	48.0	49.5	1.5	Yes	No
33	Chambers Av.	e/o Street C	Residential	41.0	41.0	0.0	Yes	No
34	McCall Bl.	w/o Sun City Bl.	Residential	66.1	66.3	0.2	Yes	No
35	McCall Bl.	e/o I-215	EDC (Commercial)	70.6	70.9	0.3	No	No
36	McCall Bl.	e/o Sherman Rd.	Residential	70.2	70.4	0.2	Yes	No
37	McCall Bl.	e/o Antelope Rd.	Residential	71.5	71.8	0.3	Yes	No
38	McCall Bl.	e/o Menifee Rd.	Residential	68.0	68.1	0.1	Yes	No
39	Trumble Rd.	s/o Ethanac Rd.	Commercial	66.5	67.4	0.9	No	No
40	Encanto Dr.	s/o A Street	Commercial	68.8	69.6	0.8	No	No

1. The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
2. Significance Criteria (subsection 4.11.4).
(Urban Crossroads, 2019c, Table 7-17)

Table 4.11-17 Opening Year Cumulative 2025 Project Buildout-Related Traffic Noise Impacts

ID	Road	Segment	Adjacent Planned Land Use[1]	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive?	Threshold Exceeded?[2]
				No Project	With Project	Project Addition		
1	I-215	n/o Ethanac Rd.	Commercial	84.6	84.8	0.2	No	No
2	I-215	s/o Ethanac Rd.	Commercial	84.7	84.9	0.2	No	No
3	I-215	s/o McCall Bl.	EDC/Residential	84.7	84.9	0.2	Yes	No
4	Encanto Dr.	n/o McLaughlin Rd.	Commercial	67.2	69.2	2.0	No	No
5	Encanto Dr.	s/o McLaughlin Rd.	Commercial	67.0	69.1	2.1	No	No
6	Encanto Dr.	s/o Chambers Av.	EDC	67.8	69.8	2.0	No	No
7	Encanto Dr.	s/o Shadel Rd.	Commercial	61.7	64.1	2.4	No	No
8	Sherman Rd.	s/o SR-74	EDC/Business Park	64.7	64.7	0.0	No	No
9	Sherman Rd.	s/o Ethanac Rd.	Business Park	67.7	67.7	0.0	No	No
10	Sherman Rd.	s/o McLaughlin Rd.	Residential	46.0	46.0	0.0	Yes	No
11	Antelope Rd.	s/o Ethanac Rd.	Business Park	63.1	63.1	0.0	No	No
12	Antelope Rd.	s/o Chambers Av.	EDC	60.9	60.9	0.0	No	No
13	Palomar Rd.	n/o SR-74	Business Park	64.2	64.2	0.0	No	No
14	Menifee Rd.	n/o SR-74	Business Park	67.9	68.0	0.1	No	No
15	Menifee Rd.	s/o SR-74	Residential	70.8	71.0	0.2	Yes	No
16	Menifee Rd.	s/o Rouse Rd.	Residential	70.1	70.3	0.2	Yes	No
17	SR-74	e/o I-215	EDC	73.9	73.9	0.0	No	No
18	SR-74	e/o Trumble Rd.	EDC	72.3	72.3	0.0	No	No
19	SR-74	e/o Sherman Rd.	Commercial	71.1	71.1	0.0	No	No
20	SR-74	w/o Palomar Rd.	Open Space	72.7	72.7	0.0	No	No
21	SR-74	e/o Palomar Rd.	Business Park	73.9	73.9	0.0	No	No
22	SR-74	e/o Menifee Rd.	Commercial/School	74.9	74.9	0.0	Yes	No
23	Ethanac Rd.	w/o Goetz Rd.	EDC (Residential)	64.6	64.6	0.0	Yes	No
24	Ethanac Rd.	e/o Goetz Rd.	EDC (Residential)	71.2	71.3	0.1	Yes	No
25	Ethanac Rd.	w/o Barnett Rd.	EDC (Residential)	72.3	72.4	0.1	Yes	No
26	Ethanac Rd.	e/o Trumble Rd.	Commercial	71.3	71.3	0.0	No	No
27	Ethanac Rd.	e/o Sherman Rd.	Business Park (Res.)	69.0	69.0	0.0	Yes	No

Table 4.11-17 Opening Year Cumulative 2025 Project Buildout-Related Traffic Noise Impacts (Cont'd)

ID	Road	Segment	Adjacent Planned Land Use[1]	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive?	Threshold Exceeded?[2]
				No Project	With Project	Project Addition		
28	Rouse Rd.	e/o Encanto Dr.	Residential	56.6	59.1	2.5	Yes	No
29	Rouse Rd.	e/o Street A	Residential	54.4	57.6	3.2	Yes	No
30	Rouse Rd.	e/o Sherman Rd.	Residential	53.8	56.1	2.3	Yes	No
31	Rouse Rd.	e/o Antelope Rd.	Residential	58.8	58.8	0.0	Yes	No
32	Chambers Av.	e/o Sherman Rd.	Residential	49.5	54.2	4.7	Yes	No
33	Chambers Av.	e/o Street C	Residential	41.0	41.0	0.0	Yes	No
34	McCall Bl.	w/o Sun City Bl.	Residential	66.6	66.9	0.3	Yes	No
35	McCall Bl.	e/o I-215	EDC (Commercial)	71.2	71.6	0.4	No	No
36	McCall Bl.	e/o Sherman Rd.	Residential	70.3	70.6	0.3	Yes	No
37	McCall Bl.	e/o Antelope Rd.	Residential	72.0	72.4	0.4	Yes	No
38	McCall Bl.	e/o Menifee Rd.	Residential	68.5	68.7	0.2	Yes	No
39	Trumble Rd.	s/o Ethanac Rd.	Commercial	66.7	68.1	1.4	No	No
40	Encanto Dr.	s/o A Street	Commercial	68.9	70.3	1.4	No	No

1. The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
2. Significance Criteria (subsection 4.11.4).
(Urban Crossroads, 2019c, Table 7-18)

Table 4.11-18 Horizon Year 2040 Project-Related Traffic Noise Impacts

ID	Road	Segment	Adjacent Planned Land Use[1]	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive?	Threshold Exceeded?[2]
				No Project	With Project	Project Addition		
1	I-215	n/o Ethanac Rd.	Commercial	85.4	85.5	0.1	No	No
2	I-215	s/o Ethanac Rd.	Commercial	85.5	85.6	0.1	No	No
3	I-215	s/o McCall Bl.	EDC/Residential	85.6	85.8	0.2	Yes	No
4	Encanto Dr.	n/o McLaughlin Rd.	Commercial	68.4	69.6	1.2	No	No
5	Encanto Dr.	s/o McLaughlin Rd.	Commercial	68.3	69.5	1.2	No	No
6	Encanto Dr.	s/o Chambers Av.	EDC	69.3	70.0	0.7	No	No
7	Encanto Dr.	s/o Shadel Rd.	Commercial	64.0	64.7	0.7	No	No
8	Sherman Rd.	s/o SR-74	EDC/Business Park	68.2	68.5	0.3	No	No
9	Sherman Rd.	s/o Ethanac Rd.	Business Park	66.8	67.9	1.1	No	No
10	Sherman Rd.	s/o McLaughlin Rd.	Residential	67.5	68.6	1.1	Yes	No
11	Antelope Rd.	s/o Ethanac Rd.	Business Park	68.4	68.5	0.1	No	No
12	Antelope Rd.	s/o Chambers Av.	EDC	62.9	63.6	0.7	No	No
13	Palomar Rd.	n/o SR-74	Business Park	66.6	66.8	0.2	No	No
14	Menifee Rd.	n/o SR-74	Business Park	72.3	72.4	0.1	No	No
15	Menifee Rd.	s/o SR-74	Residential	72.9	73.0	0.1	Yes	No
16	Menifee Rd.	s/o Rouse Rd.	Residential	73.8	73.8	0.0	Yes	No
17	SR-74	e/o I-215	EDC	74.3	74.4	0.1	No	No
18	SR-74	e/o Trumble Rd.	EDC	73.1	73.2	0.1	No	No
19	SR-74	e/o Sherman Rd.	Commercial	73.6	73.6	0.0	No	No
20	SR-74	w/o Palomar Rd.	Open Space	75.3	75.3	0.0	No	No
21	SR-74	e/o Palomar Rd.	Business Park	76.1	76.2	0.1	No	No
22	SR-74	e/o Menifee Rd.	Commercial/School	75.8	75.8	0.0	Yes	No
23	Ethanac Rd.	w/o Goetz Rd.	EDC (Residential)	74.1	74.1	0.0	Yes	No
24	Ethanac Rd.	e/o Goetz Rd.	EDC (Residential)	74.7	74.8	0.1	Yes	No
25	Ethanac Rd.	w/o Barnett Rd.	EDC (Residential)	74.9	75.0	0.1	Yes	No
26	Ethanac Rd.	e/o Trumble Rd.	Commercial	74.6	74.8	0.2	No	No
27	Ethanac Rd.	e/o Sherman Rd.	Business Park (Res.)	74.0	74.0	0.0	Yes	No

Table 4.11-18 Horizon Year 2040 Project-Related Traffic Noise Impacts (Cont'd)

ID	Road	Segment	Adjacent Planned Land Use[1]	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive?	Threshold Exceeded?[2]
				No Project	With Project	Project Addition		
28	Rouse Rd.	e/o Encanto Dr.	Residential	56.9	59.6	2.7	Yes	No
29	Rouse Rd.	e/o Street A	Residential	55.8	58.8	3.0	Yes	No
30	Rouse Rd.	e/o Sherman Rd.	Residential	55.9	58.2	2.3	Yes	No
31	Rouse Rd.	e/o Antelope Rd.	Residential	63.2	63.4	0.2	Yes	No
32	Chambers Av.	e/o Sherman Rd.	Residential	55.8	57.6	1.8	Yes	No
33	Chambers Av.	e/o Street C	Residential	58.4	58.9	0.5	Yes	No
34	McCall Bl.	w/o Sun City Bl.	Residential	66.9	67.0	0.1	Yes	No
35	McCall Bl.	e/o I-215	EDC (Commercial)	71.8	72.0	0.2	No	No
36	McCall Bl.	e/o Sherman Rd.	Residential	71.0	71.1	0.1	Yes	No
37	McCall Bl.	e/o Antelope Rd.	Residential	72.6	72.8	0.2	Yes	No
38	McCall Bl.	e/o Menifee Rd.	Residential	72.5	72.6	0.1	Yes	No
39	Trumble Rd.	s/o Ethanac Rd.	Commercial	68.9	68.9	0.0	No	No
40	Encanto Dr.	s/o A Street	Commercial	71.2	71.2	0.0	No	No

1. The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
2. Significance Criteria (subsection 4.11.4).
(Urban Crossroads, 2019c, Table 7-19)

6. Encanto Drive Closure Analysis

According to the City of Perris, the buildout of the Perris Towne Center project will include the closure of Encanto Drive at Ethanac Road. In order to access Encanto Road, traffic will be redirected via Trumble Road (Segment 39) and "A" Street (located within the Perris Towne Center site) to Encanto Road south of "A" Street (Segment 40). To evaluate the Encanto Drive closure, the Traffic Impact Analysis redistributed the existing traffic volumes along Encanto Drive to "A" Street and Trumble Road. Project (Phase 1), Project (Phase 2), and Project (Buildout) traffic volumes have then been added to the Existing redistributed traffic volumes. As shown in Table 4.11-15 through Table 4.11-18, the Project would not significantly impact any roadway segments with traffic-related noise as a result of the closure of this intersection. (Urban Crossroads, 2019c, p. 65)

C. On-Site Noise Effects from Transportation-Related Sources

Urban Crossroads, Inc. expects that the primary source of noise impacts to the Project site would be traffic noise from I-215, Encanto Drive, Sherman Road, Antelope Road, Rouse Road, and Chambers Avenue. The Project would also experience some background traffic noise impacts from the Project's internal local streets, however, due to the low traffic volume/speeds, Urban Crossroads, Inc. does not expect traffic noise from these roadways to substantially contribute to the noise environment. (Urban Crossroads, 2019c, p. 81) As a general matter, CEQA does not require the analysis of the environment's impact on the Project (see the decision reached by the Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, Case No. S213478). Therefore, CEQA does not require that the potential noise impacts from the environment (unrelated to the Project) be analyzed with respect to their effect(s) on future residents of the Project. Thus, impacts to the Project from transportation-related noise to the Project site are provided for information purposes only. A separate analysis is provided to determine the Project-related noise contributions on study area roadways.

1. On-Site Exterior Traffic Noise Analysis

Using the FHWA traffic noise prediction model and the parameters outlined in Tables 6-4 to 6-6 of the Project's Noise Impact Analysis (*Technical Appendix J*), the expected future exterior noise levels for the on-site building were calculated by Urban Crossroads, Inc. Table 4.11-19, *Exterior Noise Levels (CNEL)*, presents a summary of future exterior noise level impacts in the single-family residential outdoor living areas (backyards), commercial building facades, and outdoor community park uses of the Project Planning Areas. The on-site traffic noise level impacts indicate that the Planning Areas adjacent to I-215, Encanto Drive, Sherman Road, Antelope Road, Rouse Road, and Chambers Avenue would experience unmitigated exterior noise levels ranging from 58.7 to 76.0 dBA CNEL. Refer to Appendix 8.1 of the Noise Impact Analysis (*Technical Appendix J*) for the on-site traffic noise analysis calculations. (Urban Crossroads, 2019c, p. 81)

As a general matter, CEQA does not require the analysis of the environment's impact on the Project (see the decision reached by the Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, Case No. S213478). Therefore, CEQA does not require that the potential noise impacts from the environment (unrelated to the Project) be analyzed with respect to their effect(s) on future residents of the Project. However, the City of Menifee establishes a 60 dBA CNEL exterior noise level standard for residential land uses. As shown in Table 4.11-19, unmitigated noise levels would exceed the City of Menifee 60 dBA CNEL exterior noise level standard at all of the residential Planning Areas on-site. Thus, impacts would be significant at the proposed residential Planning Areas (Planning Areas 1 through 15) on-site. (Urban Crossroads, 2019c, p. 81)

Table 4.11-19 Exterior Noise Levels (CNEL)

Planning Area	General Plan Noise Element Land Use	Roadway	Unmitigated Exterior Noise Level (dBA CNEL)		Mitigated Exterior Noise Level (dBA CNEL)		Land Use Compatibility Criteria[1]		
			Individual	Combined	Individual	Combined	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable
PA-16	Commercial[2]	I-215	76.0	78.0	-	-	< 70	70 - 75	> 75
		Encanto Dr.	73.5		-				
PA-3	Single-Family Residential	I-215	67.7	68.0	62.2	63.0	< 60	55 - 70	70 - 75
		Encanto Dr.	58.7		53.1				
PA-18	Playground/ Park	I-215	67.8	68.0	-	-	< 70	70 - 75	> 75
		Encanto Dr.	58.8		-				
PA-2, 4, 5, 7, 10, & 12	Single-Family Residential	Sherman Rd.	70.1	-	63.8	-	< 60	55 - 70	70 - 75
PA-11, 13, 15		Antelope Rd.	68.8	-	62.6	-	< 60	55 - 70	70 - 75
PA-1, 2, 8		Rouse Rd.	68.7	-	62.4	-	< 60	55 - 70	70 - 75
PA-6, 7, 14, 15		Chambers Av.	68.4	-	62.0	-	< 60	55 - 70	70 - 75

[1] Source: City of Menifee General Plan Noise Background Document and Definitions, Table N-b3.
[2] Consistent with *normally unacceptable* land use, this noise study demonstrates the necessary interior noise reduction requirements to satisfy the interior noise level standard of 50 dBA CNEL for commercial use, based on the California Green Building Standards Code requirements for non-residential uses.
"PA" = Planning Area; "MDR" = Medium Density Residential
(Urban Crossroads, 2019c, Table 8-1)

The commercial uses proposed for Planning Areas 16 and 17 would experience unmitigated exterior noise levels approaching 78.0 dBA CNEL, which represent "normally unacceptable" land use requiring further interior noise analysis, provided below. Impacts would be significant at the proposed commercial uses on-site. The exterior noise level standard would be exceeded at the proposed community park/community center uses in Planning Area 18; however, the only interior areas requiring interior noise reduction in this Planning Area 18 would be for the proposed community center, and an interior analysis would be required for the community recreation center, only impacts to the proposed community park use portion of Planning Area 18 would be less than significant. (Urban Crossroads, 2019c, p. 81)

2. On-Site Interior Traffic Noise Analysis

To ensure that the interior noise levels comply with the City of Menifee 45 dBA CNEL interior noise standard for residential land uses, and the interior noise level threshold of 50 dBA CNEL based on the California Green Building Standards Code for non-residential buildings (Section 5.507.4.2), Urban Crossroads, Inc. calculated future noise levels at the first and second-floor building façades. The interior noise level is the difference between the predicted exterior noise level at the building facade and the noise reduction of the structure. Typical building construction would provide a Noise Reduction (NR) of approximately 12 dBA with "windows open" and a minimum 25 dBA noise reduction with "windows closed." However, sound leaks, cracks and openings within the window assembly can greatly diminish its effectiveness in reducing noise. Several methods are used to improve interior noise reduction, including: (1) weather-stripped solid core exterior doors; (2) upgraded dual glazed windows; (3) mechanical ventilation/air conditioning; and (4) exterior wall/roof assembles free of cut-outs or openings. (Urban Crossroads, 2019c, p. 83)

Table 4.11-20, *First Floor Interior Noise Impacts (CNEL)*, shows the future unmitigated noise levels (with windows open) at the first-floor building façades are calculated to range from 61.1 to 78.0 dBA CNEL. Table 4.11-21, *Second Floor Interior Noise Impacts (CNEL)*, shows that future unmitigated noise levels (with windows open) at the second-floor building façades are calculated to range from 67.2 to 78.0 dBA CNEL. The interior noise analysis shows that the City of Menifee 45 dBA CNEL interior noise level standards for residential uses can be satisfied using standard windows with a minimum sound transmission class (STC) rating of 27. Upgraded windows with STC ratings of 32 would be required for commercial buildings facing I-215 as well as for the proposed community recreation center in Planning Area 18 to satisfy the 50 dBA CNEL interior noise level threshold for non-residential buildings. Therefore, prior to mitigation, interior noise impacts would be significant. (Urban Crossroads, 2019c, p. 83)

D. Project Operation-Related Noise Effects

Potential operational noise impacts from the Project's stationary noise sources at off-site sensitive receiver locations were analyzed in the Project's Noise Impact Analysis (*Technical Appendix J*). Figure 4.11-4, *Operational Noise Source and Receiver Locations*, identifies the receiver locations and noise source locations used to assess the Project-related operational noise levels. Project-related stationary-source (operational) noise would be generated by activities at the on-site commercial uses, on-site community park, and on-site open space area. The proposed residential land uses are considered noise-sensitive receiving land uses and these residential land uses are not expected to include any specific types of operational noise levels beyond the typical noise sources associated with existing residential land uses in the Project study area. (Urban Crossroads, 2019c, p. 91)

Table 4.11-20 First Floor Interior Noise Impacts (CNEL)

Planning Area	Land Use	Noise Level at Façade[1]	Required Interior Noise Reduction[2]	Estimated Interior Noise Reduction[3]	Upgraded Windows[4]	Interior Noise Level[5]	Threshold	Threshold Exceeded?
PA-16	Commercial	78.0	28.0	30.0	Yes	48.0	50	No
PA-3	Single-Family Res.	63.0	18.0	25.0	No	38.0	45	No
PA-2, 4, 5, 7, 10, & 12	Single-Family Res.	63.0	18.0	25.0	No	38.0	45	No
PA-11, 13, 15		61.8	16.8	25.0	No	36.8	45	No
PA-1, 2, 8		61.3	16.3	25.0	No	36.3	45	No
PA-6, 7, 14, 15		61.1	16.1	25.0	No	36.1	45	No

[1] Exterior noise level at the facade with a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning).
[2] Noise reduction to satisfy the interior noise standards: 45 dBA CNEL for residential use (California Code of Regulations, Title 24, Building Standards Administrative Code), and 50 dBA CNEL for commercial uses (Based on the California Green Building Standards Code, Section 5.507.4.2).
[3] A minimum of 25 dBA noise reduction is assumed with standard building construction.
[4] Does the required interior noise reduction trigger upgraded windows with a minimum STC rating of greater than 27?
[5] Estimated interior noise level with minimum STC rating for all windows.

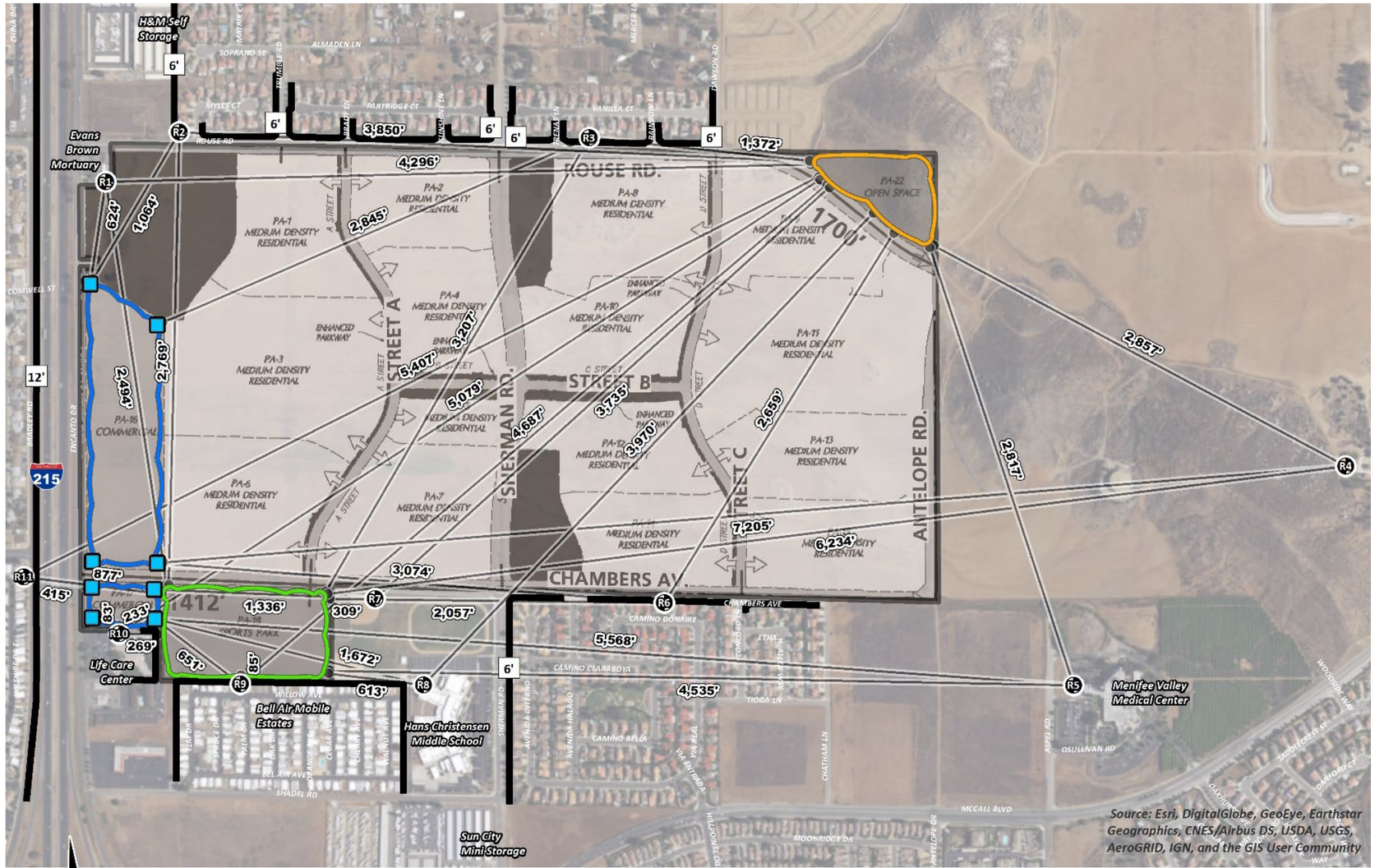
(Urban Crossroads, 2019c, Table 8-2)

Table 4.11-21 Second Floor Interior Noise Impacts (CNEL)

Planning Area	Land Use	Noise Level at Façade[1]	Required Interior Noise Reduction[2]	Estimated Interior Noise Reduction[3]	Upgraded Windows[4]	Interior Noise Level[5]	Threshold	Threshold Exceeded?
PA-16	Commercial	78.0	28.0	30.0	Yes	48.0	50	No
PA-3	Single-Family Res.	68.0	23.0	25.0	No	43.0	45	No
PA-2, 4, 5, 7, 10, & 12	Single-Family Res.	69.1	24.1	25.0	No	44.1	45	No
PA-11, 13, 15		67.8	22.8	25.0	No	42.8	45	No
PA-1, 2, 8		67.5	22.5	25.0	No	42.5	45	No
PA-6, 7, 14, 15		67.2	22.2	25.0	No	42.2	45	No

[1] Exterior noise level at the facade with a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning).
[2] Noise reduction to satisfy the interior noise standards: 45 dBA CNEL for residential use (California Code of Regulations, Title 24, Building Standards Administrative Code), and 50 dBA CNEL for commercial uses (Based on the California Green Building Standards Code, Section 5.507.4.2).
[3] A minimum of 25 dBA noise reduction is assumed with standard building construction.
[4] Does the required interior noise reduction trigger upgraded windows with a minimum STC rating of greater than 27?
[5] Estimated interior noise level with minimum STC rating for all windows.

(Urban Crossroads, 2019c, Table 8-3)



Source(s): Urban Crossroads (12-12-17)

NOT TO SCALE

Figure 4.11-4

OPERATIONAL NOISE SOURCE AND RECEIVER LOCATIONS

To estimate Project operational noise impacts, Urban Crossroads, Inc. collected reference noise level measurements from similar types of activities to represent the noise levels expected with the development of the Project. Table 10-1 of the Project's Noise Impact Analysis (*Technical Appendix J*) shows the reference noise level measurements used to calculate the Project operational noise impacts at each of the sensitive receiver locations, which included roof-top air conditioning units, parking lot vehicle movements, community park activity, and open space activity. Refer to Subsection 10.1 of the Project's Noise Impact Analysis for a description of the reference noise levels used as inputs in the modeling. (Urban Crossroads, 2019c, pp. 91-94)

Table 4.11-22, *Project Operational Noise Levels (dBA Leq)*, shows the operational noise level calculations accounting for distance attenuation provided due to geometric spreading when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. With geometric spreading, sound levels attenuate (or decrease) at a rate of 6 dB for each doubling of distance from a point source (commercial, park, and open space activities). As shown in Table 4.11-22, hourly noise levels associated with the Project's roof-top air conditioning units, parking lot vehicle movements, community park activities, and open space activities are expected to range from 16.4 to 43.0 dBA Leq at the sensitive off-site receiver locations. The operational noise levels associated with the proposed commercial, community park, and open space uses on-site would not exceed the City of Menifee exterior noise level standards of 65 dBA CNEL during daytime hours and 45 dBA CNEL during nighttime hours at the nearby sensitive receivers in the City of Menifee. Therefore, Project-related operational noise level impacts would be less than significant. (Urban Crossroads, 2019c, pp. 94-96)

E. Project Operational Noise Level Contributions

To evaluate the Project's operational noise level contribution, the Project's operational noise levels were combined with the existing ambient noise levels measurements for the off-site receiver locations potentially impacted by Project operational noise sources. The difference between the combined Project and ambient noise levels describe the Project noise level contributions. Noise levels that would be experienced at receiver locations when Project-source noise is added to the ambient daytime conditions are presented on Table 4.11-23, *Daytime Operational Noise Level Contributions (dBA Leq)*. Noise levels that would be experienced at receiver locations when Project-source noise is added to the ambient nighttime conditions are presented on Table 4.11-24, *Nighttime Operational Noise Level Contributions (dBA Leq)*. As indicated in Table 4.11-23, the Project would contribute an operational noise level increase of up to 0.3 dBA Leq during the daytime hours. As indicated in Table 4.11-24, the Project would contribute an operational noise level increase of up to 0.3 dBA Leq during the nighttime hours. Project-related operational noise level contributions of up to 0.3 dBA would not exceed the significance criteria shown in Table 4.11-7. Therefore, the Project would not result in a permanent increase in noise due to Project-related operational noise, and impacts would be less than significant. (Urban Crossroads, 2019c, pp. 97-98)

F. Conclusion

Although impacts during construction would be less than significant, implementation of City Regulation and Design Requirements CRDR 4.11-1 and CRDR 4.11-2 and Mitigation Measures MM 4.11-1, MM 4.11-6, and MM 4.11-7 would reduce the potential for nuisance noise levels at nearby noise-sensitive residential uses during construction, as summarized in Table 4.11-26, *Mitigated Construction Equipment Noise Levels*. Additionally, implementation of City Regulation and Design Requirements CRDR 4.11-1 and CRDR 4.11-2 and Mitigation Measures MM 4.11-1, MM 4.11-6, and MM 4.11-7 would reduce the Project's construction-related noise level increases to below 12 dBA Leq at all receiver locations, as summarized in Table 4.11-27, *Mitigated Construction Temporary Noise Level Increases (dBA Leq)*.

Table 4.11-22 Project Operational Noise Levels (dBA Leq)

Receiver Location[1]	Noise Source(s)[2]	Operational Noise Levels (dBA L_{eq})[3]	Combined Noise Level (dBA L_{eq})
R1	Roof-Top Air Conditioning Units	33.4	34.7
	Parking Lot Vehicle Movements	28.7	
	Sports Park Activity	9.4	
	Open Space Activity	5.0	
R2	Roof-Top Air Conditioning Units	23.4	25.0
	Parking Lot Vehicle Movements	19.7	
	Sports Park Activity	3.0	
	Open Space Activity	0.5	
R3	Roof-Top Air Conditioning Units	14.8	17.9
	Parking Lot Vehicle Movements	13.3	
	Sports Park Activity	1.8	
	Open Space Activity	9.5	
R4	Roof-Top Air Conditioning Units	12.1	16.4
	Parking Lot Vehicle Movements	12.7	
	Sports Park Activity	1.5	
	Open Space Activity	8.6	
R5	Roof-Top Air Conditioning Units	14.4	18.1
	Parking Lot Vehicle Movements	14.4	
	Sports Park Activity	4.2	
	Open Space Activity	8.7	
R6	Roof-Top Air Conditioning Units	14.1	17.1
	Parking Lot Vehicle Movements	12.8	
	Sports Park Activity	5.6	
	Open Space Activity	3.7	
R7	Roof-Top Air Conditioning Units	26.8	31.1
	Parking Lot Vehicle Movements	23.7	
	Sports Park Activity	27.6	
	Open Space Activity	6.3	
R8	Roof-Top Air Conditioning Units	24.8	27.9
	Parking Lot Vehicle Movements	22.2	
	Sports Park Activity	21.6	
	Open Space Activity	5.7	
R9	Roof-Top Air Conditioning Units	27.8	34.5
	Parking Lot Vehicle Movements	22.9	

Table 4.11-22 Project Operational Noise Levels (dBA Leq) (Cont'd)

Receiver Location[1]	Noise Source(s)[2]	Operational Noise Levels (dBA L_{eq})[3]	Combined Noise Level (dBA L_{eq})
	Sports Park Activity	33.1	
	Open Space Activity	0.0	
R10	Roof-Top Air Conditioning Units	36.3	43.0
	Parking Lot Vehicle Movements	41.8	
	Sports Park Activity	28.8	
	Open Space Activity	3.6	
R11	Roof-Top Air Conditioning Units	28.3	29.2
	Parking Lot Vehicle Movements	21.5	
	Sports Park Activity	8.7	
	Open Space Activity	0.0	

1. See Figure 4.11-4 for the receiver and noise source locations.
2. Reference noise sources as shown on Table 10-1 of the Project's Noise Impact Analysis (*Technical Appendix J*).
3. Stationary source noise level calculations are provided in Appendix 10.1 of the Project's Noise Impact Analysis. (Urban Crossroads, 2019c, Table 10-2)

Table 4.11-23 Daytime Operational Noise Level Contributions (dBA Leq)

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Contribution[6]	Threshold Exceeded?[7]
R1	34.7	L1	66.4	66.4	0.0	No
R2	25.0	L1	66.4	66.4	0.0	No
R3	17.9	L2	54.6	54.6	0.0	No
R4	16.4	L3	52.9	52.9	0.0	No
R5	18.1	L4	50.4	50.4	0.0	No
R6	17.1	L5	54.2	54.2	0.0	No
R7	31.1	L6	53.8	53.8	0.0	No
R8	27.9	L6	53.8	53.8	0.0	No
R9	34.5	L7	55.3	55.3	0.0	No
R10	43.0	L7	55.3	55.6	0.3	No
R11	29.2	L8	66.2	66.2	0.0	No

1. See Figure 4.11-4 for the sensitive receiver locations.
2. Total Project operational noise levels as shown on Table 10-3 of the Project's Noise Impact Analysis (*Technical Appendix J*).
3. Reference noise level measurement locations as shown on Exhibit 5-A of the Project's Noise Impact Analysis (*Technical Appendix J*).
4. Observed daytime ambient noise levels as shown on Table 4.11-2.
5. Represents the combined ambient conditions plus the Project activities.
6. The noise level increase expected with the addition of the proposed Project activities.
7. Significance Criteria as defined in subsection 4.11.4.

(Urban Crossroads, 2019c, Table 10-4)

Table 4.11-24 Nighttime Operational Noise Level Contributions (dBA Leq)

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Contribution[6]	Threshold Exceeded?[7]
R1	34.7	L1	64.8	64.8	0.0	No
R2	25.0	L1	64.8	64.8	0.0	No
R3	17.9	L2	54.8	54.8	0.0	No
R4	16.4	L3	47.5	47.5	0.0	No
R5	18.1	L4	47.6	47.6	0.0	No
R6	17.1	L5	51.3	51.3	0.0	No
R7	31.1	L6	54.0	54.0	0.0	No
R8	27.9	L6	54.0	54.0	0.0	No
R9	34.5	L7	54.4	54.4	0.0	No
R10	43.0	L7	54.4	54.7	0.3	No
R11	29.2	L8	62.3	62.3	0.0	No

1. See Figure 4.11-4 for the sensitive receiver locations.
2. Total Project operational noise levels as shown on Table 10-3 of the Project's Noise Impact Analysis (*Technical Appendix J*).
3. Reference noise level measurement locations as shown on Exhibit 5-A of the Project's Noise Impact Analysis (*Technical Appendix J*).
4. Observed daytime ambient noise levels as shown on Table 4.11-2.
5. Represents the combined ambient conditions plus the Project activities.
6. The noise level increase expected with the addition of the proposed Project activities.
7. Significance Criteria as defined in subsection 4.11.4.

(Urban Crossroads, 2019c, Table 10-5)

Therefore, with implementation of the City Regulation and Design Requirements and mitigation measures, the Project's construction-related noise level increases would be reduced to less-than-significant levels.

Implementation of Mitigation Measure MM 4.11-2 would require construction of noise barriers at the outdoor living areas (backyards) of all residential uses in Planning Areas 1 through 15, which would reduce on-site exterior traffic-related noise impacts to less-than-significant levels. Mitigation Measures MM 4.11-3 requires the installation of windows with a minimum STC rating of 27 at all windows on the first- and second-floors of residential homes adjacent to I-215, Encanto Drive, Sherman Road, Antelope Road, Rouse Road, and Chambers Avenue, along with other requirements for doors, exterior walls, roofs, ceilings, insulation, and forced air circulation. Similarly, Mitigation Measure MM 4.11-4 requires the installation of windows with a minimum STC rating of 32 at all windows on the first- and second floors of all commercial buildings adjacent to I-215, along with other requirements for doors, exterior walls, roofs, ceilings, insulation, and forced air circulation. Mitigation Measure MM 4.11-5 requires a final noise study to be prepared prior to building permit issuance to ensure that proposed structures meet the City's interior noise level standards for residential (45 dBA CNEL) and commercial/community recreation center (50 dBA CNEL) land uses. Implementation of Mitigation Measures MM 4.11-2 through MM 4.11-5 would reduce on-site interior traffic-related noise impacts to less-than-significant levels. With implementation of the required mitigation, impacts due to a substantial temporary or permanent increase in ambient noise levels in excess of standards would be reduced to less-than-significant levels.

Threshold b: ***Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?***

Ground-borne vibration levels from automobile traffic are generally overshadowed by vibration generated by heavy trucks that roll over the same uneven roadway surfaces. However, due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity. As such, (and as discussed under Subsection 4.11.5), the Project's Noise Impact Analysis focused on the potential ground-borne vibration associated with Project construction activities. Based on the representative vibration levels presented for various construction equipment types presented in Table 4.11-8 and the construction vibration assessment methodology published by the FTA, Urban Crossroads calculated the Project's vibration levels. Table 4.11-25, *Construction Equipment Vibration Levels*, presents the expected Project-related vibration levels of the 11 representative noise sensitive receiver locations. (Urban Crossroads, 2019c, p. 113)

Table 4.11-25 Construction Equipment Vibration Levels

Receiver[1]	Distance to Construction Activity (Feet)	Unmitigated Receiver Vibration Levels (VdB)[2]					Threshold Exceeded?[3]
		Small Bulldozer	Jackhammer	Loaded Trucks	Large Bulldozer	Highest Vibration Level	
R1	38'	52.5	73.5	80.5	81.5	81.5	Yes
R2	96'	40.5	61.5	68.5	69.5	69.5	No
R3	100'	39.9	60.9	67.9	68.9	68.9	No
R4	2,499'	0.0	19.0	26.0	27.0	27.0	No
R5	1,016'	9.7	30.7	37.7	38.7	38.7	No
R6	86'	41.9	62.9	69.9	70.9	70.9	No
R7	103'	39.6	60.6	67.6	68.6	68.6	No
R8	608'	16.4	37.4	44.4	45.4	45.4	No
R9	30'	55.6	76.6	83.6	84.6	84.6	Yes
R10	50'	49.0	70.0	77.0	78.0	78.0	No
R11	378'	22.6	43.6	50.6	51.6	51.6	No

1. Noise receiver locations are shown on Figure 4.11-3.
2. Based on the Vibration Source Levels of Construction Equipment included on Table 4.11-8.
3. Does the Peak Vibration exceed the FTA maximum acceptable vibration standard of 80 VdB for annoyance and 90 VdB for building damage?

(Urban Crossroads, 2019c, Table 11-12)

As shown on Table 4.11-8, based on the reference vibration levels provided by the FTA, a large bulldozer represents the peak source of vibration with a reference velocity of 87 VdB at a distance of 25 feet. At distances ranging from 30 to 2,499 feet from Project construction activities, construction vibration velocity levels are expected to range from 27.0 to 84.6 VdB, as shown on Table 4.11-25. Based on the FTA vibration standard of 80 VdB for annoyance, Project construction activities would generate unmitigated vibration levels capable of human annoyance at receiver locations R1 and R9. It should be noted that all Project vibration levels would remain below the FTA's 90 VdB threshold for building damage. Thus, the Project-related vibration impacts

at locations R1 and R9 represent a temporary significant impact during construction activities. (Urban Crossroads, 2019c, pp. 113-114)

Implementation of Mitigation Measure MM 4.11-6 would prohibit the use of large construction equipment capable of generating vibration levels in excess of 80 VdB within 200 feet of nearby sensitive receptors during Project construction. As summarized in Table 4.11-28, *Mitigated Construction Equipment Vibration Levels*, implementation of Mitigation Measure MM 4.11-6 would reduce the Project's vibration impacts to less-than-significant levels.

Threshold c:	***Would the Project be located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?***

As stated above, the MARB is located approximately 9.7 miles northwest of the Project site. The Project site is located within the Airport Influence Area (AIA) for the MARB. The nearest private airport facility to the Project site is the Perris Valley Airport, located approximately 2.5 miles northwest of the Project site. According to the ALUCP for the Perris Valley Airport, the Project site is not located within the AIA for this facility. As shown on Figure 4.11-2, the Project is located outside of the 55 dBA CNEL noise contour boundaries of the Perris Valley Airport and outside of the 60 dBA CNEL noise level contour boundaries of the MARB (Urban Crossroads, 2019c, p. 27). As such, the Project land uses are considered "normally acceptable" and "clearly acceptable" uses, respectively, per the Riverside County ALUCP. Therefore, the Project's impacts due to exposure of people to excessive noise levels associated with airports would be less than significant.

4.11.7 Cumulative Impact Analysis

The cumulative impact analysis considers construction and operation of the Project in conjunction with other development projects in the vicinity of the Project site resulting from full General Plan buildout and buildout in the surrounding areas.

As discussed under the analysis of Threshold a., construction activities associated with the Project would not expose nearby sensitive receptors to construction-related noise in excess of 85 dBA Leq. However, the Project would contribute unmitigated, worst-case construction noise level increases between 0.2 to 24.3 dBA Leq at the adjacent sensitive receiver locations during the daytime hours, which would exceed Caltrans' substantial noise level increase threshold of 12 dBA Leq. However, cumulative development projects that may be producing construction-related noise simultaneous to the Project's construction activities would occur on adjacent properties north and east of the Project site at distances that would not significantly contribute to noise the Project's noise level increases affecting sensitive receptors in the Project's vicinity. As such, the Project's construction-related noise impacts would be less-than-cumulatively considerable.

As also discussed under the analysis of Threshold a., the Project would not cause off-site traffic-related noise increases in excess of the significance criteria identified in Table 4.11-7 under Opening Year Cumulative 2020 With Project Phase 1 conditions, Opening Year Cumulative 2023 With Project Phase 2 conditions, Opening Year Cumulative 2025 With Project Buildout conditions, or Horizon Year 2040 conditions. As such, the Project's off-site traffic-related noise level contributions would be less-than-cumulatively considerable under all study scenarios. Although the analysis under Threshold a. indicates that the Project would be exposed to noise levels in excess of City standards, the noise levels would represent an impact to the Project and not from

the Project, and thus there is no potential for cumulatively-considerable impacts associated with on-site traffic-related noise levels.

Based on the analysis under Threshold a., the Project would not expose nearby sensitive receptors to noise levels in excess of the City of Menifee exterior noise level standards of 65 dBA CNEL during daytime hours and 45 dBA CNEL during nighttime hours. Additionally, the Project would result in noise level increases of up to 0.3 dBA Leq during the daytime and nighttime hours beyond ambient noise levels without the Project. This noise level increase would not exceed the criteria identified in Table 4.11-7. As such, Project operational-related noise would be less than cumulatively-considerable, and no mitigation would be required.

As discussed under the analysis of Threshold b., Project-related construction vibration levels are expected to range from 27.0 to 84.6 VdB. Based on the FTA's vibration standard of 80 Vdb for annoyance, Project construction activities would cause temporary significant impacts at receiver locations R1 and R9, which requires mitigation. Project construction ground-borne vibration levels combined with ambient noise and vibration levels from cumulative development that may be operating simultaneously to the Project's construction activities would add to the cumulative ground-borne vibration levels. However, cumulative development projects that may be producing construction ground-borne vibration simultaneous to the Project's construction activities would occur on adjacent properties north and east of the Project site at distances that would not significantly impact sensitive receptors in the Project's vicinity. Furthermore, cumulative projects would also be subject to the FTA vibration standard of 80 VdB for annoyance. Thus, impacts would be less-than-cumulatively-considerable.

As discussed in Threshold c., the Perris Valley Airport is located approximately 2.5 miles northwest of the Project site and the MARB is located approximately 9.7 miles northwest of the Project site. The Project site is located within the AIA for the MARB. The Project site is located outside of the 55 dBA CNEL noise contour boundaries of the Perris Valley Airport and outside of the 60 dBA CNEL noise level contour boundaries of the MARB. As such, the Project land uses are considered "normally acceptable" and "clearly acceptable" uses, respectively, per the Riverside County ALUCP. There are no components of the Project that would result in cumulatively-considerable impacts associated with airport noise.

4.11.8 Significance of Impacts Before Mitigation

Threshold a: Significant Direct Impact. The Project would result in noise impacts during the construction phase. Although construction noise would not expose nearby sensitive receptors to noise levels exceeding the NIOSH construction noise standard of 85 dBA Leq, the Project would contribute unmitigated, worst-case construction noise level increases between 0.2 to 24.3 dBA Leq at the adjacent sensitive receiver locations during the daytime hours. Since the worst-case temporary noise level increase of up to 24.3 dBA Leq during Project construction would exceed the 12 dBA Leq significance threshold at receiver locations R1, R3, R6, R7, R9, and R10, the unmitigated construction noise level increases are considered potentially significant temporary noise impacts for which mitigation would be required.

The Project would not cause off-site traffic-related noise increases in excess of the significance criteria identified in Table 4.11-7 under Opening Year Cumulative 2020 With Project Phase 1 conditions, Opening Year Cumulative 2023 With Project Phase 2 conditions, Opening Year Cumulative 2025 With Project Buildout conditions, or Horizon Year 2040 conditions. However, The on-site traffic noise level impacts indicate that the Planning Areas adjacent to I-215, Encanto Drive, Sherman Road, Antelope Road, Rouse Road, and Chambers Avenue would experience unmitigated exterior noise levels ranging from 58.7 to 76.0 dBA CNEL, which would exceed the City of Menifee 60 dBA CNEL exterior noise level standard at all of the residential

Planning Areas on-site. Thus, exterior noise level impacts would be significant at the proposed residential Planning Areas (Planning Areas 1 through 15) on-site. Proposed residential, commercial, and community recreation center uses all would be exposed to interior noise levels exceeding the City's standards of 45 dBA CNEL for residential and 50 dBA CNEL for the commercial uses and the community recreation center; thus, interior noise impacts would be significant prior to mitigation.

The operational noise levels associated with the proposed commercial, community park, and open space uses on-site would not exceed the City of Menifee exterior noise level standards of 65 dBA CNEL during daytime hours and 45 dBA CNEL during nighttime hours at the nearby sensitive receivers in the City of Menifee. Therefore, Project-related operational noise level impacts would be less than significant. Additionally, Project-related operational noise level contributions of up to 0.3 dBA would not exceed the significance criteria shown in Table 4.11-7. Therefore, the Project would not result in a permanent increase in noise due to Project-related operational noise, and impacts would be less than significant.

Threshold b: Significant Direct Impact. At distances ranging from 30 to 2,499 feet from Project construction activities, construction vibration velocity levels are expected to range from 27.0 to 84.6 VdB. Based on the FTA vibration standard of 80 VdB for annoyance, the Project's construction activities would exceed the standard at receiver locations R1 and R9. Therefore, Project-related vibration impacts at locations R1 and R9 represent a temporary significant impact during construction activities.

Threshold c: Less-than-Significant Impact. The Perris Valley Airport is located approximately 2.5 miles northwest of the Project site and the MARB is located approximately 9.7 miles northwest of the Project site. The Project site is located within the AIA for the MARB. The Project site is located outside of the 55 dBA CNEL noise contour boundaries of the Perris Valley Airport and outside of the 60 dBA CNEL noise level contour boundaries of the MARB. As such, the Project land uses are considered "normally acceptable" and "clearly acceptable" uses, respectively, per the Riverside County ALUCP. Therefore, the Project's impacts due to exposure of people to excessive noise levels associated with airports would be less than significant.

4.11.9 City Regulations, Design Requirements, and Mitigation

Applicable City Regulations and Design Requirements

The following is a standard project design requirement within the City of Menifee. Although this requirement technically does not meet CEQA's definition for mitigation, it is imposed herein to ensure Project compliance with applicable project design and regulatory requirements. Note that the Project would comply with the most up-to-date regulatory conditions and requirements as appropriate.

CRDR 4.11-1 All construction activities shall adhere to City of Menifee Municipal Code, Section 8.01.010, which requires projects within one-fourth mile from an occupied residence to operate Monday through Saturday, except nationally recognized holidays, from 6:30 a.m. to 7:00 p.m and prohibits construction from occurring on Sunday or nationally recognized holidays unless approval is obtained from the City Building Official or City Engineer. Compliance with City of Menifee Municipal Code Section 8.01.010 would reduce construction-related noise impacts.

CRDR 4.11-2 All construction activities and haul truck deliveries shall adhere to City of Menifee Municipal Code, Section 9.09.030(B), which prohibits construction activities that make loud noise from occurring between 6:00 p.m. and 6:00 a.m. during the months of June through September, and between 6:00 p.m. and 7:00 a.m. during the months of October

through May, and on Sundays and Federal holidays. Compliance with City of Menifee Municipal Code Section 9.09.030 would reduce construction-related noise impacts.

Mitigation

MM 4.11-1 Prior to approval of grading plans and/or issuance of building permits, the City of Menifee shall review grading and building plans to ensure the following notes are included on the plans. Project contractors shall be required to comply with these notes and maintain written records of such compliance that can be inspected by the City of Menifee upon request.

a) All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractors shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.

b) Construction equipment staging areas shall be located such that the greatest distance is maintained between construction-related noise sources and noise-sensitive receivers nearest the Project site (i.e., to the center) during all Project construction.

c) The construction contractor shall design a haul route exhibit that includes delivery routes that minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise. The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 6:00 a.m. and 6:00 p.m. from June to September, and 7:00 a.m. to 6:00 p.m. from October to May, with no activity allowed on Sundays and nationally recognized holidays).

MM 4.11-2 Prior to the issuance of any grading and building permits, the City of Menifee shall verify that final building plans require the construction of minimum six-foot tall noise barriers between the outdoor living areas (backyards) along the Project's perimeter and Antelope Road, Sherman Road, Chambers Avenue, Rouse Road, and/or the planned commercial and detention basin uses within Planning Areas 16, 17, and 19. The noise barriers shall adhere to the following design requirements:

a) The recommended noise control barriers shall be constructed so that the top of each wall extends to the recommended height above the pad elevation of the lot it is shielding. When the road is elevated above the pad elevation, the barrier shall extend to the recommended height above the highest point between the residential home and the road.

b) The barriers shall provide a weight of at least 4 pounds per square foot of face area with no decorative cutouts or line-of-sight openings between shielded areas and the roadways. The barrier must present a solid face from top to bottom.

c) Unnecessary openings or decorative cutouts shall not be made. All gaps (except for weep holes) should be filled with grout or caulking. The noise barrier shall be constructed using one of the following materials:

- Masonry block;

- Stucco veneer over wood framing (or foam core), or one-inch thick tongue and groove wood of sufficient weight per square foot;
- Glass (1/4-inch-thick), or other transparent material with sufficient weight per square foot
- capable of providing a minimum transmission loss of 20 dBA;
- Earthen berm; or
- Any combination of these construction materials.

During the final building inspection, the City of Menifee Building Inspector shall ensure that the sound barriers were constructed to adhere to the requirements stated herein, as well as the design specifications shown on the final approved building plans.

MM 4.11-3 Prior to the issuance of building permits for proposed residential uses, the City of Menifee shall verify that final building plans require the following:

- First- and second-story windows with a minimum STC rating of 27 be installed at all residential homes adjacent to I-215, Encanto Drive, Sherman Road, Antelope Road, Rouse Road, and Chambers Avenue.
- All exterior doors shall be well weather-stripped and have minimum STC ratings of 25.
- Any penetrations of exterior walls by pipes, ducts, or conduits, the space between the wall and pipes, ducts, or conduits shall be caulked or filled with mortar to form an airtight seal.
- Roof sheathing of wood construction shall be per manufacturer's specification or caulked plywood of at least one-half inch thick.
- Ceilings shall be per manufacturer's specification or well-sealed gypsum board of at least one-half inch thick.
- Insulation with at least a rating of R-19 shall be used in the attic space.
- A forced air circulation system (e.g. air conditioning) or active ventilation system (e.g. fresh air supply) shall be provided which satisfies the requirements of the Uniform Building Code.

During final building inspection, the City of Menifee Building Inspector shall ensure that the above-listed requirements have been met.

MM 4.11-4 Prior to the issuance of building permits for commercial and/or community recreation center uses, the City of Menifee shall verify that final building plans require the following for commercial uses within Planning Areas 16 and 17 and for the community recreation center within Planning Area 18 of the Legado Specific Plan:

- First- and second-story windows with a minimum STC rating of 32 be installed at commercial buildings facing I-215 and at the community recreation center within Planning Area 18 of the Legado Specific Plan.
- All exterior doors shall be well weather-stripped and have minimum STC ratings of 25. Well-sealed perimeter gaps around the doors are essential to achieve the optimal STC rating.

- At any penetrations of exterior walls by pipes, ducts, or conduits, the space between the wall and pipes, ducts, or conduits shall be caulked or filled with mortar to form an airtight seal.
- Roof sheathing shall be per manufacturer's specification. Ceilings shall be per manufacturer's specification. Ceiling/roof Insulation, if required under manufacturer's specification, shall have a minimum rating of R-19.
- A forced air circulation system (e.g. air conditioning) or active ventilation system (e.g. fresh air supply) shall be provided which satisfies the requirements of the Uniform Building Code.

During final building inspection, the City of Menifee Building Inspector shall ensure that the above-listed requirements have been met.

MM 4.11-5 Prior to issuance of building permits for proposed residential, commercial, and community recreation center uses, the Project Applicant shall prepare a final noise study to verify that proposed building elements would meet the interior noise level standards for residential (45 dBA CNEL) and commercial/community recreation center (50 dBA CNEL) land uses. If necessary, additional measures may be included as necessary to meet the applicable interior noise standards.

MM 4.11-6 Prior to approval of grading plans and/or issuance of building permits, the City of Menifee shall review grading and building plans to ensure the plans prohibit the use of large construction equipment (e.g., dozers, graders, scrapers) within 200 feet of nearby occupied sensitive uses. Large construction equipment includes equipment capable of generating noise levels in excess of 68 dBA Leq (10-minute) at 50 feet and vibration levels of 80 VdB at sensitive receiver locations. However, such large construction equipment may be allowed within 200 feet of nearby sensitive receptors if it can be demonstrated that specific pieces of large construction equipment can demonstrate compliance with the 68 dBA Leq (10-minute) at 50 feet criteria and will generate vibration levels at adjacent sensitive uses which remain below 80 VdB. For any such equipment, the contractor shall maintain a record demonstrating that the equipment would not generate noise or vibration standards specified herein, which shall be made available for inspection by the City of Menifee upon request.

MM 4.11-7 Prior to issuance of any grading and building permits, the City of Menifee shall verify that the Project's grading and building plans include the installation of temporary construction noise barriers at the following locations:

a) A minimum 8-foot high temporary construction noise barrier at the Project's site boundaries adjacent to sensitive receiver locations R7 (western property line of Hans Christensen Middle School);

b) A minimum 8-foot high temporary barrier adjacent to sensitive receiver location R9 (northern property line of Bell Air Mobile Estates); and

c) A minimum 8-foot high temporary barrier adjacent to sensitive receiver location R10 (north and east property lines of Life Care Center).

The temporary noise barriers shall remain on the Project site for the duration of Project construction. The noise barriers shall adhere to the following design requirements:

a) The temporary noise barriers shall have a solid face from top to bottom;

b) The temporary noise barriers shall provide a minimum transmission loss of 20 dBA (Federal Highway Administration, Noise Barrier Design Handbook). The noise barrier shall be constructed using an acoustical blanket (e.g. vinyl acoustic curtains or quilted blankets) attached to the construction site perimeter fence or equivalent temporary fence posts; and

c) The noise barrier must be maintained, and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired.

The noise control barrier and associated elements shall be completely removed, and the site appropriately restored upon the conclusion of the construction activity. Project contractors shall be required to comply with this requirement and maintain records of such compliance that can be inspected by the City of Menifee upon request. The Project contractor shall also be required to adhere to the noise barrier design specifications stated herein.

4.11.10 Significance of Impacts After Mitigation

Threshold a: Less-than-Significant Impact with Mitigation Incorporated. Although impacts during construction would be less than significant, implementation of City Regulation and Design Requirements CRDR 4.11-1 and CRDR 4.11-2 and Mitigation Measures MM 4.11-1, MM 4.11-6, and MM 4.11-7 would reduce the potential for nuisance noise levels at nearby noise-sensitive residential uses during construction, as summarized in Table 4.11-26, *Mitigated Construction Equipment Noise Levels*.

Table 4.11-26 Mitigated Construction Equipment Noise Levels

Receiver Location[1]	Highest Construction Noise Levels (dBA L_{eq})[2]	Additional Distance to 200-Foot Buffer	Attenuation from Mitigation Measures (dBA L_{eq})[3]		Mitigated Construction Noise Levels (dBA L_{eq})
			Distance Attenuation with 200-Foot Buffer	8' Temp. Barrier	
R1	81.9	162'	-10.2	0.0	71.7
R3	68.0	100'	-6.0	0.0	62.0
R6	69.4	114'	-7.2	0.0	62.2
R7	73.3	97'	-5.8	-4.9	62.6
R9	78.5	170'	-10.6	-4.9	63.0
R10	79.6	150'	-9.5	-4.9	65.1

1. Noise receiver locations are shown on Figure 4.11-3.
2. Highest construction noise levels, as shown on Table 4.11-11, based on the distance to each receiver location shown on Figure 4.11-3.
3. Calculated barrier attenuation provided in Appendix 11.1 to the Project's Noise Impact Analysis (*Technical Appendix J*).

(Urban Crossroads, 2019c, Table 11-10)

Additionally, implementation of City Regulation and Design Requirements CRDR 4.11-1 and CRDR 4.11-2 and Mitigation Measures MM 4.11-1, MM 4.11-6, and MM 4.11-7 would reduce the Project's construction-related noise level increases to below 12 dBA Leq at all receiver locations, as summarized in Table 4.11-27, *Mitigated Construction Temporary Noise Level Increases (dBA Leq)*. Therefore, with implementation of the City Regulation and Design Requirements and mitigation measures, the Project's construction-related noise level increases would be reduced to less-than-significant levels.

Table 4.11-27 Mitigated Construction Temporary Noise Level Increases (dBA Leq)

Receiver Location[1]	Mitigated Construction Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Contribution[6]	Threshold Exceeded?[7]
R1	71.7	L1	66.4	72.9	6.5	No
R3	62.0	L2	54.6	62.7	8.1	No
R6	62.2	L5	54.2	62.8	8.6	No
R7	62.6	L6	53.8	63.2	9.4	No
R9	63.0	L7	55.3	63.7	8.4	No
R10	65.1	L7	55.3	65.6	10.3	No

1. See Figure 4.11-3 for the sensitive receiver locations.
2. Mitigated construction noise levels as shown on Table 4.11-26.
3. Reference noise level measurement locations as shown on Exhibit 5-A of the Project's Noise Impact Analysis (*Technical Appendix J*).
4. Observed daytime ambient noise levels as shown on Table 4.11-2.
5. Represents the combined ambient conditions plus the Project activities.
6. The noise level increase expected with the addition of the proposed Project activities.
7. Significance Criteria as defined in subsection 4.11.4.

(Urban Crossroads, 2019c, Table 11-11)

Implementation of Mitigation Measure MM 4.11-2 would require construction of noise barriers at the outdoor living areas (backyards) of all residential uses in Planning Areas 1 through 15, which would reduce on-site exterior traffic-related noise impacts to less-than-significant levels. Mitigation Measures MM 4.11-3 requires the installation of windows with a minimum STC rating of 27 at all windows on the first- and second-floors of residential homes adjacent to I-215, Encanto Drive, Sherman Road, Antelope Road, Rouse Road, and Chambers Avenue, along with other requirements for doors, exterior walls, roofs, ceilings, insulation, and forced air circulation. Similarly, Mitigation Measure MM 4.11-4 requires the installation of windows with a minimum STC rating of 32 at all windows on the first- and second floors of all commercial buildings adjacent to I-215, along with other requirements for doors, exterior walls, roofs, ceilings, insulation, and forced air circulation. Mitigation Measure MM 4.11-5 requires a final noise study to be prepared prior to building permit issuance to ensure that proposed structures meet the City's interior noise level standards for residential (45 dBA CNEL) and commercial/community recreation center (50 dBA CNEL) land uses. Implementation of Mitigation Measures MM 4.11-2 through MM 4.11-5 would reduce on-site interior traffic-related noise impacts to less-than-significant levels. With implementation of the required mitigation, impacts due to a substantial temporary or permanent increase in ambient noise levels in excess of standards would be reduced to less-than-significant levels.

Threshold b: Less-than-Significant Impact with Mitigation Incorporated. Implementation of Mitigation Measure MM 4.11-6 would prohibit the use of large construction equipment capable of generating vibration

levels in excess of 80 VdB within 200 feet of nearby sensitive receptors during Project construction. As summarized in Table 4.11-28, *Mitigated Construction Equipment Vibration Levels*, implementation of Mitigation Measure MM 4.11-6 would reduce the Project's vibration impacts to less-than-significant levels.

Table 4.11-28 Mitigated Construction Equipment Vibration Levels

Receiver[1]	Distance to Construction Activity (Feet)	Mitigated Receiver Vibration Levels (VdB)[2]					Threshold Exceeded?[3]
		Small Bulldozer	Jackhammer	Loaded Trucks	Large Bulldozer	Highest Vibration Level	
R1	200'	30.9	51.9	58.9	59.9	59.9	No
R2	200'	30.9	51.9	58.9	59.9	59.9	No
R3	200'	30.9	51.9	58.9	59.9	59.9	No
R4	2,499'	0.0	19.0	26.0	27.0	27.0	No
R5	1,016'	9.7	30.7	37.7	38.7	38.7	No
R6	200'	30.9	51.9	58.9	59.9	59.9	No
R7	200'	30.9	51.9	58.9	59.9	59.9	No
R8	608'	16.4	37.4	44.4	45.4	45.4	No
R9	200'	30.9	51.9	58.9	59.9	59.9	No
R10	200'	30.9	51.9	58.9	59.9	59.9	No
R11	378'	22.6	43.6	50.6	51.6	51.6	No

1. Noise receiver locations are shown on Figure 4.11-3.
2. Based on the Vibration Source Levels of Construction Equipment included on Table 4.11-8.
3. Does the Peak Vibration exceed the FTA maximum acceptable vibration standard of 80 VdB for annoyance and 90 VdB for building damage?

(Urban Crossroads, 2019c, Table 11-13)

4.12 PUBLIC SERVICES

This Subsection provides information on existing public services and service levels for fire protection, police protection, schools, parks, libraries, and public health facilities, and evaluates impacts to the environment that may result from the demand the Project may have on such services. The information is based on a variety of source material including the City of Menifee General Plan, and communications with public service agency personnel. Service letters were provided by Menifee Union School District (MUSD), Perris Union High School District (PUHSD), California Department of Forestry & Fire Protection (CalFire), Riverside County Fire Department (RCFD), Riverside County Sheriff's Department (RCSD), and the Riverside County Library System (RCPLS). Copies of the letters provided by these agencies are included in *Technical Appendix M*.

4.12.1 EXISTING CONDITIONS

A. Fire Protection/Emergency Medical Services

Fire protection services for the Project site are provided by the RCFD. The RCFD provides a full range of fire services within the County and contracting cities. The level of service provided is dependent on response times, travel distance, and staffing workload levels established in the Riverside County Fire Protection and Emergency Medical Aid Plan. The Fire Protection and Emergency Medical Aid Plan contains four fire response categories that are used to determine the response times/travel distances for primary and secondary fire stations. The response categories are based on the amount of community build-out presumed in the Fire Protection and Emergency Medical Aid Plan. The Fire Department assumes in any given region that three or more fire engines respond to any reported fire.

The fire station that would serve the Project as the first responder is Station 7 (Sun City), which is located approximately 1.4 roadway miles from the Project site. In January 2018 and following release of the Project's Notice of Preparation (NOP) (November 2017), Station 7 was relocated to a new site just south of the Bradley Road and Cherry Hills Boulevard in the City of Menifee. The Sun City Fire Station is staffed full-time, 24 hours per day, seven days per week, with a minimum 3-person crew, including paramedics, operating "Type-1" firefighting apparatus. The current minimum staffing levels of three persons per Type 1 Fire engine responding unit and two persons per Paramedic Squad responding unit to meet existing demands. (RCFD, 2017) According to the City of Menifee General Plan, the northeastern portion of the Project site is located within a "High Fire Hazard Severity Zone," while the rest of the Project site is not located within a Fire Hazard Zone (Menifee, 2013b, Figure 5.8-3)..

B. Sheriff Services

The Riverside County Sheriff's Department provides community policing for the Project area through a contract with the City of Menifee. The Sheriff Station serving the Project area is the Perris Station, located at 137 North Perris Boulevard, Suite A, Perris, CA 92570. The Perris Station is approximately 6.0 roadway miles south of the Project site (Google Earth, 2016). Additionally, the Project area is served by the Menifee Police Substation, located at 28115 Bradley Road, Suite 4, Menifee (Sun City), CA 92586. The Menifee Police Substation is located approximately 1.5 roadway miles southwest of the Project site (Google Earth, 2016). In addition to community policing, other services provided by the Sheriff's Department include, but are not to, operating of the emergency 911 system, operating correctional facilities, performing traffic control, and providing crime prevention education. Also, the Sheriff's Department coordinates with volunteer groups such as Neighborhood Watch Programs and the Community Oriented and Policing Problem Solving (COPPS) Program and the Community Oriented Policing (COP) Program. COPPS shifts the focus of police work from

a solely reactive mode by supplementing traditional law enforcement methods with proactive problem-solving approaches that involve the community as well as the police.

The Sheriff's Department has indicated that their desired staffing level is 1.2 deputies per 1,000 residents. At present, the Perris Station has a current officer-to-population ratio of 0.64 deputies per 1,000 residents, which is lower than both the Department's goal to achieve 1.2 deputies per 1,000 residents. Average response times achieved by Perris Station from January through November 2017 are shown in Table 4.12-1, *Perris Sheriff's Station Response Times*. Emergency calls involving life-threatening events take priority assignment. (RCSD, 2017)

Table 4.12-1 Perris Sheriff's Station Response Times

Priority Level	Average Response Time	Number of Calls
Priority 1	8.06 minutes	590 calls
Priority 2	19.24 minutes	11,214 calls
Priority 3	40 minutes	10,168 calls
Priority 4	67.49 minutes	5,286 calls

(RCSD, 2017, p. 1)

C. *Schools*

The Project site is located in the MUSD for elementary and middle school services and the PUHSD for high school service. The Project site is currently within the attendance boundary of Freedom Crest Elementary School, located at 29282 Menifee Road in Menifee (approximately 2.1 miles southeast of the Project site); Hans Christensen Middle School, located at 27625 Sherman Road in Menifee (immediately south of the Project site); and Heritage High School, located at 26001 Road in Menifee (approximately 2.3 miles northeast of the Project site). Table 4.12-2, *MUSD and PUHSD Existing Enrollment and Capacity*, depicts the student enrollment and capacity status of the schools within the MUSD and PUHSD as of 2017. As shown, as of 2017, the schools that would serve the Project experienced excess capacities for elementary and middle school grade levels, including 250 elementary students and 480 middle school students. The high school that would serve the Project site experienced exceeded capacity for high school students, including an excess of 164 additional students above school capacity. (MUSD, 2017; PUHSD, 2017)

Table 4.12-2 MUSD and PUHSD Existing Enrollment and Capacity

District	School	Grades Served	Current Enrollment	Capacity	Excess Capacity	Student Generation Rate (Per Household)
MUSD	Freedom Crest Elementary School	K-5	725	975	250	0.3362
	Hans Christensen Middle School	6-8	780	1,260	480	0.1144
PUHSD	Heritage High School	9-12	2,804	2,640	-164	0.1043

(MUSD, 2017; PUHSD, 2017)

A new high school is currently being planned in Menifee, which when completed, will be the school of residence for students generated as a result of the Legado Specific Plan area. The new high school site is located at the northwest corner of Leon and Wickerd Roads in the unincorporated Winchester area. This school will provide services for approximately 2,500 students in grades 9-12; however, an anticipated opening date for the school is unknown at this time. The most optimistic projection for opening the school is the 2021-2022 school year. (PUHSD, 2017)

D. Parks

Under existing conditions, the Project site is within the service area of the City of Menifee for park maintenance services. A total of 29 parks exist in the City of Menifee, with nine parks managed by the City of Menifee and 20 parks managed by the Valley-Wide Recreation and Parks District (VWRPD). On May 26, 2016 the City of Menifee submitted a formal application to the Local Agency Formation Commission (LAFCO) for the detachment of VWRPD from the City of Menifee boundaries. If approved by the LAFCO, the decision would potentially transfer all VWPRD facilities within the City boundary over to the City for ownership and operation. If approved, the City would be solely responsible for all park and recreation services. At the time the NOP for the Project was released (November 2017) the decision was pending. The local parks in the Project's vicinity would either continue to be maintained by the two entities as described above if the LAFCO application is rejected, or all parks managed by VWRPD would be transferred to the City of Menifee for ownership and maintenance if the LAFCO application is approved. The discussion herein assumes that parks are maintained as under existing conditions. (Menifee, 2017a) For a more detailed discussion regarding parks and recreational facilities in the region, refer to EIR Subsection 4.13, *Recreation*.

E. Libraries

The Project site is located within the RCPLS service area. Within the RCPLS are a total of 368,820 square feet of library space with approximately 1,195,875 volumes of material. A total of 238 persons are employed by the RCPLS. The nearest library servicing the Project site is the Sun City Library, located approximately 0.75 mile to the southwest of the Project site at 26982 Cherry Hills in the City of Menifee. The Sun City Library is approximately 11,000 s.f. in size. The Sun City Library is open Monday, Wednesday, and Friday from 10 a.m. to 6 p.m., Tuesday and Thursday from 11 a.m. to 7 p.m., Saturday from 9 a.m. to 3 p.m., and Sunday from 12 p.m. to 4 p.m. (RCPLS, 2017)

4.12.2 Applicable Regulatory Requirements

The following is a brief description of the federal, state, and local environmental laws and related regulations related to public services.

A. State Regulations

1. Fire Protection Services Regulations and Plans

- Public Resources Code (PRC) Sections 4290-4299

This portion of the Public Resources Code (PRC) requires minimum statewide fire safety standards pertaining to: road standards for fire equipment access; standards for signs identifying streets, roads, and buildings; minimum private water supply reserves for emergency fire use; and fuel breaks and greenbelts. With certain exceptions, all new construction in potential wildland fire areas is required to meet the statewide standards. State requirements, however, do not supersede more restrictive local regulations.

❑ PRC Sections 4102-4127 - State Responsibility Areas (SRAs)

PRC Section 4102 specifies that "'State responsibility areas' means areas of the state in which the financial responsibility of preventing and suppressing fires has been determined by the [State Fire] Board pursuant to Section 4125, to be primarily the responsibility of the state." These areas may contain state or privately-owned forest, watershed, and rangeland. §§ 4126-4127 of the PRC further specify the standards that define what does and does not constitute an SRA.

❑ California Code of Regulations (CCR) Title 24, Parts 2 and 9 – Fire Codes

Part 2 of Title 24 of the CCR refers to the California Building Code which contains complete regulations and general construction building standards of State of California adopting agencies, including administrative, fire and life safety and field inspection provisions. Part 2 was updated in 2008 to reflect changes in the base document from the Uniform Building Code to the International Building Code. Part 9 refers to the California Fire Code, which contains other fire safety-related building standards. In particular, Chapter 7A, "Materials and Construction Methods for Exterior Wildfire Exposure," in the 2010 California Building Code addresses fire safety standards for new construction and Section 701A.3.2 addresses "New Buildings Located in Any Fire Hazard Severity Zone."

❑ CCR Title 14 – Natural Resources

These regulations constitute the basic wildland fire protection standards of the California Board of Forestry. They were prepared and adopted to establish minimum wildfire protection standards in conjunction with building, construction, and development within SRAs. Among other things, Title 14 requires the design and construction of structures, subdivisions, and developments in an SRA provide for basic emergency access and perimeter wildfire protection measures (fire fuel modification zones, etc.).

❑ California Government Code (CGC) Sections 51178-51179 – Very High Fire Hazard Severity Zones

Section 51178 specifies that the Director of CalFire, in cooperation with local fire authorities, must identify areas that are Very High Fire Hazard Severity Zones (VHFHSZs) in Local Responsibility Areas (LRAs), based on consistent statewide criteria and the expected severity of fire hazard. It further specifies that VHFHSZs "shall be based on fuel loading, slope, fire weather and other relevant factors," including areas subject to Santa Ana winds which are a "major cause of wildfire spread." Section 51179 states that a local agency (such as a county) must also designate (and map) the VHFHSZs in its jurisdiction by ordinance. (See the discussion on Ordinance No. 787, below, regarding Riverside County's VHFHSZs). Other portions of the Government Code outline when a local agency may use its discretion to exclude areas from VHFHSZ requirements or add areas not designated by the State of California to its VHFHSZ areas.

❑ CGC Section 51182 – Defensible Space

Pursuant to this code, a person who "owns, leases, controls, operates or maintains an occupied dwelling or occupied structure in, upon or adjoining a mountainous area, forest-covered land, brush-covered land, grass-covered land or land that is covered with flammable material" in a very high fire hazard severity zone designated by the local agency pursuant to § 51179, shall at all times maintain a specified amount of "defensible space" to protect structures in high fire hazard areas.

❑ PRC Section 4213 - Fire Prevention Fees

Pursuant to PRC Section 4213, in July of 2011, the State of California began assessing an annual "Fire Prevention Fee" for all habitable structures within the SRA to pay for fire prevention services. The SRA is the portion of the state where the State of California is financially responsible for the prevention and suppression of wildfires. The SRA does not include lands within incorporated city boundaries, Tribal or federally owned land. As of 2013, the fee is up to $150 per habitable structure (i.e., a building that can be occupied for residential use, which does not include incidental buildings such as detached garages, barns, outdoor bathrooms, sheds, etc.).

2. School Services Regulations and Plans

❑ Assembly Bill (AB) 16

In 2002, AB 16 created the Critically Overcrowded School Facilities program, which supplements the new construction provisions within the School Facilities Program (SFP). The SFP provides State of California funding assistance for new facility construction projects and modernization projects. The Critically Overcrowded School Facilities program allows school districts with critically overcrowded school facilities, as determined by the California Department of Education (CDE), to apply for new construction projects in advance of meeting all SFP new construction program requirements. Districts with SFP new construction eligibility and school sites included on a CDE list of source schools may apply.

❑ Leroy F. Greene School Facilities Act of 1998 (Senate Bill [SB] 50)

Senate Bill 50 (SB 50) was enacted by the State Legislature in 1998, which amended existing state law governing school fees. In particular, SB 50 amended prior California Government Code (CGC) Section 65995(a) to prohibit state or local agencies from imposing school impact mitigation fees, dedications, or other requirements in excess of those provided in the statute in connection with "any legislative or adjudicative act...by any state or local agency involving...the planning, use, or development of real property...."

The legislation also amended CGC Section 65996(b) to prohibit local agencies from using the inadequacy of school facilities as a basis for denying or conditioning approvals of any "legislative or adjudicative act [involving] the planning, use or development of real property." Further, SB 50 established the base amount of allowable developer fees: $1.93 per square foot for residential construction and $0.31 per square foot for commercial. These base amounts are commonly called "Level 1 fees" and are the same caps that were in place at the time SB 50 was enacted. Level 1 fees are subject to inflation adjustment every two years.

In certain circumstances, for residential construction, school districts can impose fees that are higher than Level 1 fees. School districts can impose Level 2 fees, which are equal to 50% of land and construction costs if they: (1) prepare and adopt a school needs analysis for facilities; (2) are determined by the State Allocation Board to be eligible to impose these fees; and (3) meet at least two of the following four conditions:

- At least 30% of the district's students are on a multi-track year-round schedule.
- The district has placed on the ballot within the previous four years a local school bond that received at least 50% of the votes cast.
- The district has passed bonds equal to 30% of its bonding capacity.
- Or, at least 20% of the district's teaching stations are relocatable classrooms.

Additionally, if the State of California's bond funds are exhausted, a school district that is eligible to impose Level 2 fees is authorized to impose even higher fees. Commonly referred to as "Level 3 fees," these fees are equal to 100% of land and construction costs of new schools required as a result of new developments.

3. Parks Regulations

❑ Quimby Act, California Government Code § 66477

The State of California's Quimby Act was established by the California Legislature for the purpose of preserving open space and providing park facilities for California's growing communities. The Quimby Act allows local agencies to establish ordinances requiring residential subdivisions to provide land or "in-lieu-of" fees for park and recreation purposes. This State Act requires the dedication of land and/or imposes a requirement of fees for park and recreational purposes as a condition of approval of tentative tract map or parcel map.

B. Local Regulations

1. Public Services Regulations

❑ City of Menifee Transactions and Use Tax (Municipal Code Chapter 3.26)

Chapter 3.26 of the City of Menifee Municipal Code establishes the program for the administration of a transactions and use tax within the City of Menifee. The tax rate added an additional 1.0% to the sales tax rate within the City that is to be used for the funding of local roadway improvements; maintaining local police/fire protection/paramedics/9-1-1 emergency response times; prevent cuts to senior/disabled/youth programs; and provide other general services. (Menifee, 2018, Chapter 3.26)

❑ City of Menifee Development Impact Fees (Ordinance No. 2017-232)

City of Menifee Ordinance No. 2017-232, which is included as Chapter 8.02 of the City of Menifee Municipal Code, establishes the program for the adoption and administration of development impact fees (DIF). DIF requires development applicants to pay established public facilities mitigation fees that are to be used for the funding of public facilities, including fire protection facilities, sheriff facilities, library books, and public health facilities. (Menifee, 2018, Chapter 8.02)

2. Fire Protection Services Regulations

❑ City of Menifee Fire Code (Municipal Code Chapter 8.20)

The City of Menifee Fire Code adopts the provisions and appendices of the 2016 California Fire Code for application in the City of Menifee. In addition, the City of Menifee Fire Code includes additional provisions that are excluded from the 2016 California Fire Code and adopts these additional provisions for use within the City. The City of Menifee Fire Code contains regulations and general construction building standards in the City of Menifee, including administrative, fire and life safety and field inspection provisions.

❑ Riverside County Ordinance No. 460 (As Adopted and Amended by the City of Menifee)

This ordinance stipulates requirements for residential fire flows and pressure. It also stipulates sizing and placement of water mains and fire hydrants. The City requires development applicants to pay established fire protection mitigation fees that are to be used by the RCFD to construct new fire protection facilities or provide facilities in lieu of the fee as approved by the Riverside County Fire Department.

❑ Riverside County Ordinance No. 695 (As Adopted and Amended by the City of Menifee)

Each spring, the California Department of Forestry (CDF) and RCFD distribute hazard abatement notices. These notices, instruct property owners to reduce fuels (flammable vegetation) around their property. A minimum 30-foot clearance is required around all structures; this can be extended to 100 feet in areas where severe fire hazards exist. On unimproved parcels, the property owner is required to disc or mow 100 feet along the perimeter of the property. These requirements substantially improve public safety and property protection for fire-prone areas by removing fire fuels. (Riverside County, 2015b, p. 4.13-95)

❑ Riverside County Ordinance No. 787 (As Adopted and Amended by the City of Menifee)

This ordinance adopts the Uniform Fire Code and adds requirements to further protect people and structures from fire risks, and ensures that development would not impede emergency egress for fire safety personnel, equipment, and apparatus, and also ensures buildings would not hinder evacuation from fire, including potential blockage of stairways of fire doors. (Riverside County, 2015b, p.4.13-95)

❑ Riverside County Fire Department Fire Protection and Emergency Medical Services Strategic Master Plan

The County of Riverside has developed this plan to proactively plan facility, service, and equipment needs for fire protection. It also incorporates the CDF Management Plan for several sub-zones within Riverside County. Implementation of this plan helps reduce potential risks of fire for residents in areas of moderate to high fire danger. (Riverside County, 2015b, p.4.13-95)

3. Parks Regulations

❑ City of Menifee General Plan – Open Space and Conservation Element OSC-1

The Open Space & Conservation Element of the City of Menifee General Plan includes the following goal and policies that relate to parks and recreation. (Menifee, 2013a)

- Goal OSC-1: A comprehensive system of high quality parks and recreation programs that meets the diverse needs of the community.
- Policy OCS-1.1: Provide parks and recreational programs to meet the varied needs of community residents, including children, youth, adults, seniors, and persons with disabilities, and make these facilities and services easily accessible and affordable to all users.
- Policy OCS-1.2: Require a minimum of 5 acres of public open space to be provided for every 1,000 city residents.
- Policy OCS-1.3: Locate and distribute parks and recreational facilities throughout the community so that most residents are within walking distance (1-half mile) of a public open space.
- Policy OCS-1.4: Enhance the natural environment and viewsheds through park design and site selection while preserving sensitive biological, cultural, and historic resources.
- Policy OCS-1.5: Make parks as safe as possible by promoting the latest developments in facility design and equipment technology.

❑ City of Menifee Parks, Trails, Open Space and Recreation Master Plan

The City of Menifee Parks, Trails, Open Space and Recreation Master Plan ("PTOSR Master Plan") serves as a guide and implementation tool for the management and development of parks and recreational programs for the City of Menifee. The PTOSR Master Plan provides a clear set of objectives to provide direction for the maintenance, development, re-development, expansion and enhancement of City's park system, open spaces, trails, and recreation facilities program and services for the short term, mid-term, and long term. The PTOSR Master Plan identifies recreational opportunities and resources in the City, as well as needs, facility usage patterns, recreation standards and recommendations to meet the City's needs. (Menifee, 2016, p. 19)

❑ City of Menifee Municipal Code Chapter 9.55

Chapter 9.55 of the City of Menifee Municipal Code implements the Quimby Act by establishing a requirement for dedication of 5.0 acres of parkland per 1,000 residents, or payment of a fee in lieu of such dedication. The calculation for the average number of persons per dwelling unit is designated by a City Council Resolution. At the time the NOP for the Project was released for public review (November 2017), City Council Resolution No. 15-143 was applicable to the Project, which designated a population generation rate of 3.164 persons per single family dwelling unit (Menifee, 2015b). The land, fees, or combination thereof that are dedicated pursuant to this chapter are to be used only for the purposes of developing new or rehabilitating existing neighborhood or community park or recreational facilities to serve the subdivision that prompts the dedication, and the amount and location of land to be dedicated or the fees to be paid must bear a reasonable relationship to the use of the park and recreational facilities by future inhabitants of the subdivisions.

4.12.3 Basis for Determining Significance

Section XV of Appendix G to the CEQA Guidelines addresses typical adverse effects to public services, and includes the following threshold questions to evaluate the Project's impacts on public services (OPR, 2018):

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a. Fire protection;

b. Police protection;

c. Schools;

d. Parks; or

e. Other public facilities.

4.12.4 IMPACT ANALYSIS

Threshold a: ***Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for Fire Protection Services?***

The Project's proposal to develop 1,061 single-family residential homes, 225,000 s.f. of commercial retail uses, recreation areas, and open space would place additional demand on the RCFD which provides fire protection services to the City of Menifee. Implementation of the Project would cumulatively affect the RCFD's ability to service the planned population. The Project would require an "Urban – Category II" level of service as defined by the Riverside County Fire Protection Master Plan. This classification requires a fire station to be within three roadway miles of all areas of the Project and a full first alarm assignment team operating on the scene of a fire within 15 minutes of dispatch. The primary station serving the Project area (Station 7, Sun City) is located approximately 1.4 roadway miles from the Project site.

As a condition of Project approval, the Project would be required to conform to all mandatory local, state, and federal laws, ordinances, and standards relating to fire safety. Among other items, these requirements include conformance with the Uniform Building Code Section 1503, which requires that all buildings be constructed with fire retardant roofing material, as well as standard RCFD conditions of approval (COAs) for specific plans, which prohibit flag lots and require alternative/secondary access routes to neighborhoods. The alternative/secondary access routes would be required to be maintained throughout construction and buildout of the Project.

Development of the Project would impact fire services by placing an additional demand on existing RCFD resources and personnel. In accordance with the Riverside County Fire Protection Master Plan, a new fire station and/or appropriate fire company is required for the development of 2,000 dwelling units or more. The Project proposes the development of 1,061 dwelling units and 225,000 s.f. of commercial retail uses; therefore, the Project would not result in the need for any new fire stations. However, the Project would impact the fire department's ability to provide an adequate level of service. The RCFD indicated in correspondence (included in EIR *Technical Appendix M*) that Sun City Fire Station is the busiest station in Riverside County due to the demographics of the area, and the addition of Project residents would impact call volumes and fire response times in the area. These impacts include an increased number of emergency and public service calls due to the increased presence of structures, traffic, and population. (RCFD, 2017)

In November of 2016, the City of Menifee voted to impose a 1.0% sales tax to fund general City services, included in the City of Menifee Municipal Code as Chapter 3.26. Municipal Code Chapter 3.26 would allow funds collected from the sales tax to be used for fire protection facilities, including fire stations, in order to maintain of adequate emergency response times in the City. The City's implementation of Municipal Code Chapter 3.26 would ensure that funds are available for capital improvements, such as land/equipment purchases and fire station construction at such a time these facilities are deemed to be necessary to maintain an adequate level of service for fire protection services. Future Project residents would be required to pay the 1.0% sales tax on all items purchased in the City of Menifee. Payment of the of the 1.0% sales tax would ensure that funds are available for capital improvements, such as land/equipment purchases and fire station construction.

On a site-specific level, the Project is required to adhere to City of Menifee Municipal Code Chapter 8.02, which requires payment of a DIF to assist the City in providing for fire protection facilities, including fire stations. Payment of the DIF would ensure that funds are available for capital improvements, such as land/equipment purchases and fire station construction. Accordingly, Project-related impacts to fire protection services are evaluated as less than significant and no mitigation beyond payment of DIF fees would be required.

Threshold b: ***Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for Police Protection Services?***

The Project would result in an approximate population increase of 2,971 residents and the addition of up to 358 employees. The incremental increase in population to the region could result in an incremental increase in criminal activity such as burglaries, thefts, auto thefts, vandalism, etc. However, according to the RCSD, there is not a direct correlation between population growth, the number of crimes committed, and the number of RCSD personnel needed to respond to these increases. As the population and use of an area increases, however, additional financing of equipment and manpower needs are required to meet the increased demand. The Project would result in an increase in the cumulative demand for services from the RCSD, which provides police protection services to the Project site.

The Sheriff's Department has indicated in correspondence (included in EIR *Technical Appendix M*) that their desired staffing level is 1.2 deputies per 1,000 people (RCSD, 2017). In order to maintain the desirable level of service, build-out of the Project would generate a need for approximately four (4) additional sworn peace officers ([2,971 total residents + 358 total employees] x 1.2 sworn peace officers / 1,000 persons = 4.0 sworn peace officers). Staff necessary to support the additional deputies would include an appropriate level of civilian, investigation, and supervisory personnel. The Project would not, however, in and of itself result in the need for new or expanded sheriff facilities.

In November of 2016, the City of Menifee voted to impose a 1.0% sales tax to fund general City services, included in the City of Menifee Municipal Code as Chapter 3.26. Municipal Code Chapter 3.26 would allow funds collected from the sales tax to be used for local police protection facilities, including sheriff's stations in order to maintain of adequate emergency response times in the City. The City's implementation of Municipal Code Chapter 3.26 would ensure that funds are available for capital improvements, such as land/equipment purchases and sheriff station construction at such a time these facilities are deemed to be necessary to maintain an adequate level of service for sheriff protection services. Future Project residents would be required to pay the 1.0% sales tax on all items purchased in the City of Menifee. Payment of the of the 1.0% sales tax would ensure that funds are available for capital improvements, such as land/equipment purchases and fire station construction.

The Project's impact to sheriff protection services would not be regarded as significant on a direct basis because the Project would not create the need to construct a new Sheriff station or physically alter an existing station to accommodate the additional personnel. However, the Project would be required to comply with City of Menifee Municipal Code Chapter 8.02, which requires a DIF payment to the City for impacts to public services and facilities, including sheriff facilities and services. Payment of the DIF fee would ensure that funds are available for either the purchase of new equipment and/or facilities to maintain the City's desired level of service for sheriff protection. Property taxes collected from future Project residents would fund the hiring of additional sheriff personnel to maintain the City's desired level of service for sheriff protection.

Therefore, implementation of the Project would not result in the need for new or expanded sheriff facilities, and impacts would be less than significant. The Project's incremental demand for sheriff protection services also would be less than significant because future Project residents would be required to pay the City-wide 1.0% sales tax on items purchased in the City, the Project would be required to contribute DIF fees, and future Project residents would be required to pay property taxes. Accordingly, a less-than-significant impact would occur with respect to sheriff protection services or facilities as a result of implementation of the Project.

Threshold c: ***Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for Schools?***

The construction of 1,061 dwelling units as planned under the Project would increase the population in the City of Menifee and would consequently place greater demand on the existing public-school system by generating additional students to be served by the MUSD and PUHSD. The MUSD and PUHSD have established a student generation rate for each school type, which are depicted in Table 4.12-3, *Project-Related Student-Generation*. As indicated in Table 4.12-3, the Project's proposed 1,061 dwelling units would result in the annual generation of approximately 357 elementary school students (grades K-5), 121 middle school students (grades 6-8), and 111 high school students (grades 9-12) (MUSD, 2017; PUHSD, 2017).

Table 4.12-3 Project-Related Student-Generation

District	School Type	Grades Served	Student Generation Rate	Dwelling Units	No. of Project-Generated Students
MUSD	Elementary School	K-5	0.3362	1,061	357
	Middle School	6-8	0.1144	1,061	121
PUHSD	High School	9-12	0.1043	1,061	111
Total Number of Students Generated by the Project					**589**

(MUSD, 2017; PUHSD, 2017)

Comparing the estimated annual number of students generated by the Project to the existing school capacity information presented in Table 4.12-2 indicates that the Project's generation of middle school students would be accommodated based on the existing capacity within the MUSD. Based on the information presented in Table 4.12-2, the Project's generation of elementary and high school students would not be accommodated based on the existing capacity within the MUSD and PUHSD. (MUSD, 2017; PUHSD, 2017) The City of Menifee regularly consults with the MUSD and PUHSD to discuss student projections on residential developments so the School Districts can plan for their future needs.

Based on correspondence received from MUSD (included in EIR *Technical Appendix M*), although the Project's generation of elementary school students would not be accommodated based on the existing capacity within the MUSD, a new elementary school would not be required to be constructed by the Project. In addition to written correspondence received from the MUSD, the Project Applicant met with Ambur Borth, Assistant Superintendent Business, and Bruce Shaw, Facility Director on February 14, 2018, to coordinate on the Project and discuss the potential growth that would occur in the MUSD with development of the Project. The meeting provided MUSD an introduction to the Project.

A new high school is being planned in the unincorporated Winchester area. The PUHSD indicated that the new high school would likely be the school of residence for students generated as a result of the Project. When construction of the new high school is complete, the PUHSD would have the authority to make a final determination regarding if students from the Project site would attend the existing Heritage High School, or the new high school. PUHSD would make this determination based on enrollment capacity and school attendance boundaries. The school site will be located at the northwest corner of Leon and Wickerd Roads, which is east of the Menifee city limits. This school will accommodate approximately 2,500 students in grades 9-12. The opening date is unknown at this time, but an optimistic estimate is opening for the 2021-2022 school year. In the event the new high school is not open prior to implementation of the Project, students would attend Heritage High School which does not have capacity to accommodate students from the Project under existing conditions. The PUHSD indicated that the existing over capacity is served through temporary/atypical scheduling and room-utilization under existing conditions. (PUHSD, 2017)

The Project would be required to contribute fees to the MUSD and PUHSD in accordance with Public Education Code §§ 17620-17626. Pursuant to the Leroy F. Greene School Facilities Act of 1998, payment of school impact fees constitutes complete mitigation for impacts to school services from new development. Although Project-related impacts to school services would be significant due to available capacity, mandatory payment of school impact fees would be required and would ensure that the Project's impacts to school facilities would be reduced to less-than-significant levels.

Threshold d:	***Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for Parks?***

Development of the property with residential and commercial uses would create a demand for public park facilities. As discussed in EIR Section 4.13, *Recreation*, according to the City Council Resolution No. 15-143 population generation rate (utilized only for the calculation of recreational facilities), the Project would yield a future population of 3,357 persons (1,061 homes x 3.164 persons per household = 3,357 persons). Thus, the Project would require 16.8 acres of on-site public parkland in order to meet the City of Menifee objective of providing 5.0 acres of parkland per 1,000 persons (3,357 persons x 5.0 acres /1,000 persons = 16.8 acres of parkland required). The Project would provide 20.8 acres of public parkland on-site, including a 12.9-acre community park/community center and approximately 7.9 acres of paseos/neighborhood parks; thus, the Project would exceed the City's requirement for parkland development by 4.0 acres. In addition, a 1.9-acre private recreation facility would be provided on-site; however, the private recreation center is not accounted for in the public parkland calculation for the Project because it would not be available for public use. As concluded throughout this EIR, the Project's direct and cumulative impacts associated with construction of on-site park facilities would be less than significant, or would be reduced to below a level of significance with the application of mitigation measures.

Given that the Project's proposed 12.9-acre community park/community center would not be completed until 50% of the building permits have been issued for Project development, the Project could increase the use of the surrounding park facilities prior to construction of the on-site community park/community center. However, the lack of concurrent parkland for Project residents in the early phases of Project implementation (i.e., Phase 1 and prior to issuance of building permits for 31 units in Phase 2) is not anticipated to result in the physical deterioration of any existing parkland facilities due to the relatively short time frame between initial occupancy and issuance of 50% of the building permits being issued for the Project and because

paseos/neighborhood parks would be developed in phases concurrent with residential development. Implementation of the Project would not otherwise result in significant environmental effects related to parks. Thus, the Project would result in a less-than-significant impact to park facilities.

Threshold e: ***Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for Other public facilities?***

Development of the Project would increase the region's population, creating an additional demand for library facilities and services. Development of the site with 1,061 residential homes would result in an increase in the area's population. The Project would generate approximately 2,971 residents in the City of Menifee, based on the population generation rates used in the Menifee General Plan Housing Element (Menifee, 2014).

Although use of the internet has resulted in decreased demand being placed on library services nation-wide, the City continues to maintain its standards for book titles and library square footage. Library services in the City of Menifee are provided by the Riverside Public Library System. To attain the RCPLS level of service standard of 2.5 titles-per-capita, the Project-generated population would require an additional 7,428 book titles. To attain the RCPLS standard of 0.5 square foot of library space per capita, the Project would create the demand for 1,486 square feet of additional library space.

Development of the Project would contribute to an existing deficiency in library service standards. The provision of additional library space would be addressed through the City's compliance with the adopted level of service standards. Additionally, mandatory compliance with City of Menifee Municipal Code Chapter 8.02 requires payment of a public facility impact fees. These fees would provide funding for library books and library expansion projects. Although new library facilities are being considered by the RCPLS in the Menifee area it is not possible to identify environmental impacts that may be associated with the development of this new library facility until a specific proposal and design for the facility is prepared by the RCPLS. Accordingly, impacts due to the construction of new or expanded library facilities are too speculative for evaluation in this EIR (CEQA Guidelines § 15145). Environmental effects of such library facilities and any associated mitigation would be identified through a future CEQA process required in association with any future proposals for new or expanded library facilities. Any mitigation measures required for new or expanded library facilities could be funded, in part, from property taxes to such purposes. As such, Project impacts to library facilities and resources are evaluated as less than significant.

4.12.5 Cumulative Impact Analysis

This cumulative impact analysis considers development of the Project in conjunction with other development projects and planned development in the vicinity of the Project site, including buildout of the City of Menifee General Plan Land Use Plan. This study area was selected because public services are provided to most of the existing and planned developments in the City of Menifee by the same service providers.

Although the Project would be adequately served by fire protection services, based on the proximity and response times estimated from nearby fire station facilities, the Project would nonetheless result in an incremental increase in requests for service, which would affect the fire department's ability to provide acceptable levels of service. These impacts include an increased number of emergency and public service calls due to the increased presence of structures, increased traffic volumes, and increased population. When

considered in the context of on-going cumulative development throughout the City of Menifee, such impacts would be cumulatively considerable. However, the Project and all cumulative developments within City of Menifee would be required to contribute DIF fees pursuant to City of Menifee Municipal Code Chapter 8.02. Mandatory DIF fee contributions by the Project and cumulative developments would ensure that adequate funding is provided to the RCFD for the acquisition of additional facilities, equipment, and personnel. Accordingly, the Project's impact to the RCFD is evaluated as less than significant on a cumulative basis with the payment of DIF fees.

Although the Project site would be adequately served by sheriff facilities, the increased population that would be generated by the Project, when considered in conjunction with other on-going development throughout City of Menifee, has the potential to adversely affect service response times. However, the Project and all cumulative developments would be required to contribute DIF fees pursuant to City of Menifee Municipal Code Chapter 8.02, which would help to provide for adequate equipment and personnel in the Project area. Therefore, with mandatory payment of DIF fees, Project impacts to police protection services would be less than significant on a cumulative basis.

The Project, when considered in conjunction with on-going development throughout the MUSD and PUHSD service areas, would cumulatively affect the ability of these school districts to provide school services. As the above analysis demonstrates, the existing capacity at schools that service the Project area is not sufficient to accommodate Project-generated students. A new 2,500-student high school is being planned in the unincorporated area of Winchester that would be the school of residence for students in grades 9-12 generated by the Project, although the timing for completion of this facility is unknown. Nevertheless, the Project and all cumulative developments would be required to contribute fees to the MUSD and PUHSD, or other applicable school districts, in accordance with Public Education Code §§ 17620-17626. Pursuant to the Leroy F. Greene School Facilities Act of 1998, payment of school impact fees constitutes complete mitigation for project-related impacts to school services. Therefore, although the Project's impacts to school services would be cumulatively considerable, cumulative impacts would be less than significant with contribution of mandatory school impact fees.

The Project would be required to comply with City of Menifee Municipal Code Chapter 9.55 and City Council Resolution No. 15-143 which implements parkland requirements and specifies parkland dedication requirements and imposes in-lieu park impact fees. Other developments within the City and the VWRPD would either be subject to the parkland standards identified in Municipal Code Chapter 9.55 and City Council Resolution No. 15-143 or would be subject to the VWRPD Master Plan. Compliance ensures there is enough parkland to serve the population. It is important to note that Project residents and residents from cumulative developments may increase utilization of nearby recreation facilities in the area. However, construction of adequate parkland and/or payment of fees by other cumulative developments would ensure the provision of parkland in accordance with City standards, and would ensure that cumulatively-considerable impacts would not occur.

The Project, when considered in conjunction with on-going development throughout the City of Menifee, would cumulatively affect the ability of the RCPLS to serve the local community with library services. It is not possible to identify environmental impacts that may be associated with such new or expanded library facilities until a specific proposal and design for such facilities are prepared. Accordingly, impacts due to the construction of new or expanded library facilities are too speculative for evaluation in this EIR (CEQA Guidelines § 15145). Environmental effects of such library facilities and associated mitigation would be identified through a future CEQA process required in association with any future proposals for new or expanded library facilities. However, the Project and all cumulative developments would contribute property

taxes and would be required to contribute DIF fees to City of Menifee pursuant to City of Menifee Municipal Code Chapter 8.02, which could be used for the purpose of acquiring book titles and/or additional library square footage. Any mitigation measures required for new or expanded library facilities also could be funded, in part, from property taxes allocated to such purposes. Therefore, because environmental impacts associated with new or expanded library facilities cannot be known at this time and would be determined in the future once the RCPLS identifies a specific proposal for new or expanded library facilities, Project impacts to library services and facilities are evaluated as less than significant on a cumulative basis.

4.12.6 Significance of Impacts Before Mitigation

Threshold a: Less-than-Significant Impact. With conformance with all mandatory local, state, and federal laws, ordinances, and standards relating to fire safety and payment of mandatory DIF fees as required by City Regulations and Design Requirements CRDR 4.12-1 and CRDR 4.12-2, respectively, the Project's potential direct and cumulatively-considerable impacts to the RCFD would be reduced to less-than-significant levels, and the Project would not result in or require the construction of new fire protection facilities that could result in a significant impact to the environment.

Threshold b: Less-than-Significant Impact. With payment of mandatory DIF fees as enforced for the Project by City Regulation and Design Requirement CRDR 4.12-3, the Project's potential direct and cumulatively-considerable impacts to the RCSD would be reduced to less-than-significant levels, and the Project would not result in or require the construction of new police protection facilities that could result in a significant impact to the environment.

Threshold c: Less-than-Significant Impact. The Project would generate approximately 600 students. A new high school is also being planned in the unincorporated Winchester area that could accommodate the 113 high school students that the Project would generate. Although the Project would result in significant impacts associated with the demand for new or expanded school services, the payment of mandatory school impact fees as enforced for the Project by City Regulation and Design Requirement CRDR 4.12-4, would ensure that the Project would not result in significant direct or cumulative impacts to the ability of the MUSD and PUHSD to provide for school services. The Project would not require the construction of new school facilities that could result in a significant impact to the environment.

Threshold d: Less-than-Significant Impact. With construction of public parkland on-site as required by City Regulation and Design Requirement CRDR 4.12-6, as well as Municipal Code Chapter 9.55 and City Council Resolution No. 15-143 (included as City Regulation and Design Requirement CRDR 4.12-5), the Project's direct and cumulatively-considerable park impacts to the City of Menifee would be reduced to less-than-significant levels, and the Project would not result in or require the construction of new parkland that could result in a significant impact to the environment.

Threshold e: Less-than-Significant Impact. Although the Project would contribute to a need for new or expanded library facilities, it is not possible to identify environmental impacts that may be associated with such new or expanded library facilities until a specific proposal and design for such facilities are prepared by the RCPLS. Accordingly, impacts due to the construction of new or expanded library facilities are too speculative for evaluation in this EIR (CEQA Guidelines § 15145). Environmental effects of such library facilities and associated mitigation would be identified through a future CEQA process required in association with any future proposals for new or expanded library facilities. With payment of mandatory DIF fees as enforced for the Project by City Regulation and Design Requirement CRDR 4.12-7, the Project's direct and

cumulatively-considerable library impacts to the City of Menifee would be reduced to less-than-significant levels on both a direct and cumulative basis.

4.12.7 City Regulations, Design Requirements, and Mitigation

Applicable City Regulations and Design Requirements

The following are City regulations and a standard project design requirement within the City of Menifee. Although these requirements technically do not meet CEQA's definition for mitigation, they are imposed herein to ensure Project compliance with applicable project design and regulatory requirements.

CRDR 4.12-1 As a condition of Project approval, the Project would be required to conform to all mandatory local, state, and federal laws, ordinances, and standards relating to fire safety. Among other items, these requirements include conformance with the Uniform Building Code Section 1503, which requires that all buildings be constructed with fire retardant roofing material, as well as standard Riverside County Fire Department conditions of approval (COAs) for specific plans, which prohibit flag lots and require alternative/secondary access routes to neighborhoods. The alternative/secondary access routes would be required to be maintained throughout construction and buildout of the Project. Compliance with fire safety laws would ensure that the Project's is constructed in a manner that would reduce impacts to fire protection services and response times.

CRDR 4.12-2 The Project would be required to adhere to City of Menifee Ordinance No. 2017-232 (Municipal Code Chapter 8.02), which requires payment of a development impact fee (DIF) to assist the City in providing for fire protection facilities, including fire stations. Payment of the DIF fee would ensure that funds are available for capital improvements, such as land/equipment purchases and fire station construction.

CRDR 4.12-3 The Project would be required to adhere to City of Menifee Ordinance No. 2017-232 (Municipal Code Chapter 8.02), which requires payment of a development impact fee (DIF) to assist the City in providing for sheriff protection facilities, including sheriff stations. Payment of the DIF fee would ensure that funds are available for additional sheriff personnel as well as capital improvements, such as land/equipment purchases and sheriff station construction.

CRDR 4.12-4 The Project is required to comply with Public Education Code § 17072.10-18, which requires mandatory payment of school impact fees pursuant. Payment of school impact fees would ensure that funds are available for capital improvements such as land/equipment purchases and school construction.

CRDR 4.12-5 The Project would be required to comply with the City of Menifee Municipal Code Chapter 9.55 and City Council Resolution No. 15-143, which sets forth a parkland standard of 5.0 acres per 1,000 residents, specifies a single-family residential population generation rate of 3.164 pph, specifies parkland dedication requirements, and imposes in-lieu park impact fees to address potential parkland deficiencies. Compliance with the parkland standard would ensure adequate parkland is available in the City of Menifee for Project residents.

CRDR 4.12-6 The Project would be required to construct a 12.9-acre community park/community center, 1.9-acre private recreation center, and 7.9 acres of paseos/neighborhood parks.

Construction of the 12.9-acre community park/community center, 1.9-acre private recreation center, and 7.9 acres of paseos/neighborhood parks would serve the parkland needs of the Project's population.

CRDR 4.12-7 The Project would be required to adhere to City of Menifee Ordinance No. 2017-232 (Municipal Code Chapter 8.02), which requires payment of a development impact fee (DIF) to assist the City in providing for library facilities. Payment of the DIF fee would ensure that funds are available for capital improvements, such as land/equipment purchases and library construction.

Mitigation

Impacts to public services as a result of Project implementation would be less than significant, and mitigation is not required.

4.13 RECREATION

This Subsection provides an overview of the existing parks and recreational facilities that occur within the Project vicinity and that could potentially be indirectly physically affected by implementation of the Project. This Subsection also describes on-site recreational facilities proposed by the Legado Specific Plan (SP 2017-187), and provides an analysis of the potential environmental effects that could occur due to the construction of such recreational facilities on-site. The analysis herein is based in part on the City of Menifee General Plan Open Space and Conservation Element.

4.13.1 EXISTING CONDITIONS

A. Federal Parks

There are no federal parks located within the area surrounding the Project site. The nearest federal park is the Cleveland National Forest located approximately 12.3 miles west of the Project site. (Google Earth, 2016)

B. State Parks

There are no California State Parks located within the Project site's immediate vicinity. The nearest California State Park is the Lake Perris State Recreation Area located approximately 7.9 miles north of the Project site. (CDPR, 2017; Google Earth, 2016)

C. Regional and Local Parks

As shown in Figure 4.13-1, *Existing Local and Regional Recreation Facilities*, numerous regional and local parks occur within a two-mile radius of the Project site. At the time the NOP was released for public review (November, 2017) parks and recreation services in the City of Menifee were provided by two distinct and separate public agencies, the City of Menifee and the Valley-Wide Recreation and Parks District (VWRPD). Under existing conditions, park facilities on the Project site would be maintained by the City of Menifee. On May 26, 2016 the City of Menifee submitted a formal application to the Local Agency Formation Commission (LAFCO) for the detachment of VWRPD from the City of Menifee boundaries. If approved by the LAFCO, the decision would potentially transfer all VWPRD facilities within the City boundary over to the City for ownership and operation. If approved, the City would be solely responsible for all park and recreation services. At the time the NOP for the Project was released (November, 2017) the decision was pending. The local parks in the Project's vicinity would either continue to be maintained by the two entities as described below if the LAFCO application is rejected, or all parks managed by VWRPD would be transferred to the City of Menifee for ownership and maintenance if the LAFCO application is approved. The discussion herein assumes that parks are maintained as under existing conditions. The regional and local parks within a two-mile radius of the Project site are described below. (Menifee, 2017a)

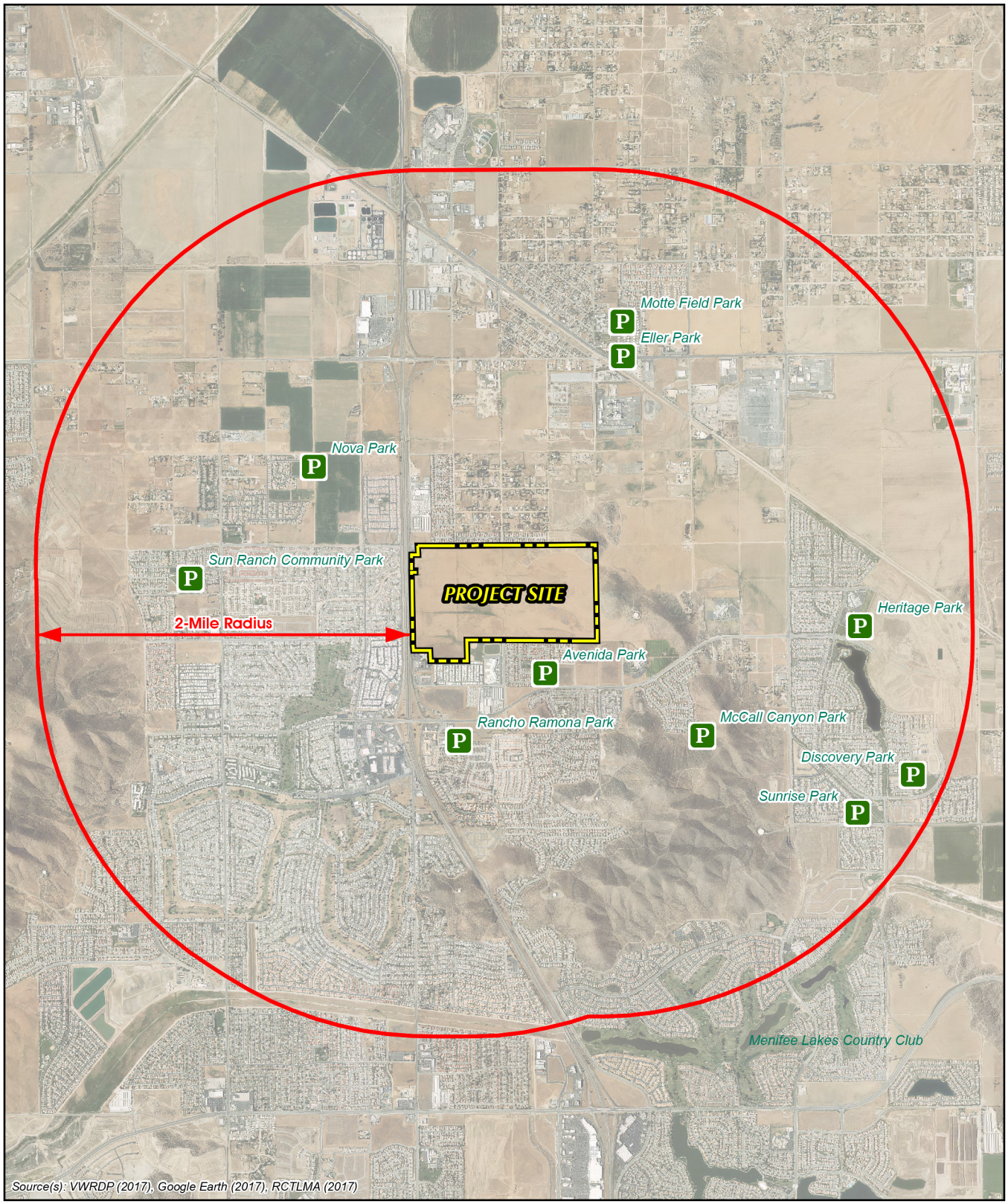


Figure 4.13-1
EXISTING LOCAL AND REGIONAL RECREATION FACILITIES

- **Eller Park.** Eller Park is a local park facility managed by the VWRPD and located approximately 1.1 miles north of the Project site. This facility includes a lighted ball field, outdoor basketball courts, a running/jogging track, and two play areas. (VWRPD, 2017; Google Earth, 2016)

- **Heritage Park.** Heritage Park is a local park facility managed by the VWRPD and located approximately 1.3 miles east of the Project site. This facility includes two basketball courts, two play areas, and two picnic areas. (VWRPD, 2017; Google Earth, 2016)

- **McCall Canyon Park.** McCall Canyon Park is a local park facility managed by VWRPD and located approximately 0.7-mile southeast of the Project site. This facility includes two basketball courts and one play area. (VWRPD, 2017; Google Earth, 2016)

- **Sunrise Park.** Sunrise Park is a local park facility managed by VWRPD and located 1.2 miles southeast of the Project site. This facility includes two ball fields, two basketball courts, two play areas, one picnic area, and a running/jogging track. (VWRPD, 2017; Google Earth, 2016)

- **Discovery Park.** Discovery Park is a local park facility managed by VWRPD and located 2.0 miles southeast of the Project site. This facility includes one ball field, one basketball court, one play area, picnic structures, fitness trails, and restrooms. (VWRPD, 2017; Google Earth, 2016)

- **Rancho Ramona Park.** Rancho Ramona Park is a local park facility managed by the City of Menifee and located 0.4-mile south of the Project site. This facility includes one basketball court, one volleyball court, horseshoe pits, three picnic areas, one multi-purpose/soccer field, and two play areas. (Menifee, 2017b; Google Earth, 2016)

- **Nova Park.** Nova Park is a local park facility managed by the City of Menifee and located 0.75-mile northwest of the Project site. This facility includes one multi-purpose/soccer field and one playground/tot lot area. (Menifee, 2017b; Google Earth, 2016)

- **Avenida Park.** Avenida is a local park facility that is privately managed and located 0.1-mile south of the Project site. This facility includes a play area and several picnic areas. (Google Earth, 2016)

- **Sun Ranch Community Park.** Sun Ranch Community Park is a local park facility that is privately managed and located 1.2 miles west of the Project site. This facility includes a play area.

- **Motte Field Park.** Motte Field Park is a local park facility located 1.1 miles north of the Project site. This facility includes a soccer field, two ball fields, a jogging/running track, four basketball courts, and one play area.

Under existing conditions, the Project site is subject to the City of Menifee Parks, Trails, Open Space and Recreation Master Plan ("PTOSR Master Plan"), described in more detail below under Subsection 4.13.2. The PTOSR Master Plan includes a service area analysis which identified residential areas within 0.5-mile of existing and planned park facilities. The PTOSR Master Plan determined that areas within 0.5-mile (a reasonable walking distance) of a park had adequate access to recreation facilities. As shown in Figure 3.4-1 of the PTOSR Master Plan, the parks planned within the vicinity of the Project site adequately serve the Project site under existing conditions. The PTOSR Master Plan also identifies two "City Parks in Progress" on the

Project site, including a park west of Sherman Road and a park that appears to occur within the alignment of Rouse Road. (Menifee, 2016, p. 65, Figure 3.4-1)

D. Regional Trails and Bikeway System

The City of Menifee General Plan identifies the City's long-term objectives for recreational trails and bikeways within the City. Figure 4.13-2, *General Plan Proposed Recreational Trails*, depicts the proposed recreational facilities within the Project vicinity and Figure 4.13-3, *General Plan Proposed Bikeway and Community Pedestrian Network*, depicts proposed bikeway and pedestrian facilities within the Project vicinity.

The nearest Regional Trail to the Project site is approximately 1.7 miles south of the Project site, located just north of the Menifee Lakes Country Club. The Regional Trail continues west along the Salt Creek Channel to Canyon Lake. The nearest Community Trail to the Project site is approximately 1.5 miles north of the Project site, located at the intersection of State Route 74 (SR-74) and Menifee Road. The Community Trail continues north along Menifee Road to the City boundary. The nearest planned bikeway facilities to the Project site are "Community On-Street Bike Lanes (Class II)" facilities along Encanto Drive and the portion of Chambers Avenue west of Sherman Avenue adjacent to the Project site. Additionally, "Community On-Street NEV/Bike Lanes (Class II)" facilities are identified along Sherman Road, the portion of Chambers Avenue located east of Sherman Road, Antelope Road, and the portion of Rouse Road east of Myles Court. A "Community Off-Road Bike Trail (Class I)" also is planned along the segment of Rouse Road located west of Myles Court. In addition to the City of Menifee's Bikeway Network, General Plan Circulation Element Exhibit C-6 identifies the City's planned Neighborhood Electric Vehicle (NEV) Network. "NEV/Bike Lanes (Class II Routes)" are planned along Sherman Road, the portion of Chambers Avenue located east of Sherman Road, Antelope Road, and the portion of Rouse Road east of Myles Court, while an "Off-Road NEV/Bike Trail (Class I)" is planned along the segment of Rouse Road located west of Myles Court. (Menifee, 2013a, Exhibit OSC-1; Exhbit C-4; Exhibit C-6; Google Earth, 2016)

In addition to the trails and bicycle facilities identified by the City of Menifee General Plan, a proposed bikeway and community pedestrian network was identified by the PTOSR Master Plan. The trail designations in the Master Plan vary from the designations identified in the General Plan. Figure 4.13-4, *PTOSR Master Plan Proposed Trail Network*, depicts the proposed bikeways and pedestrian trails proposed within the Project vicinity. The PTOSR Master Plan calls for the provision of a Community Trail (Hiking, Biking & Equestrian) along Rouse Road, Sherman Road, Antelope Road, and the segment of Chambers Avenue located east of Sherman Road. The PTOSR Master Plan also calls for a Community Bike Lane – Class II along Encanto Drive and the segment of Chambers Avenue located west of Sherman Road. The regional trails and bikeways identified in both Figure 4.13-1 and Figure 4.13-2 for roadways within and surrounding the Project site would apply to the Project. (Menifee, 2016, p. 43, Figure 2.7-1; Google Earth, 2016)

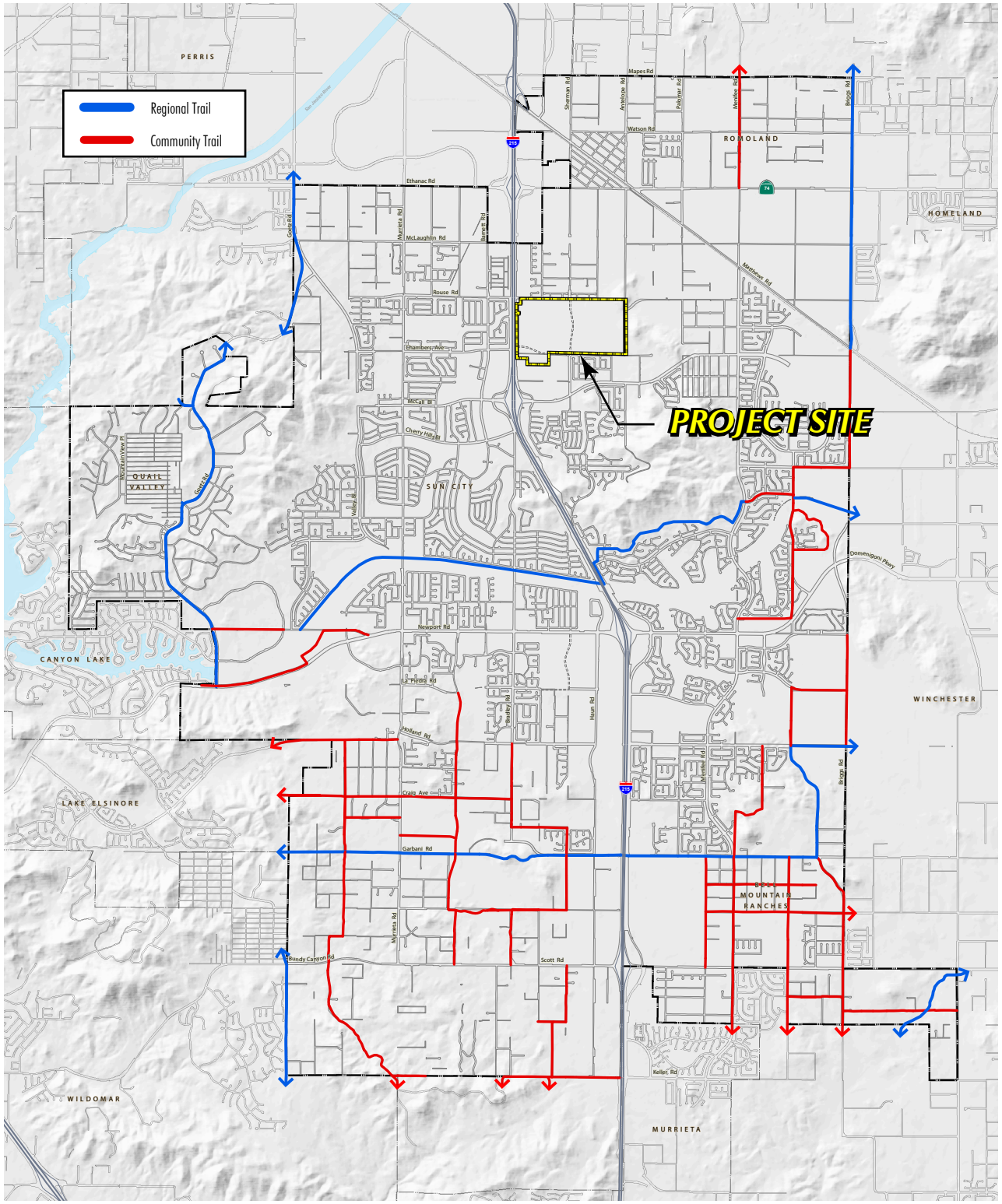
4.13.2 Applicable Regulatory Requirements

The following is a brief description of the state and local environmental laws and related regulations related to recreation.

A. State Regulations

1. Quimby Act, California Government Code § 66477

The State of California's Quimby Act was established by the California Legislature for the purpose of preserving open space and providing park facilities for California's growing communities.

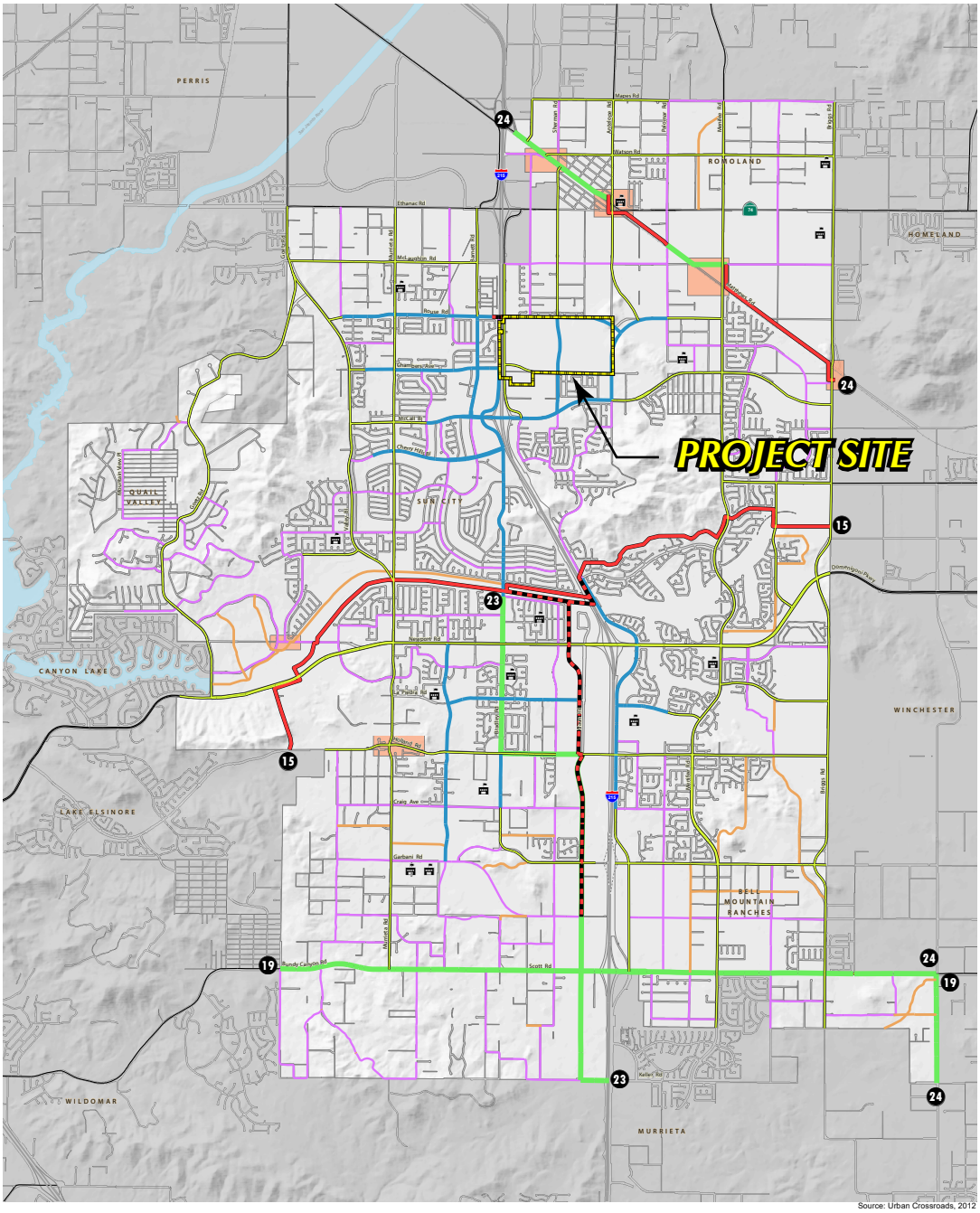


Source(s): Menifee Trails Committee (2010)

Figure 4.13-2

NOT TO SCALE

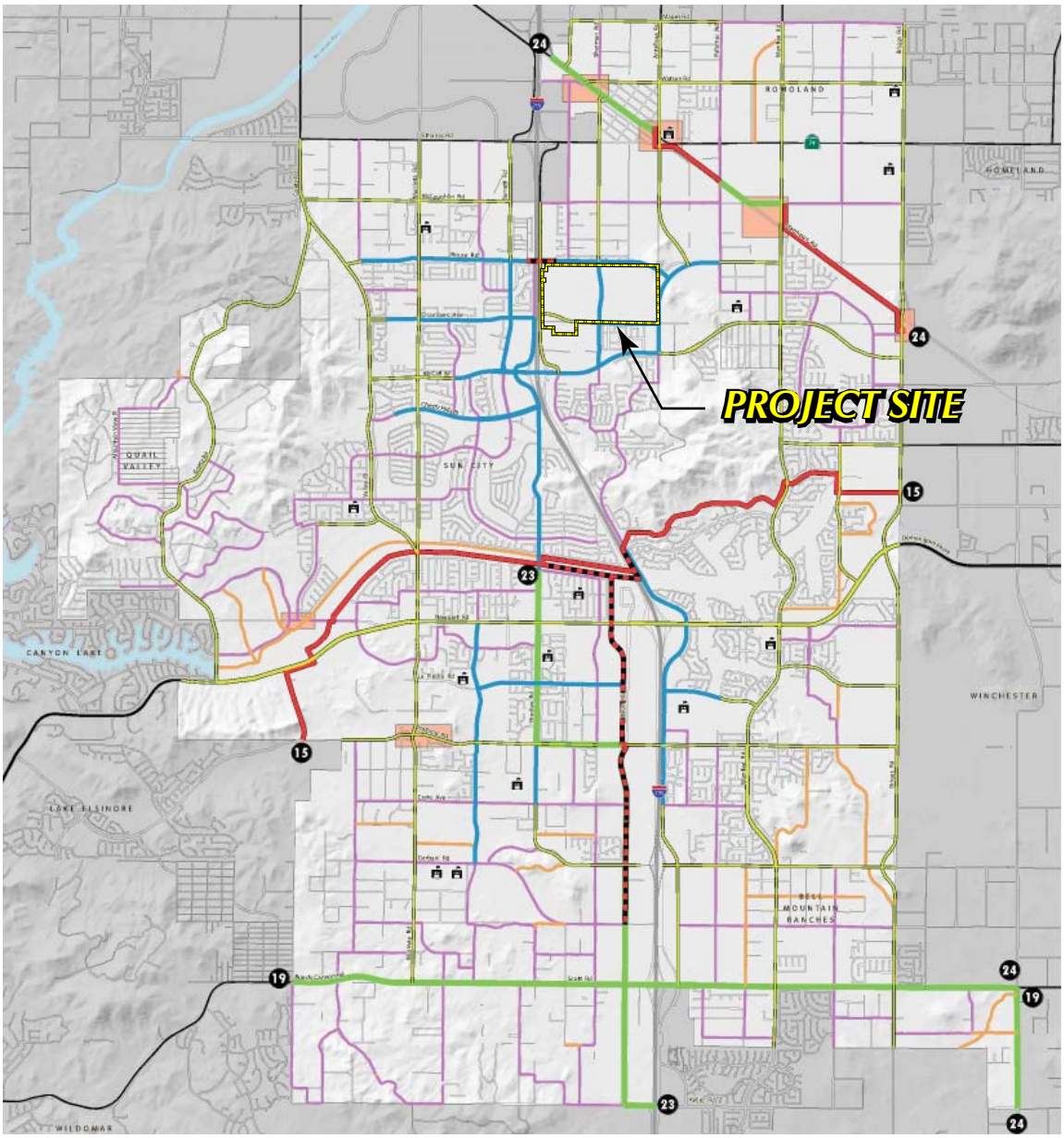
GENERAL PLAN PROPOSED RECREATIONAL TRAILS



Source(s): Menifee General Plan Circulation Element (2013)

NOT TO SCALE

Figure 4.13-3
GENERAL PLAN PROPOSED BIKEWAY AND COMMUNITY PEDESTRIAN NETWORK



LEGEND

- Subregional Route - Off-Road Bike Trail (Class I)
- Subregional Route - On-Street Bike Lanes (Class II)
- Community Off-Road Bike Trail (Class I)
- Community On-Street NEV/Bike Lanes (Class II)
- Community On-Street Bike Lanes (Class II)
- Community Hiking / Biking Trail Opportunity
- Class III Bike Routes
- Connectivity Analysis Zone - Trail alignments and traffic control features subject to additional assessment
- Existing Schools
- Subregional Route Number (WRCOG Non-Motorized Transportation Plan)

Source(s): City of Menifee Parks, Trails, Open Space and Recreation Master Plan (2013)

NOT TO SCALE

Figure 4.13-4
PTOSR MASTER PLAN
PROPOSED TRAIL NETWORK

The Quimby Act allows local agencies to establish ordinances requiring residential subdivisions to provide land or "in-lieu-of" fees for park and recreation purposes. This State Act requires the dedication of land and/or imposes a requirement of fees for park and recreational purposes as a condition of approval of tentative tract map or parcel map.

B. Local Regulations

1. City of Menifee General Plan – Open Space and Conservation Element OSC-1

The Open Space & Conservation Element of the City of Menifee General Plan includes the following goal and policies that relate to parks and recreation. (Menifee, 2013a)

- Goal OSC-1: A comprehensive system of high quality parks and recreation programs that meets the diverse needs of the community.

- Policy OCS-1.1: Provide parks and recreational programs to meet the varied needs of community residents, including children, youth, adults, seniors, and persons with disabilities, and make these facilities and services easily accessible and affordable to all users.

- Policy OCS-1.2: Require a minimum of 5 acres of public open space to be provided for every 1,000 city residents.

- Policy OCS-1.3: Locate and distribute parks and recreational facilities throughout the community so that most residents are within walking distance (1-half mile) of a public open space.

- Policy OCS-1.4: Enhance the natural environment and viewsheds through park design and site selection while preserving sensitive biological, cultural, and historic resources.

- Policy OCS-1.5: Make parks as safe as possible by promoting the latest developments in facility design and equipment technology.

2. City of Menifee Parks, Trails, Open Space and Recreation Master Plan

The City of Menifee Parks, Trails, Open Space and Recreation Master Plan ("PTOSR Master Plan") serves as a guide and implementation tool for the management and development of parks and recreational programs for the City of Menifee. The PTOSR Master Plan provides a clear set of objectives to provide direction for the maintenance, development, re-development, expansion and enhancement of City's park system, open spaces, trails, and recreation facilities program and services for the short term, mid-term, and long term. The PTOSR Master Plan identifies recreational opportunities and resources in the City, as well as needs, facility usage patterns, recreation standards and recommendations to meet the City's needs. (Menifee, 2016, p. 19)

The PTOSR Master Plan identifies one existing City Park in the vicinity of the Project, the Rancho Ramona Park, located 0.4 mile south of the Project site at the southeast corner of Encanto Drive and Alta Vista Way. The PTOSR Master Plan also identifies three "City Parks in Progress" in the Project area, including recreational facilities proposed on site by the Project; the Talvera Park, which is planned northeast of the Project site within Tract 29777; and the CV Communities Park, which is planned to the east of the Project site within Tract 29835. It should be noted that the "City Park in Progress" identified in the PTOSR Master Plan on the Project site are different sizes and configurations as compared to what is currently proposed by the Project. Although the Project would modify the sizes and configuration of the on-site park identified by the

PTOSR Master Plan, the Project would continue to provide a community park/community center and other recreational amenities on-site. (Menifee, 2016, p. 65, Figure 3.4-1)

3. City of Menifee Municipal Code Chapter 9.55

Chapter 9.55 of the City of Menifee Municipal Code implements the Quimby Act by establishing a requirement for dedication of 5.0 acres of parkland per 1,000 residents, or payment of a fee in lieu of such dedication. The calculation for the average number of persons per dwelling unit is designated by a City Council Resolution. At the time the NOP for the Project was released for public review (November 2017), City Council Resolution No. 15-143 was applicable to the Project, which designated a population generation rate of 3.164 persons per single family dwelling unit (Menifee, 2015b). The land, fees, or combination thereof that are dedicated pursuant to this chapter are to be used only for the purposes of developing new or rehabilitating existing neighborhood or community park or recreational facilities to serve the subdivision that prompts the dedication, and the amount and location of land to be dedicated or the fees to be paid must bear a reasonable relationship to the use of the park and recreational facilities by future inhabitants of the subdivisions. (Menifee, 2018)

4.13.3 Basis for Determining Significance

Section XVI of Appendix G to the CEQA Guidelines addresses typical adverse effects to recreation, and includes the following threshold questions to evaluate the Project's impacts on recreation (OPR, 2018):

a. *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; or*

b. *Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.*

4.13.4 Impact Analysis

Threshold a:	***Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?***

The Project site is located within the sphere of influence for the VWRPD for recreational facilities management; however, recreational facilities would be maintained by the City of Menifee. As noted above under Subsection 4.13.2B.2, Municipal Code Chapter 9.55 defers to City Council Resolution No. 15-143 for the population generation rate that is utilized to calculate parkland demand for projects within the City of Menifee that is different from the average number of persons per household (pph) identified in the City's General Plan Housing Element (which uses 2.8 pph). According to City Council Resolution No. 15-413, the average number of pph for single-family homes is 3.164 pph (Menifee, 2015b). Parkland demand within the City of Menifee must be calculated based on the pph rate utilized in the City Council Resolution No. 15-413. It should be noted that the population generation rates of City Council Resolution No. 15-413 are utilized only for the analysis of potential parkland demand; all other subsections of this EIR rely instead on the City of Menifee General Plan Housing Element population generation rate of 2.8 pph.

Using the rates identified in the City Council Resolution No. 15-413, the Project would yield a future population of 3,357 persons (1,061 homes x 3.164 persons/household = 3,357 persons). Municipal Code Chapter 9.55 requires the provision of 5.0 acres of usable parkland per 1,000 persons. Thus, per Menifee Municipal Code Chapter 9.55 and City Council Resolution No. 15-413, the Project would require a total of 16.8 acres of usable parkland. (Menifee, 2015b)

The Project proposes the construction of 20.8 acres of public parkland, including a 12.9-acre community park/community center, and approximately 7.9 acres of paseos/neighborhood parks. In addition, a 1.9-acre private recreation facility would be provided on-site; however, the private recreation center is not accounted for in the public parkland calculation for the Project because it would not be available for public use. The 12.9-acre community park/community center would be completed when 50% of the building permits are issued for the Project. The private recreation centers and paseos/neighborhood parks would be developed in the same phase as the Planning Area they are located in. In accordance with the PTOSR Master Plan, the Project also includes Class II Bike/NEV Lanes along Sherman Road, Chambers Avenue (east of Sherman Road), Antelope Road, and Rouse Road; and Class II Bike Lanes along Chambers Avenue (west of Sherman Road) and Encanto Drive. In addition, the Project proposes the construction of Class III Bike Lanes within the internal roadways of the Project site. Refer to Figure 3-7, *NEV and Bikeway Network*, shown previously in EIR Section 3.0 for the Project's detailed NEV and bikeway network. Thus, not including NEV and bike lanes, the Project would exceed the parkland requirements of the City of Menifee by approximately 4.0 acres. Accordingly, the Project would not result in or require the development of new parkland to serve future Project residents beyond what is planned within the Project's boundaries.

Given the excess amount of parkland planned within the Project area, it is unlikely that future Project residents would utilize parkland resources outside of the Project boundaries to the point that physical deterioration of such facilities would occur or would be accelerated. Moreover, it is likely that any incremental increase in the use of existing off-site recreational facilities as a result of the Project would be off-set by existing City residents utilizing proposed recreational facilities on-site. Given that the Project's proposed 12.9-acre community park/community center would not be completed until 50% of the building permits are issued for the Project, the Project could increase the use of the surrounding park facilities prior to construction of the on-site community park/community center. However, the lack of concurrent parkland for Project residents in the early phases of Project implementation (i.e., Phase 1 and prior to issuance of building permits for 31 units in Phase 2) is not anticipated to result in the physical deterioration of any existing parkland facilities due to the relatively short time frame between initial occupancy and issuance of 50% of the building permits being issued for the Project and because paseos/neighborhood parks would be developed in phases concurrent with residential development. Implementation of the Project would not otherwise result in significant environmental effects related to parks. Accordingly, impacts to the environment resulting from the Project's demand for parkland resources would be less than significant.

Threshold b: ***Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?***

The Project proposes the construction of 20.8 acres of public parkland, including a 12.9-acre community park/community center, and approximately 7.9 acres of paseos/neighborhood parks. The 12.9-acre community park/community center would be completed when 50% of the building permits are issued for the Project. The private recreation centers and paseos/neighborhood parks would be developed in the same phase as the Planning Area they are located in. In accordance with the PTOSR Master Plan, the Project also includes Class II Bike/NEV Lanes along Sherman Road, the segment of Chambers Avenue east of Sherman Road, Antelope Road, and Rouse Road; and Class II Bike Lanes along Chambers Avenue west of Sherman Road, and Encanto Drive. In addition, the Project proposes the construction of Class III Bike Lanes within the internal roadways of the Project site. Refer to Figure 3-7, *NEV and Bikeway Network*, shown previously in EIR Section 3.0 for the Project's detailed NEV and bikeway network. The physical construction of the on-site recreation facilities has been addressed under the relevant issue areas identified throughout this EIR (e.g., air quality, biological resources, cultural resources, etc.). Under each of these topics, the Project impacts are determined to be less than significant, or mitigation measures have been imposed to reduce impacts to the maximum feasible extent.

There are no components of the planned recreation facilities on-site that have not already been addressed and accounted for throughout this EIR for the Project site. Accordingly, Project impacts due to parkland development on-site would be less than significant, requiring no mitigation beyond that which is identified in other portions of this EIR.

Additionally, and as noted under Threshold a, the Project would result in a demand for 16.8 acres per Menifee Municipal Code Chapter 9.55 and City Council Resolution No. 15-143, while the Project proposes a total of 20.8 acres of parkland on-site; thus, the Project would exceed the City of Menifee parkland provision requirement by 4.0 acres. Thus, the Project would not result in or require the construction of recreational facilities off-site, and no impacts due to off-site parkland construction would occur as a result of the Project.

4.13.5 Cumulative Impact Analysis

This cumulative impact analysis considers development of the Project in conjunction with other development projects and planned development in the vicinity of the Project site, including build-out of the City of Menifee General Plan Land Use Plan. This study area was selected because people tend to utilize community recreation facilities that are near where they live.

The Project would be required to comply with City of Menifee Municipal Code Chapter 9.55 and City Council Resolution No. 15-143, which implement parkland requirements, specify parkland dedication requirements, and impose in-lieu park impact fees. The Project also would be consistent with and would implement a portion of the PTOSR Master Plan. Other developments within the City and the VWRPD would either be subject to Municipal Code Chapter 9.55 and City Council Resolution No. 15-143 or would be subject to the VWRPD Master Plan and would be required to demonstrate compliance with the PTOSR Master Plan. Compliance ensures there is enough parkland to serve the population. It is important to note that Project residents and residents from cumulative developments may increase utilization of nearby recreation facilities in the area. The Project proposes construction of a 12.9-acre community park/community center, and 7.9 acres of paseos/neighborhood parks which would be utilized by Project residents and residents the surrounding region. However, construction of adequate parkland and/or payment of fees by other cumulative developments would ensure the provision of parkland in accordance with City standards, and would ensure that cumulatively-considerable impacts would not occur. Impacts to existing recreational facilities would be reduced to less-than-significant levels. Accordingly, the Project's impacts to existing parks and recreational facilities within the region would be less-than-cumulatively considerable.

The construction of 20.8 acres of public parkland on-site, and construction of the trails per the City's PTOSR Master Plan are inherent to the Project's construction phase. Cumulatively-considerable effects associated with the buildout of these areas have been evaluated throughout appropriate topical headings within this EIR, and where necessary, mitigation measures have been imposed on the Project to reduce such impacts to the maximum feasible extent. There are no potential cumulatively-considerable impacts to the environment that would occur that are unique to parkland construction on-site. Accordingly, cumulatively-considerable impacts due to on-site parkland construction would be less than significant.

4.13.6 Significance of Impacts Before Mitigation

Threshold a: Less-than-Significant Impact. The Project would provide a total of 20.8 acres of public parkland on-site, while only 16.8 acres are required by the Municipal Code Chapter 9.55 and City Council Resolution No. 15-143 (included as City Regulation and Design Requirement CRDR 4.13-1); thus, the Project would exceed the City of Menifee parkland requirement by 4.0 acres as included by City Regulation and Design Requirement CRDR 4.13-2. Given the excess amount of parkland planned within the Project area, it is unlikely

that future Project residents would utilize parkland resources outside of the Project boundaries to the point that physical deterioration of such facilities would occur or would be accelerated. Moreover, it is likely that any incremental increase in the use of existing recreational uses as a result of the Project would be off-site by existing City residents utilizing proposed recreational facilities on-site. Thus, the Project's impacts to existing parks and recreation facilities in the region would be less than significant.

Threshold b: Less-than-Significant Impact. A 12.9-acre community park/community center, 7.9 acres of paseos/neighborhood parks, and trails per the City's PTOSR Master Plan are proposed on the Project site as included in City Regulation and Design Requirement CRDR 4.13-2. Effects associated with the physical construction of these facilities are addressed under the relevant issue areas identified within this EIR (e.g., air quality, biological resources, cultural resources etc.). As concluded throughout this EIR, the Project's direct and cumulative impacts associated with construction of the Project would be less than significant, or would be reduced to the maximum feasible extent with the implementation of mitigation measures.

4.13.7 City Regulations, Design Requirements, and Mitigation

Applicable City Regulations and Design Requirements

The following are applicable regulations and design requirements within the City of Menifee. Although these requirements technically do not meet CEQA's definition for mitigation, they are imposed herein to ensure Project compliance with applicable City regulations and design requirements.

CRDR 4.13-1 The Project would be required to comply with the City of Menifee Municipal Code Chapter 9.55 and City Council Resolution No. 15-143, which sets forth a parkland standard of 5.0 acres per 1,000 residents, specifies a single-family residential population generation rate of 3.164 pph, specifies parkland dedication requirements, and imposes in-lieu park impact fees to address potential parkland deficiencies. Compliance with the parkland standard would ensure adequate parkland is available in the City of Menifee for Project residents.

CRDR 4.13-2 The Project would be required to construct a 12.9-acre community park/community center, and 7.9 acres of paseos/neighborhood parks. Construction of the 12.9-acre community park/community center and 7.9 acres of paseos/neighborhood parks would serve the parkland needs of the Project's population.

Mitigation

Impacts to recreation facilities as a result of Project implementation would be less than significant, and mitigation is not required.

4.14 TRANSPORTATION

The following analysis is primarily based on a traffic impact analysis (TIA) prepared by Urban Crossroads Inc., titled *Legado Specific Plan – Traffic Impact Analysis, City of Menifee*, and dated December 4, 2019. A copy of the TIA report is included as *Technical Appendix K* to this EIR. The TIA evaluates the potential operating deficiencies of traffic and circulation facilities in the Project's study area and identifies improvements that would be needed to relive operational deficiencies. As directed by the City of Menifee, the TIA was prepared in accordance with the *City of Menifee Public Works Department Traffic Impact Analysis Guidelines* (August 2015), the California Department of Transportation (Caltrans) *Guide for the Preparation of Traffic Impact Studies* (December 2002), and consultation with City of Menifee staff during the traffic study scoping process. (Urban Crossroads, 2019d, p. 1)

4.14.1 STUDY AREA DESCRIPTION

The Project study area was defined in coordination with the City of Menifee. Pursuant to the *City of Menifee Public Works Department Traffic Impact Analysis Guidelines*, the study area includes any intersection of "Collector" or higher classification street with other "Collector" or higher classification streets, at which the Project will add 50 or more peak hour trips. Figure 4.14-1, *Study Area Location Map*, presents the study area and intersection analysis locations. (Urban Crossroads, 2019d, p. 4; Menifee, 2015a, p. 6)

The "50 peak hour trip" criteria generally represents a minimum number of trips at which a typical intersection would have the potential to be substantively impacted by a given development proposal. Although each intersection may have unique operating characteristics, this traffic engineering rule of thumb is a widely-utilized tool for estimating a potential area of impact (i.e., study area). (Urban Crossroads, 2019d, p. 4)

To ensure that the TIA satisfies the needs of the City of Menifee, Urban Crossroads, Inc. prepared a Project-specific traffic study scoping agreement for review by City staff prior to the preparation of the TIA. The agreement provides an outline of the study area, trip generation, trip distribution, and analysis methodology. The agreement approved by the City of Menifee is included in Appendix 1.1 to the TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 4)

A. Intersections

Based on consultation with City of Menifee staff, forty-seven intersections are included within the Project's study area, as shown on Figure 4.14-1 and listed in Table 4.14-1, *Intersection Analysis Locations*. (Urban Crossroads, 2019d, p. 4)

B. Roadway Segments

Based on consultation with City of Menifee staff, a total of 44 roadway segments are included in the Project's study area, as shown on Figure 4.14-1 and listed in Table 4.14-2, *Roadway Segment Analysis Locations*. (Urban Crossroads, 2018d, p. 7)

C. Freeway Mainline Segments

Standard Caltrans guidance related to the geographic scope of the study area for the State Highway System (SHS) suggests the traffic study should include, as a minimum, all State highway facilities where the project will add over 100 peak hour trips. State highway facilities that are experiencing noticeable delays should be analyzed in the scope of the traffic study for projects that add 50 to 100 peak hour trips.

Table 4.14-1 Intersection Analysis Locations

ID	Intersection Location	Jurisdiction	CMP
1	Goetz Rd. & Ethanac Rd.	Menifee / Perris	No
2	Murrieta Rd. & Ethanac Rd.	Menifee / Perris	No
3	Murrieta Rd. & McCall Bl.	Menifee	No
4	Sun City Bl. & McCall Bl.	Menifee	No
5	Barnett Rd. & Ethanac Rd.	Menifee / Perris	No
6	Case Rd. & Ethanac Rd.	Perris	No
7	Bradley Rd. & McCall Bl.	Menifee	No
8	Bradley Rd. & Cherry Hills Bl.	Menifee	No
9	I-215 SB Ramps/SR-74 & Bonnie Dr.	Caltrans / Perris	Yes
10	I-215 SB Ramps & Ethanac Rd.	Caltrans / Perris	Yes
11	I-215 SB Ramps & McCall Bl.	Caltrans / Menifee	Yes
12	I-215 NB Ramps & SR-74	Caltrans / Menifee	Yes
13	I-215 NB Ramps & Ethanac Rd.	Caltrans / Perris	Yes
14	I-215 NB Ramps & McCall Bl.	Caltrans / Menifee	Yes
15	Encanto Dr. & Ethanac Rd.	Perris	No
16	Encanto Dr. & McLaughlin Rd.	Menifee / Perris	No
17	Encanto Dr. & Rouse Rd.	Menifee	No
18	Encanto Dr. & Chambers Av. – Future Intersection	Menifee	No
19	Encanto Dr. & Shadel Rd.	Menifee	No
20	Encanto Dr. & McCall Bl.	Menifee	No
21	Trumble Rd. & SR-74	Menifee	No
22	Trumble Rd. & Ethanac Rd.	Menifee / Perris	No
23	Trumble Rd. & Rouse Rd.	Menifee	No
24	Brady Ln. & Rouse Rd.	Menifee	No
25	Street A & Chambers Av. – Future Intersection	Menifee	No
26	Sherman Rd. & SR-74	Menifee	No
27	Sherman Rd. & Ethanac Rd.	Menifee / Perris	No
28	Sherman Rd. & McLaughlin Rd.	Menifee	No
29	Sherman Rd. & Rouse Rd.	Menifee	No
30	Sherman Rd. & Street B – Future Intersection	Menifee	No
31	Sherman Rd. & Chambers Av.	Menifee	No
32	Sherman Rd. & Shadel Rd.	Menifee	No
33	Sherman Rd. & McCall Bl.	Menifee	No
34	Dawson Rd./Street C & Rouse Rd.	Menifee	No
35	Street C/Concord Ln. & Chambers Av.	Menifee	No
36	Antelope Rd. & Ethanac Rd.	Menifee	No
37	Antelope Rd. & Rouse Rd. (North) – Future Intersection	Menifee	No
38	Antelope Rd. & Rouse Rd. (South) – Future Intersection	Menifee	No

Table 4.14-1 Intersection Analysis Locations (Cont'd)

ID	Intersection Location	Jurisdiction	CMP
39	Antelope Rd. & Chambers Av. – Future Intersection	Menifee	No
40	Antelope Rd. & McCall Bl.	Menifee	No
41	Palomar Rd. & SR-74	Menifee	No
42	Menifee Rd. & SR-74	Caltrans	Yes
43	Menifee Rd. & Rouse Rd.	Menifee	No
44	Menifee Rd. & McCall Bl.	Menifee	No
45	Menifee Rd. & Simpson Rd.	Menifee	No
46	I-215 SB Ramps & Newport Rd.	Menifee / Caltrans	Yes
47	I-215 NB Ramps & Newport Rd.	Menifee / Caltrans	Yes

(Urban Crossroads, 2019d, Table 1-1)

Table 4.14-2 Roadway Segment Analysis Locations

ID	Roadway Segment	Segment Limits
1	SR-74	Bonnie Dr. to I-215 NB Ramps
2	SR-74	I-215 NB Ramps to Trumble Rd.
3	Ethanac Rd.	Goetz Rd. to Murrieta Rd.
4	Ethanac Rd.	Murrieta Rd. to Barnett Rd.
5	Ethanac Rd.	Case Rd. to I-215 Freeway
6	Ethanac Rd.	I-215 Freeway to Encanto dr.
7	Ethanac Rd.	Encanto dr. to Trumble Rd.
8	Ethanac Rd.	Trumble Rd. to Sherman Rd.
9	Ethanac Rd.	Sherman Rd. to Antelope Rd.
10	SR-74	Antelope Rd. to Palomar Rd.
11	Rouse Rd.	Encanto Dr. to Trumble Rd.
12	Rouse Rd.	Brady Ln. to Sherman Rd.
13	Rouse Rd.	Sherman Rd. to Dawson Rd.
14	Rouse Rd.	Dawson Rd. to Antelope Rd.
15	Rouse Rd.	Antelope Rd. (N) to Menifee Rd.
16	Chambers Av.	Encanto Dr. to St. A
17	Chambers Av.	St. A to Sherman Rd.
18	Chambers Av.	Sherman Rd. to Concord Ln.
19	McCall Bl.	Murrieta Rd. to Sun City Bl.
20	McCall Bl.	Sun City Bl. to Bradley Rd.
21	McCall Bl.	Bradley Rd. to I-215 Freeway
22	McCall Bl.	I-215 Freeway to Encanto Dr.
23	McCall Bl.	Encanto Dr. to Sherman Rd.
24	McCall Bl.	Sherman Rd. to Antelope Rd.
25	McCall Bl.	Antelope Rd. to Menifee Rd.
26	Trumble Rd.	North of Ethanac Rd.
27	Encanto Dr.	Ethanac Rd. to McLaughlin Rd.
28	Encanto Dr.	McLaughlin Rd. to Rouse Rd.
29	Encanto Dr.	Rouse Rd. to Chambers Av.
30	Encanto Dr.	Chambers Av. to Shadel Rd.
31	Encanto Dr.	Shadel Rd. to McCall Bl.
32	Sherman Rd.	SR-74 to Ethanac Rd.
33	Sherman Rd.	Ethanac Rd. to McLaughlin Rd.
34	Sherman Rd.	McLaughlin Rd. to Rouse Rd.
35	Sherman Rd.	Rouse Rd. to St. B
36	Sherman Rd.	St. B to Chambers Av.
37	Sherman Rd.	Chambers Av. to Shadel Rd.
38	Sherman Rd.	Shadel Rd. to McCall Bl.
39	Antelope Rd.	Rouse Rd. (N) to Rouse Rd. (S)
40	Antelope Rd.	Rouse Rd. (S) to Chambers Av.
41	Antelope Rd.	Chambers Av. to McCall Bl.
42	Menifee Rd.	SR-74 to Biscayne Av.
43	Menifee Rd.	Biscayne Av. to Rouse Rd.
44	Menifee Rd.	Rouse Rd. to McCall Bl.
45	Menifee Rd.	McCall Bl. to Simpson Rd.

(Urban Crossroads, 2019d, Table 1-2)

Because impacts to freeway segments dissipate with distance from the point of SHS entry, quantitative study of freeway segment beyond those immediately adjacent to the point of entry is not being proposed. Based on the preceding, the traffic study has evaluated the freeway mainline segments shown on Table 4.14-3, *Freeway Mainline Segment Analysis Locations*. (Urban Crossroads, 2019d, p. 8)

Table 4.14-3 Freeway Mainline Segment Analysis Locations

ID	Freeway Mainline Segments
1	I-215 Freeway Southbound – SR-74 to Ethanac Road
2	I-215 Freeway Southbound – Ethanac Road to McCall Boulevard
3	I-215 Freeway Southbound – McCall Boulevard to Newport Road
4	I-215 Freeway Northbound – SR-74 to Ethanac Road
5	I-215 Freeway Northbound – Ethanac Road to McCall Boulevard
6	I-215 Freeway Northbound – McCall Boulevard to Newport Road

(Urban Crossroads, 2019d, Table 1-3)

D. Freeway Merge/Diverge Ramp Junctions

The study area freeway merge/diverge ramp junction analysis locations include eight Interstate 215 (I-215) freeway ramp junctions for the northbound and southbound directions of flow, as shown on Table 4.14-4, *Freeway Merge/Diverge Ramp Junction Analysis Locations*.

Table 4.14-4 Freeway Merge/Diverge Ramp Junction Analysis Locations

ID	Freeway Merge/Diverge Ramp Junctions
1	I-215 Freeway – Southbound, Off-Ramp at Ethanac Road (Diverge)
2	I-215 Freeway – Southbound, On-Ramp at Ethanac Road (Merge)
3	I-215 Freeway – Southbound, Off-Ramp at McCall Boulevard (Merge)
4	I-215 Freeway – Southbound, On-Ramp at McCall Boulevard (Diverge)
5	I-215 Freeway – Northbound, On-Ramp at Ethanac Road (Merge)
6	I-215 Freeway – Northbound, Off-Ramp at Ethanac Road (Diverge)
7	I-215 Freeway – Northbound, On-Ramp at McCall Boulevard (Merge)
8	I-215 Freeway – Northbound, Off-Ramp at McCall Boulevard (Diverge)

(Urban Crossroads, 2019d, Table 1-4)

4.14.2 Methodology for Determining Transportation Facility Deficiencies

A. Level of Service (LOS)

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. (Urban Crossroads, 2019d, p. 19)

B. Analysis Methodologies

1. Intersection Capacity Analysis

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The 2010 Highway Capacity Manual (HCM) methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control. (Urban Crossroads, 2019d, p. 19)

❑ Signalized Intersections

The City of Menifee requires signalized intersection operations analysis based on the methodology described in Chapter 18 and Chapter 31 of the HCM 2010. Intersections located in the City of Perris and County of Riverside have also been evaluated with the same methodology. 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 LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 4.14-5, *Signalized Intersection Description of LOS*. The Synchro software (Version 9.1) has also been utilized to evaluate all signalized study area intersections. (Urban Crossroads, 2019d, p. 19)

Per the Caltrans *Guide for the Preparation of Traffic Impact Studies*, the traffic modeling and signal timing optimization software package Synchro (Version 9.1) has also been utilized to analyze signalized intersections under Caltrans' jurisdiction, which include interchange to arterial ramps (i.e. I-215 Freeway ramps at SR-74, Ethanac Road, McCall Boulevard, Newport Road, and the intersections of Menifee Road and Briggs Road along Pinacate Road (SR-74)). Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the HCM. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length. The level of service and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network. Signal timing for the freeway arterial-to-ramp intersections have been obtained from Caltrans District 8 and were utilized for the purposes of the TIA's analysis. (Urban Crossroads, 2019d, pp. 19-20)

The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes at all study area intersections. 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 have been used for all analysis scenarios, with the exception of Horizon Year traffic conditions. Per Chapter 4 of the HCM 2010, PHF values over 0.95 often are indicative of high traffic volumes with capacity constraints on peak hour flows while lower PHF values are indicative of greater variability of flow during the peak hour. In an effort to conduct a conservative analysis, a PHF of 0.92 was utilized in the TIA for Horizon Year traffic conditions unless the PHF is higher for Existing conditions. (Urban Crossroads, 2019d, p. 20)

Table 4.14-5 Signalized Intersection Description of LOS

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B	F
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
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	D	F
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	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths	80.01 and up	F	F

Source: HCM 2010
(Urban Crossroads, 2019d, Table 2-1)

❑ Unsignalized Intersections

The City of Menifee, City of Perris, and County of Riverside require the operations of unsignalized intersections be evaluated using the methodology described in Chapter 19, Chapter 20, and Chapter 32 of the HCM 2010. The LOS rating is based on the weighted average control delay expressed in seconds per vehicle, as shown in Table 4.14-6, *Unsignalized Intersection Description of LOS*. (Urban Crossroads, 2019d, pp. 20-21)

Table 4.14-6 Unsignalized Intersection Description of LOS

Description	Average Control Delay Per Vehicle (Seconds)	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Little or no delays.	0 to 10.00	A	F
Short traffic delays.	10.01 to 15.00	B	F
Average traffic delays.	15.01 to 25.00	C	F
Long traffic delays.	25.01 to 35.00	D	F
Very long traffic delays.	35.01 to 50.00	E	F
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F	F

Source: HCM 2010
(Urban Crossroads, 2019d, Table 2-2)

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. (Urban Crossroads, 2019d, p. 21)

2. Roadway Segment Capacity Analysis

Roadway segment operations have been evaluated using the City of Menifee Roadway Segment Capacity Thresholds provided in Attachment B of the City's traffic study guidelines (Menifee, 2015a). Per the City of Menifee's TIA guidelines, roadway segments within the study area should maintain LOS D capacities along City roadways. These roadway capacities are "rule of thumb" estimates for planning purposes and are affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic), and pedestrian bicycle traffic. In other words, while using average daily traffic (ADT) for planning purposes is suitable with regards to evaluating potential volume to capacity with future forecasts, it is not suitable for operational analysis because it does not account for the factors listed previously. As such, where the ADT based roadway segment analysis indicates an impact (unacceptable LOS), a review of the more detailed peak hour intersection analysis and progression analysis are undertaken. The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. Therefore, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes. (Urban Crossroads, 2019d, p. 21)

3. Freeway Off-Ramp Queuing Analysis

The study area for the TIA includes the freeway-to-arterial interchanges of the I-215 Freeway at Ethanac Road, McCall Boulevard, and Newport Road. Consistent with Caltrans requirements, the 95th percentile queuing of vehicles has been assessed at the off-ramps to determine potential queuing issues at the freeway ramp intersections on Ethanac Road, McCall Boulevard, and Newport Road. Specifically, the queuing analysis is utilized to identify any potential queuing and "spill back" onto the I-215 Freeway mainline from the off-ramps. (Urban Crossroads, 2019d, pp. 21-22)

The traffic progression analysis tool and HCM intersection analysis program, *Synchro*, has been used to assess the potential issues/needs of the intersections with traffic added from the Project. Storage (turn-pocket) length recommendations at the ramps have been based upon the 95th percentile queue resulting from the Synchro progression analysis. The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes. The queue length reported is for the lane with the highest queue in the lane group. (Urban Crossroads, 2019d, p. 22)

A footnote on the Synchro outputs indicates if the 95th percentile cycle exceeds capacity. Traffic is simulated for two complete cycles of the 95th percentile traffic in Synchro in order to account for the effects of spillover between cycles. In practice, the 95th percentile queue shown will rarely be exceeded and the queues shown with the footnote are acceptable for the design of storage bays. (Urban Crossroads, 2019d, p. 22)

A vehicle is considered queued whenever it is traveling at less than 10 feet/second. A vehicle will only become queued when it is either at the stop bar or behind another queued vehicle. Although only the 95th percentile queue has been reported in the tables, the 50th percentile queue can be found in the appendix alongside the 95th percentile queue for each ramp location. The 50th percentile maximum queue is the maximum back of queue on a typical cycle during the peak hour, while the 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes during the peak hour. In other words, if traffic were observed for 100 cycles, the 95th percentile queue would be the queue experienced with the 95th busiest cycle (or 5% of the

time). The 50th percentile or average queue represents the typical queue length for peak hour traffic conditions, while the 95th percentile queue is derived from the average queue plus 1.65 standard deviations. The 95th percentile queue is not necessarily ever observed; it is simply based on statistical calculations. (Urban Crossroads, 2019d, p. 22)

4. 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 Project's TIA uses the signal warrant criteria presented in the latest edition of the Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD), as amended by the MUTCD 2014 California Supplement, for all study area intersections. (Urban Crossroads, 2019d, p. 22)

The signal warrant criteria for Existing 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 2014 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 Project's TIA utilizes the 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 2014 California Supplement. Warrant 3 is appropriate to use for the Project's TIA because it provides specialized warrant criteria for intersections with rural characteristics (e.g. located in communities with populations of less than 10,000 persons or with adjacent major streets operating above 40 miles per hour). For the purposes of the Project's TIA, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection. (Urban Crossroads, 2019d, pp. 22-23)

Future unsignalized intersections have been assessed regarding the potential need for new traffic signals based on future ADT volumes, using the Caltrans planning level ADT-based signal warrant analysis worksheets. Traffic signal warrant analyses were performed for the following study area intersections shown on Table 4.14-7, *Unsignalized Intersection Locations*. (Urban Crossroads, 2019d, p. 23)

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 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 LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant. (Urban Crossroads, 2019d, p. 24)

5. Freeway Mainline Segment Analysis

Consistent with recent Caltrans guidance and because impacts to freeway segments dissipate with distance from the point of SHS entry, quantitative study of freeway segments beyond those immediately adjacent to the point of entry is not required. As such, the Project's TIA evaluated the freeway segments along the I-215 Freeway where the Project is anticipated to contribute 25 or more one-way peak hour trips. Because impacts to freeway segments dissipate with distance from the point of SHS entry, quantitative evaluation of freeway segments with fewer than 25 peak hour trips is not necessary. (Urban Crossroads, 2019d, p. 24)

Table 4.14-7 Unsignalized Intersection Locations

ID	Intersection Location	Jurisdiction
8	Bradley Rd. & Cherry Hills Bl.	Menifee
15	Encanto Dr. & Ethanac Rd.	Perris
16	Encanto Dr. & McLaughlin Rd.	Menifee / Perris
17	Encanto Dr. & Rouse Rd.	Menifee
18	Encanto Dr. & Chambers Av.	Menifee
19	Encanto Dr. & Shadel Rd.	Menifee
23	Trumble Rd. & Rouse Rd.	Menifee
24	Brady Ln./St. A & Rouse Rd.	Menifee
25	St. A & Chambers Av. – Future Intersection	Menifee
27	Sherman Rd. & Ethanac Rd.	Menifee / Perris
28	Sherman Rd. & McLaughlin Rd.	Menifee
29	Sherman Rd. & Rouse Rd.	Menifee
31	Sherman Rd. & Chambers Av.	Menifee
32	Sherman Rd. & Shadel Rd.	Menifee
34	Dawson Rd. & Rouse Rd.	Menifee
35	St. C/Concord Ln. & Chambers Av.	Menifee
36	Antelope Rd. & Ethanac Rd.	Menifee
37	Antelope Rd. & Rouse Rd. (North) – Future Intersection	Menifee
38	Antelope Rd. & Rouse Rd. (South) – Future Intersection	Menifee
39	Antelope Rd. & Chambers Av. – Future Intersection	Menifee
40	Antelope Rd. & McCall Bl.	Menifee

(Urban Crossroads, 2019d, Table 2-3)

The freeway system in the study area has been broken into segments defined by the freeway-to-arterial interchange locations. The freeway segments have been evaluated in the Project's TIA based upon peak hour directional volumes. The freeway segment analysis is based on the methodology described in the HCM and performed using HCS2010 software. The performance measure preferred by Caltrans to calculate LOS is density. Density is expressed in terms of passenger cars per mile per lane. Table 4.14-8, *Description of Freeway Mainline LOS*, illustrates the freeway segment LOS descriptions for each density range utilized for this analysis. The number of lanes for existing baseline conditions has been obtained from field observations conducted by Urban Crossroads in August 2017. These existing freeway geometrics have been utilized for Existing, Existing Plus Project (E+P), Opening Year Cumulative (2020) Without and With Phase 1 Project, Opening Year Cumulative (2023) Without and With Phase 2 Project, Opening Year Cumulative (2025) Without and With Project Buildout (Phase 3), and Horizon Year (2040) Without and With Project conditions. (Urban Crossroads, 2019d, p. 24)

Table 4.14-8 Description of Freeway Mainline LOS

Level of Service	Description	Density Range (pc/mi/ln)[1]
A	Free-flow operations in which vehicles are relatively unimpeded in their ability to maneuver within the traffic stream. Effects of incidents are easily absorbed.	0.0 – 11.0
B	Relative free-flow operations in which vehicle maneuvers within the traffic stream are slightly restricted. Effects of minor incidents are easily absorbed.	11.1 – 18.0
C	Travel is still at relative free-flow speeds, but freedom to maneuver within the traffic stream is noticeably restricted. Minor incidents may be absorbed, but local deterioration in service will be substantial. Queues begin to form behind significant blockages.	18.1 – 26.0
D	Speeds begin to decline slightly and flows and densities begin to increase more quickly. Freedom to maneuver is noticeably limited. Minor incidents can be expected to create queuing as the traffic stream has little space to absorb disruptions.	26.1 – 35.0
E	Operation at capacity. Vehicles are closely spaced with little room to maneuver. Any disruption in the traffic stream can establish a disruption wave that propagates throughout the upstream traffic flow. Any incident can be expected to produce a serious disruption in traffic flow and extensive queuing.	35.1 – 45.0
F	Breakdown in vehicle flow.	>45.0

(Urban Crossroads, 2019d, Table 2-4)

The I-215 Freeway mainline volume data were obtained from the Caltrans Performance Measurement System (PeMS) website for the segments of the I-15 Freeway at McCall Boulevard. The data was obtained in August 2017. In an effort to conduct a conservative analysis, the maximum value observed within the three-day period was utilized for the weekday morning (AM) and weekday evening (PM) peak hours. In addition, truck traffic, represented as a percentage of total traffic, has been utilized for the purposes of this analysis in an effort to not overstate traffic volumes and peak hour deficiencies. As such, actual vehicles (as opposed to passenger-car-equivalent volumes) have been utilized for the purposes of the basic freeway segment analysis. (Urban Crossroads, 2019d, p. 24)

6. Freeway Merge/Diverge Ramp Junction Analysis

The freeway system in the study area has been broken into segments defined by freeway-to-arterial interchange locations resulting in two existing on- and off-ramp locations. Although the HCM indicates the influence area for a merge/diverge junction is 1,500 feet, the analysis presented in the Project's TIA has been performed at all ramp locations with respect to the nearest on or off ramp at each interchange in an effort to be consistent with Caltrans guidance/comments on other projects the Project's traffic consultant (Urban Crossroads) has worked on along the I-215 corridor. (Urban Crossroads, 2019d, p. 25)

The merge/diverge analysis is based on the HCM Ramps and Ramp Junctions analysis method and performed using HCS 2010 software. The measure of effectiveness (reported in passenger car/mile/lane) are calculated based on the existing number of travel lanes, number of lanes at the on and off ramps both at the analysis junction and at upstream and downstream locations (if applicable) and acceleration/deceleration lengths at each merge/diverge point. Table 4.14-9, *Description of Freeway Merge and Diverge LOS*, presents the merge/diverge area level of service descriptions for each density range utilized for the Project's TIA. (Urban Crossroads, 2019d, p. 25)

Table 4.14-9 Description of Freeway Merge and Diverge LOS

Level of Service	Density Range (pc/mi/ln)[1]
A	≤10.0
B	10.0 – 20.0
C	20.0 – 28.0
D	28.0 – 35.0
E	>35.0
F	Demand Exceeds Capacity

[1] pc/mi/ln = passenger cars per mile per lane. Source: HCM 2010

(Urban Crossroads, 2019d, Table 2-5)

The ramp data (per the count data presented in Appendix 3.1) were utilized to flow conserve the mainline volumes to determine the I-215 Freeway mainline volumes north of McCall Boulevard. Flow conservation checks ensure that traffic flows from north of McCall Boulevard to south of McCall Boulevard with no unexplained loss of vehicles. (Urban Crossroads, 2019d, p. 26)

C. *Minimum Level of Service (LOS)*

The definition of an intersection impact has been obtained from each of the applicable surrounding jurisdictions and is described below.

1. City of Menifee

Per Policy C-1.2 of the City of Menifee General Plan, the following LOS is utilized for study area intersections located within the City: Require development to achieve a peak hour LOS D or better at intersections, except at constrained intersections within close proximity to the I-215 Freeway, where LOS E may be permitted. (Urban Crossroads, 2019d, p. 26)

2. City of Perris

According to Policy II. A of the City of Perris General Plan, City intersections must maintain LOS D. Exceptions to this standard are intersections of any Arterials and Expressways with SR-74; intersections along the Ramona-Cajalco Expressway; and intersections at I-215 freeway ramps. In these instances, LOS E is the minimum acceptable condition. (Urban Crossroads, 2019d, p. 26)

3. County of Riverside

Riverside County General Plan Policy C 2.1 states that the County will maintain the following County-wide target level of service (LOS): LOS C on all County-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. (Urban Crossroads, 2019d, p. 26)

For the purposes of this analysis, LOS D is established as the minimum acceptable standard because study area intersections under Riverside County jurisdiction lie within a County Community Development Area, and are Secondary Highways or higher classification. (Urban Crossroads, 2019d, p. 26)

4. Caltrans

Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on SHS facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. Consistent with the City of Menifee minimum LOS of LOS D, LOS D will be used as the target LOS for both arterial-to-freeway ramps and freeway mainline segments and ramp junctions. Based on the criteria outlined above, all of the study area intersections under the jurisdiction of Caltrans are anticipated to allow a minimum LOS of D. (Urban Crossroads, 2019d, p. 27)

D. Significant Impact Criteria

This section outlines the methodology used in this analysis related to identifying circulation system deficiencies.

1. Intersections

To determine whether the addition of Project traffic at study area intersections would result in a significant impact, the following criteria were utilized (Urban Crossroads, 2019d, p. 28):

- If the pre-Project peak hour intersection LOS is at or better than the minimum acceptable LOS and the addition of Project trips results in unacceptable intersection peak hour LOS, a significant impact would occur.

- For intersections currently operating at unacceptable LOS, a significant impact would occur if the Project contributes 50 or more peak hour trips to pre-Project traffic conditions.

2. Caltrans Facilities

To determine whether the addition of Project traffic to the SHS freeway segments would result in a significant impact, the following criteria were utilized (Urban Crossroads, 2019d, p. 28):

- The addition of Project traffic would cause the LOS of a freeway segment to degrade from D or better to E or F.

- The addition of Project traffic would exacerbate an already deficient condition. A segment that is operating at or near capacity is deemed to be significant.

E. Project Fair Share Calculation Methodology

In cases where the Project's TIA identifies that the Project would contribute additional traffic volumes to cumulative traffic deficiencies, Project fair share costs of improvements necessary to address deficiencies have been identified. The Project's fair share cost of improvements is determined based on the following equation, which is the ratio of Project traffic to new traffic, and new traffic is total future traffic less existing baseline traffic: (Urban Crossroads, 2019d, p. 29)

For Opening Year Cumulative (2020, 2023, 2025) traffic conditions:

Project Fair Share % = Project Traffic / (2020, 2023, 2025 Total Traffic – Existing Traffic)

Or for Horizon Year (2040) traffic conditions:

Project Fair Share % = Project Traffic / (2040 Total Traffic – Existing Traffic)

4.14.3 EXISTING CONDITIONS

The Project site is located in the north-central portion of the City of Menifee, and is located south of the City of Perris, northeast of the City of Canyon Lake, and north of the City of Murrieta. The Project site is currently vacant and undeveloped. The Project site does not contain any roadways or transportation facilities under existing conditions. (Google Earth, 2016) A description of the existing circulation network in the Project's study area is provided below.

A. Existing Circulation Network

As stated above, the Project site does not include any roadways or transportation facilities under existing conditions. Pursuant to the agreement with City of Menifee staff (see TIA Appendix 1.1 in *Technical Appendix K*), the study area includes a total of 47 existing and future intersections, as shown on Figure 4.14-1*, Study Area Location Map*. *Figure 4.14-2, Existing Number of Through Lanes and Intersection Controls (1 of 2)*, and Figure 4.14-3, *Existing Number of Through Lanes and Intersection Controls (2 of 2)*, illustrate the study area intersections located near the Project and identifies the number of through traffic lanes for existing roadways and intersection traffic controls. (Urban Crossroads, 2019d, p. 31)

B. Existing Conditions Intersection Operations Analysis

Existing peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented above in Subsection 4.14.2, *Methodology for Determining Transportation Facility Deficiencies*. The intersection operations analysis results are summarized in Table 4.14-10, *Intersection Analysis for Existing (2017) Conditions*, which indicates that existing study area intersections are currently operating at an acceptable LOS during the peak hours, with the exception of the following: (Urban Crossroads, 2018d, p. 48)

- Encanto Dr. / Ethanac Rd. (Intersection #15) – LOS F AM peak hour; LOS E PM peak hour
- Menifee Rd. / SR-74 (Intersection #42) – LOS E AM and PM peak hours

It is important to recognize that the intersection operations analysis reflects the existing constrained traffic count conditions. These constraints in the form of vehicle queues at closely spaced intersections significantly limit the number of vehicles that can physically be accommodated during peak hour conditions. While the traffic counts identify all the vehicles using an intersection during peak hours, they may not fully account for the unconstrained demand at a particular location. Several intersections such as Encanto Drive at McCall Boulevard, Bradley Road at McCall Boulevard, Case Road/Barnett Road at Ethanac Road, and the I-215 Ramps locations at the Ethanac Road and McCall Boulevard interchanges experience vehicle delays that are not reflected in the intersection LOS analysis due to the constrained conditions. As such, based on the constrained traffic count data the intersections appear to operate at acceptable LOS. Notwithstanding, field observations indicate that intersections proximate to the I-215 Freeway experience peak hour queues that periodically affect intersection operations. (Urban Crossroads, 2019d, p. 48)

Table 4.14-10 Intersection Analysis for Existing (2017) Conditions

#	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
1	Goetz Rd. & Ethanac Rd.	TS	1	1	1	1	2	1	2	1	1	2	1	1	32.1	31.6	C	C
2	Murrieta Rd. & Ethanac Rd.[4]	TS	0	1	0	0	1	1	1	2	0	1	2	0	33.3	32.7	C	C
3	Murrieta Rd. & McCall Bl.	TS	1	2	0	1	2	0	1	2	d	1	2	d	22.5	26.6	C	C
4	Sun City Bl. & McCall Bl.	TS	0	2	1	0	2	0	1	2	d	1	2	0	29.2	31.1	C	C
5	Barnett Rd. & Ethanac Rd.	TS	0	1	0	0	0	0	0	3	1	1	2	0	17.9	14.1	B	B
6	Case Rd. & Ethanac Rd.	TS	0	0	0	2	0	2	1	2	0	0	3	1	22.2	26.4	C	C
7	Bradley Rd. & McCall Bl.	TS	1	1	1>	1	1	0	1	2	d	1	2	0	44.6	50.3	D	D
8	Bradley Rd. & Cherry Hills Bl.	AWS	1	1	0	0	1	1	1	0	1	0	0	0	10.8	13.1	B	B
9	I-215 SB Ramps/SR-74 & Bonnie Dr.	TS	1	1	0	0	1	1	1	0	1>>	0	0	0	12.9	15.9	B	B
10	I-215 SB Ramps & Ethanac Rd.	TS	0	0	0	0	1	1	0	1	1	1	2	0	18.6	19.0	B	B
11	I-215 SB Ramps & McCall Bl.	TS	0	0	0	0	1	1	0	2	1	1	2	0	23.4	28.0	C	C
12	I-215 NB Ramps & SR-74	TS	0	0	0	0	1	0	1	2	0	0	2	1>>	12.8	12.8	B	B
13	I-215 NB Ramps & Ethanac Rd.	TS	0	1	1	0	0	0	1	1	0	0	1	0	30.1	27.0	C	C
14	I-215 NB Ramps & McCall Bl.	TS	0	1	1	0	0	0	1	2	0	0	2	1	21.8	26.2	C	C
15	Encanto Dr. & Ethanac Rd.	CSS	0	1	0	0	0	0	0	1	0	1	1	0	**69.4**	**40.4**	**F**	**E**
16	Encanto Dr. & McLaughlin Rd.	CSS	0	1	0	0	1	0	0	0	0	0	1	0	9.4	10.9	A	B
17	Encanto Dr. & Rouse Rd.	CSS	0	1	0	0	1	0	0	0	0	0	1	0	11.1	10.4	B	B
18	Encanto Dr. & Chambers Av.	Intersection Does Not Exist																
19	Encanto Dr. & Shadel Rd.	CSS	0	1	0	0	1	0	0	0	0	0	1	0	12.6	11.4	B	B
20	Encanto Dr. & McCall Bl.	TS	1	1	1	1	1	0	1	2	0	1	2	0	24.9	25.9	C	C
21	Trumble Rd. & SR-74	TS	0	0	0	1	0	1	1	2	0	0	2	d	16.0	12.5	B	B
22	Trumble Rd. & Ethanac Rd.	TS	0	1	0	0	1	1	1	1	0	1	1	0	28.2	28.8	C	C
23	Trumble Rd. & Rouse Rd.	CSS	0	0	0	0	1	0	0	1	0	0	1	0	8.9	8.7	A	A
24	Brady Ln./St. A & Rouse Rd.	CSS	0	0	0	0	1	0	0	1	0	0	1	0	8.6	8.5	A	A
25	St. A & Chambers Av.	Intersection Does Not Exist																
26	Sherman Rd. & SR-74	TS	0	1	1	0	1	0	1	2	d	1	2	0	13.5	14.8	B	B
27	Sherman Rd. & Ethanac Rd.	CSS	0	1	0	0	1	0	0	1	0	0	1	0	21.6	25.7	C	D
28	Sherman Rd. & McLaughlin Rd.	AWS	0	1	0	0	1	0	0	1	0	0	1	0	6.9	7.0	A	A
29	Sherman Rd. & Rouse Rd.	AWS	0	0	0	1	0	1	0	1	0	0	1	0	7.1	7.1	A	A
30	Sherman Rd. & St. B	Intersection Does Not Exist																
31	Sherman Rd. & Chambers Av.	AWS	1	0	1	0	0	0	0	1	1	0	1	0	8.4	7.2	A	A
32	Sherman Rd. & Shadel Rd.	AWS	1	1	0	0	2	0	0	1	0	0	0	0	9.2	7.4	A	A
33	Sherman Rd. & McCall Bl.	TS	1	1	d	1	1	1	1	2	0	1	2	0	27.1	21.8	C	C
34	Dawson Rd. & Rouse Rd.	UC	0	0	0	0	0	1	1	0	0	0	0	0	0.0	0.0	A	A
35	St. C/Concord Ln. & Chambers Av.	CSS	0	1	0	0	0	0	0	1	0	0	1	0	8.6	8.6	A	A
36	Antelope Rd. & Ethanac Rd.	CSS	0	1	0	0	0	0	0	1	1	0	1	0	15.5	11.6	C	B
37	Antelope Rd. & Rouse Rd. (North)	Intersection Does Not Exist																
38	Antelope Rd. & Rouse Rd. (South)	Intersection Does Not Exist																
39	Antelope Rd. & Chambers Av.	Intersection Does Not Exist																
40	Antelope Rd. & McCall Bl.	CSS	1	0	d	0	0	0	0	2	d	1	2	0	20.0	16.7	C	C

Table 4.14-10 Intersection Analysis for Existing (2017) Conditions (Cont'd)

#	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
41	Palomar Rd. & SR-74	TS	1	1	1	1	2	0	1	2	d	1	2	0	21.5	20.4	C	C
42	Menifee Rd. & SR-74	TS	0	1	1	0	1	0	1	2	0	1	2	0	**55.6**	**58.6**	**E**	**E**
43	Menifee Rd. & Rouse Rd./Turtle Point Dr.	TS	1	2	0	1	2	0	0	1	0	0	1	d	6.8	5.1	A	A
44	Menifee Rd. & McCall Bl.	TS	1	3	d	1	2	0	2	2	0	2	2	1	42.2	31.2	D	C
45	Menifee Rd. & Simpson Rd.	TS	1	2	1	1	2	0	0	1	0	0	1	1	16.3	18.1	B	B
46	I-215 SB Ramps & Newport Rd.	TS	0	0	0	1	0	2	0	4	1	0	3	1>>	12.2	15.0	B	B
47	I-215 NB Ramps & Newport Rd.	TS	1	0	2	0	0	0	0	3	1>>	0	4	1>>	14.4	18.7	B	B

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[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; >> = Free-Right Turn Lane; d= Defacto Right Turn Lane

[2] Per the 2010 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 sharin a single lane) are shown.

[3] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; UC = Uncontrolled

[4] Lane geometries and traffic control reflects the improvements completed in 2019.

(Urban Crossroads, 2019d, Table 3-1)

C. *Existing Conditions Roadway Segment Capacity Analysis*

The City of Menifee TIA Guidelines provide roadway volume capacity values. These roadway segment capacities are approximate figures only, and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet traffic demand. Table 4.14-11, *Roadway Segment Capacity Analysis for Existing (2017) Conditions*, provides a summary of the Existing (2016) conditions roadway segment capacity analysis based on the City of Menifee Roadway Segment Capacity Thresholds. As shown on Table 4.14-11, all but six of the study area roadway segments currently operate at an acceptable LOS based on the City's planning level daily roadway capacity thresholds: (Urban Crossroads, 2019d, p. 48)

- SR-74, I-215 NB Ramps to Trumble Rd. (Roadway Segment #2) – LOS E
- Ethanac Rd., I-215 Freeway to Encanto Dr. (Roadway Segment #6) – LOS F
- Ethanac Rd., Encanto Dr. to Trumble Rd. (Roadway Segment #7) – LOS F
- McCall Bl., Bradley Rd. to the I-215 Freeway (Roadway Segment #21) – LOS E
- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25) – LOS F

D. *Existing Conditions Traffic Signal Warrants Analysis*

Traffic signal warrants for existing traffic conditions are based on existing peak hour intersection turning volumes. Table 4.14-12, *Existing Conditions Traffic Signal Warrants Analysis*, shows the study area intersections that warrant traffic signals under existing conditions. As shown in Table 4.14-12, the following study area intersections warrant traffic signals under existing conditions:

- Intersection #40 – Antelope Road at McCall Boulevard: Peak Hour Warrant Met

Table 4.14-11 Roadway Segment Capacity Analysis for Existing (2017) Conditions

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	Existing (2017)	V/C[2]	LOS[3]	General Plan Classification
1	SR-74	Bonnie Dr. to I-215 NB Ramps	3D	Major	25,575	18,878	0.74	C	Major
2	SR-74	I-215 NB Ramps to Trumble Rd.	4D	Major	34,100	**32,399**	**0.95**	**E**	Major
3	Ethanac Rd.	Goetz Rd. to Murrieta Rd.	4D	Arterial	37,000	12,499	0.34	A	Expressway
4	Ethanac Rd.	Murrieta Rd. to Barnett Rd.	4D	Arterial	37,000	15,327	0.41	A	Expressway
5	Ethanac Rd.	Case Rd. to I-215 Freeway	4D	Arterial	37,000	23,341	0.63	B	Expressway
6	Ethanac Rd.	I-215 Freeway to Encanto Dr.	2U	Collector	13,000	**13,992**	**1.08**	**F**	Expressway
7	Ethanac Rd.	Encanto Dr. to Trumble Rd.	2U	Collector	13,000	**13,239**	**1.02**	**F**	Expressway
8	Ethanac Rd.	Trumble Rd. to Sherman Rd.	2U	Collector	13,000	10,480	0.81	D	Expressway
9	Ethanac Rd.	Sherman Rd. to Antelope Rd.	2U	Collector	13,000	7,266	0.56	A	Expressway
10	SR-74	Antelope Rd. to Palomar Rd.	4D	Major	34,100	25,742	0.75	C	Expressway
11	Rouse Rd.	Encanto Dr. to Trumble Rd.	2U	Local	6,500	1,899	0.29	A	Secondary
12	Rouse Rd.	Brady Ln. to Sherman Rd.	2U	Local	6,500	711	0.11	A	Secondary
13	Rouse Rd.	Sherman Rd. to Dawson Rd.	2U	Local	6,500	457	0.07	A	Secondary
14	Rouse Rd.	Dawson Rd. to Antelope Rd.	--	Secondary	12,950	--	--	--	Secondary
15	Rouse Rd.	Antelope Rd. (N) to Menifee Rd.	2U	Major	12,950	63	0.00	A	Major
16	Chambers Av.	Encanto Dr. to St. A	--	Secondary	12,950	--	--	--	Secondary
17	Chambers Av.	St. A to Sherman Rd.	2U	Local	6,500	35	0.01	A	Secondary
18	Chambers Av.	Sherman Rd. to Concord Ln.	2U	Local	6,500	475	0.07	A	Secondary
19	McCall Bl.	Murrieta Rd. to Sun City Bl.	4D	Major	34,100	10,829	0.32	A	Major
20	McCall Bl.	Sun City Bl. to Bradley Rd.	4D	Major	34,100	18,607	0.55	A	Major
21	McCall Bl.	Bradley Rd. to I-215 Freeway	4D	Major	34,100	**32,750**	**0.96**	**E**	Major
22	McCall Bl.	I-215 Freeway to Encanto Dr.	4D	Major	34,100	30,696	0.90	D	Urban Arterial
23	McCall Bl.	Encanto Dr. to Sherman Rd.	4D	Major	34,100	24,133	0.71	C	Urban Arterial
24	McCall Bl.	Sherman Rd. to Antelope Rd.	4D	Major	34,100	18,910	0.55	A	Urban Arterial
25	McCall Bl.	Antelope Rd. to Menifee Rd.	2D	Major	17,050	**19,203**	**1.13**	**F**	Urban Arterial
26	Trumble Rd.	North of Ethanac Rd.	2U	Collector	13,000	1,981	0.15	A	Collector
27	Encanto Dr.	Ethanac Rd. to McLaughlin Rd.	2U	Collector	13,000	3,132	0.24	A	Major
28	Encanto Dr.	McLaughlin Rd. to Rouse Rd.	2U	Collector	13,000	3,280	0.25	A	Major
29	Encanto Dr.	Rouse Rd. to Chambers Av.	2U	Collector	13,000	4,253	0.33	A	Major
30	Encanto Dr.	Chambers Av. to Shadel Rd.	2U	Collector	13,000	4,679	0.36	A	Major
31	Encanto Dr.	Shadel Rd. to McCall Bl.	2U	Collector	13,000	5,016	0.39	A	Major
32	Sherman Rd.	SR-74 to Ethanac Rd.	2U	Local	6,500	3,208	0.49	A	Major
33	Sherman Rd.	Ethanac Rd. to McLaughlin Rd.	2U	Local	6,500	361	0.06	A	Major
34	Sherman Rd.	McLaughlin Rd. to Rouse Rd.	2U	Local	6,500	359	0.06	A	Major
35	Sherman Rd.	Rouse Rd. to St. B	--	Major	34,100	--	--	--	Major
36	Sherman Rd.	St. B to Chambers Av.	--	Major	34,100	--	--	--	Major
37	Sherman Rd.	Chambers Av. to Shadel Rd.	4D	Major	34,100	508	0.01	A	Major
38	Sherman Rd.	Shadel Rd. to McCall Bl.	3D	Major	25,575	2,485	0.10	A	Major
39	Antelope Rd.	Rouse Rd. (N) to Rouse Rd. (S)	--	Major	17,050	--	--	--	Major
40	Antelope Rd.	Rouse Rd. (S) to Chambers Av.	--	Major	17,050	--	--	--	Major

Table 4.14-11 Roadway Segment Capacity Analysis for Existing (2017) Conditions (Cont'd)

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	Existing (2017)	V/C[2]	LOS[3]	General Plan Classification
41	Antelope Rd.	Chambers Av. to McCall Bl.	--	Major	17,050	--	--	--	Major
42	Menifee Rd.	SR-74 to Biscayne Av.	4D	Arterial	37,000	11,186	0.30	A	Urban Arterial
43	Menifee Rd.	Biscayne Av. to Rouse Rd.	2U	Collector	13,000	11,186	0.86	D	Urban Arterial
44	Menifee Rd.	Rouse Rd. to McCall Bl.	4D	Major	34,100	13,055	0.38	A	Urban Arterial
45	Menifee Rd.	McCall Bl. to Simpson Rd.	4D	Major	34,100	10,931	0.32	A	Arterial

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] These maximum roadway capacities have been extracted from the following source: City of Menifee Traffic Impact Analysis Guidelines and Requirements (Attachment B). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. By using the LOS E capacity for each roadway facility type, volume-to-capacity (v/c) values between 0.00-0.60 will represent LOS A, 0.61-0.70 will represent LOS B, 0.71-0.80 will represent LOS C, 0.81-0.90 will represent LOS D, 0.91-1.00 will represent LOS E, and v/c values greater than 1.00 will represent LOS F operations. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] v/c = Volume to Capacity ratio

[3] LOS = Level of Service

[4] Where the average daily volume (ADT) based roadway segment analysis indicates a deficiency (unacceptable LOS), a review of the more detailed peak hour intersection analysis is undertaken. The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. While this traffic study recognizes LOS D is the City's target LOS for roadway segments, a review of the more detailed peak hour intersection analysis is necessary to determine whether roadway widening along the segment is necessary. For the purposes of this analysis, if the peak hour intersection operations on either side of the roadway segment are anticipated to operate at LOS D or better, then additional roadway segment widening is not recommended. Therefore, for the purposes of this assessment, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes. Furthermore, it is likely that a roadway segment can have a volume-to-capacity ratio of up to 1.10 if the adjacent intersections are anticipated to operate at acceptable LOS, without the need for additional widening. As the LOS threshold for the study area intersections is LOS D, LOS D have also been utilized as the minimum LOS criteria for roadway segments for the purposes of this analysis.

(Urban Crossroads, 2019d, Table 3-2)

Table 4.14-12 Existing Conditions Traffic Signal Warrants Analysis

	INTERSECTION	Existing
8	Bradley Rd. & Cherry Hills Bl.	
15	Encanto Dr. & Ethanac Rd.	
16	Encanto Dr. & McLaughlin Rd.	
17	Encanto Dr. & Rouse Rd.	
18	Encanto Dr. & Chambers Av.	DNE
19	Encanto Dr. & Shadel Rd.	
23	Trumble Rd. & Rouse Rd.	
24	Brady Ln./St. A & Rouse Rd.	
25	St. A & Chambers Av.	DNE
27	Sherman Rd. & Ethanac Rd.	
28	Sherman Rd. & McLaughlin Rd.	
29	Sherman Rd. & Rouse Rd.	
31	Sherman Rd. & Chambers Av.	
32	Sherman Rd. & Shadel Rd.	
34	Dawson Rd. & Rouse Rd.	
35	St. C/Concord Ln. & Chambers Av.	
36	Antelope Rd. & Ethanac Rd.	
37	Antelope Rd. & Rouse Rd. (North)	DNE
38	Antelope Rd. & Rouse Rd. (South)	DNE
39	Antelope Rd. & Chambers Av.	DNE
40	Antelope Rd. & McCall Bl.	PH

= Warranted under a previous scenario

DNE = Does not Exist

PH = Peak Hour Warrant Met

ADT = Daily Volume Warrant Met

(Urban Crossroads, 2019d, p. 54)

E. Existing Conditions Off-Ramp Queuing Analysis

A queuing analysis was performed for the off-ramps at the I-215 Freeway and McCall Boulevard interchange to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially "spill back" onto the I-215 Freeway mainlines. Queuing analysis findings are presented in Table 4.14-13, *Freeway Off-Ramp Queuing Summary for Existing (2017) Conditions*. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown on Table 4.14-13, there are no movements that are currently experiencing queuing issues during the AM or PM peak hour 95th percentile traffic flows. Worksheets for Existing traffic conditions off-ramp queuing analysis are provided in Appendix 3.4 to the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 55)

F. Existing Conditions Basic Freeway Segment Analysis

Existing mainline directional volumes for the weekday AM and PM peak hours are provided on Exhibit 3-15 of the Project's TIA (*Technical Appendix K*). As shown on Table 4.14-14, *Basic Freeway Segment Analysis for Existing (2017) Conditions*, I-215 Freeway segments analyzed as part of the Project's TIA were found to operate at an acceptable LOS (i.e., LOS D or better) during the peak hours. Existing basic freeway segment analysis worksheets are provided in Appendix 3.5 of the TIA. (Urban Crossroads, 2019d, p. 55)

Table 4.14-13 Freeway Off-Ramp Queuing Summary for Existing (2017) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	95th Percentile Queue (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Ramps/SR-74 & Bonnie Dr.	SBT	2,275	342	461	Yes	Yes
	SBR	215	11	14	Yes	Yes
I-215 SB Ramps & Ethanac Rd.	SBL/T	1,450	69	79	Yes	Yes
	SBR	240	53	63	Yes	Yes
I-215 SB Ramps & McCall Bl.	SBL/T	1,440	200	279	Yes	Yes
	SBR	450	146	477 [2]	Yes	Yes[3]
I-215 NB Ramps & SR-74	SBL/R	1,510	79	112	Yes	Yes
I-215 NB Ramps & Ethanac Rd.	NBL/T	1,440	305 [2]	268 [2]	Yes	Yes
	NBR	270	41	42	Yes	Yes
I-215 NB Ramps & McCall Bl.	NBL/T	1,870	196 [2]	387 [2]	Yes	Yes
	NBR	240	57	374 [2]	Yes	Yes[3]
I-215 SB Ramps & Newport Rd.	SBL	1,660	311	431	Yes	Yes
	SBR	1,660	229	243	Yes	Yes
I-215 NB Ramps & Newport Rd.	NBL	1,520	314	554	Yes	Yes
	NBR	1,520	312	382	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-215 Freeway mainline.

(Urban Crossroads, 2019d, Table 3-3)

Table 4.14-14 Basic Freeway Segment Analysis for Existing (2017) Conditions

Freeway	Direction[1]	Mainline Segment	Lanes[2]	Volume		Density[3]		LOS[4]	
				AM	PM	AM	PM	AM	PM
I-215 Freeway	SB	SR-74 to Ethanac Rd.	3	4,872	5,554	27.4	33.3	D	D
		Ethanac Rd. to McCall Bl.	3	5,127	5,583	29.4	33.6	D	D
		McCall Bl. to Newport Rd.	3	5,456	5,382	32.1	31.7	D	D
	NB	SR-74 to Ethanac Rd.	3	3,247	3,701	17.1	19.5	B	C
		Ethanac Rd. to McCall Bl.	3	3,403	3,829	18.0	20.3	B	C
		McCall Bl. to Newport Rd.	3	3,021	4,227	15.9	22.7	B	C

* **BOLD** = Unacceptable Level of Service

[1] NB = Northbound; SB = Southbound

[2] Number of lanes are in the specified direction and is based on existing conditions.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

(Urban Crossroads, 2019d, Table 3-4)

G. *Existing Conditions Freeway Merge/Diverge Analysis*

Ramp merge and diverge operations were also evaluated for Existing conditions and the results of this analysis are presented in Table 4.14-15, *Freeway Ramp Junction Merge/Diverge Analysis for Existing (2017) Conditions*. As shown in Table 4.14-15, the following merge/diverge ramps were found to operate at an unacceptable LOS (i.e., LOS E or worse) during one or more peak hours: (Urban Crossroads, 2019d, p. 55)

- I-215 Freeway – Southbound, Off-Ramp at Ethanac Road (Merge/Diverge Location #1)– LOS E PM peak hour only
- I-215 Freeway – Southbound, Off-Ramp at McCall Boulevard (Merge/Diverge Location #3)– LOS E PM peak hour only

Existing freeway ramp junction operations analysis worksheets are provided in Appendix 3.6 of the Project's TIA (*Technical Appendix K*).

Table 4.14-15 Freeway Ramp Junction Merge/Diverge Analysis for Existing (2017) Conditions

Freeway	Direction[1]	Ramp or Segment	Lanes on Freeway[2]	AM Peak Hour		PM Peak Hour	
				Density[3]	LOS[4]	Density[3]	LOS[4]
I-215 Freeway	SB	Off-Ramp at Ethanac Rd.	3	32.3	D	**35.4**	**E**
		On-Ramp at Ethanac Rd.	3	30.2	D	32.0	D
		Off-Ramp at McCall Bl.	3	33.7	D	**36.2**	**E**
		On-Ramp at McCall Bl.	3	33.6	D	32.6	D
	NB	On-Ramp at Ethanac Rd.	3	19.8	B	22.1	C
		Off-Ramp at Ethanac Rd.	3	25.1	C	27.3	C
		On-Ramp at McCall Bl.	3	22.7	C	23.9	C
		Off-Ramp at McCall Bl.	3	23.0	C	30.1	D

* **BOLD** = Unacceptable Level of Service

[1] NB = Northbound; SB = Southbound, EB = Eastbound; WB = Westbound

[2] Number of lanes are in the specified direction and is based on existing conditions.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

(Urban Crossroads, 2019d, Table 3-5)

H. Alternative Transportation

1. Transit Service

The study area is currently served by the Riverside Transit Agency (RTA) with bus services along Encanto Drive, south of McCall Boulevard, and along McCall Boulevard west of Encanto Drive via Route 61. Routes 27, 74, 208, and 212 also serve the area. These routes provide bus service along the I-215 Freeway, McCall Boulevard, Sun City Boulevard, Ethanac Road, Murrieta Road, and Mathews Road/SR-74. The existing RTA Route 61 could potentially serve the Project area if extended to the north. (Urban Crossroads, 2019d, p. 31)

2. Pedestrian and Bicycle Facilities

Exhibit C-4 of the Circulation Element depicts the City's planned Bikeway and Community Pedestrian Network. Exhibit C-4 identifies "Community On-Street Bike Lanes (Class II)" facilities along Encanto Drive and the portion of Chambers Avenue west of Sherman Avenue. Exhibit C-4 also identifies "Community On-Street NEV/Bike Lanes (Class II)" facilities along Sherman Road, the portion of Chambers Avenue located east of Sherman Road, Antelope Road, and the portion of Rouse Road east of Myles Court. A "Community Off-Road Bike Trail (Class I)" also is planned along the segment of Rouse Road located west of Myles Court. (Menifee, 2013a)

Circulation Element Exhibit C-6 identifies the City's planned Neighborhood Electric Vehicle (NEV) Network. "NEV/Bike Lanes (Class II Routes)" are planned along Sherman Road, the portion of Chambers Avenue located east of Sherman Road, Antelope Road, and the portion of Rouse Road east of Myles Court, while an "Off-Road NEV/Bike Trail (Class I)" is planned along the segment of Rouse Road located west of Myles Court. In addition, the General Plan has identified a Class I NEV/bike lane over-crossing of the I-215 at Rouse Road. Based on conceptual sketches and information from the General Plan, the landing site for the over-crossing on Rouse Road would be located approximately 300 feet east of the intersection of Rouse Road and Encanto Drive. The landing site is anticipated to be a 16 feet wide and 40 feet long pad that would be located within the Rouse Road ROW immediately adjacent to the Project site. The Project would not construct the Class I NEV/bike lane over-crossing; however, the Project would accommodate a landing site along Rouse Road at the Project's northwestern boundary. Although the over-crossing is not proposed as part of this Project, none of the Project elements would preclude construction of the over-crossing in the future. (Menifee, 2013a)

In addition to the trails identified by the City of Menifee General Plan, a proposed bikeway and community pedestrian network was identified by the City of Menifee *Parks, Trails, Open Space and Recreation Master Plan* ("PTOSR Master Plan"). The trail designations in the Master Plan vary from the designations identified in the General Plan. EIR Figure 4.13-2 (previously presented) depicts the proposed bikeways and pedestrian trails proposed within the Project vicinity. The PTOSR Master Plan calls for the provision of a Community Trail (Hiking, Biking & Equestrian) along Rouse Road, Sherman Road, Antelope Road, and the segment of Chambers Avenue located east of Sherman Road. The PTOSR Master Plan also calls for a Community Bike Lane – Class II along Encanto Drive and the segment of Chambers Avenue located west of Sherman Road. (Menifee, 2016, p. 43, Figure 2.7-1; Google Earth, 2016)

I. Existing Airport Facilities

The Project does not involve the construction, operation, or direct use of any public airports, public use airports, or private airstrips. The nearest airport to the Project site is the Perris Valley Airport, although the Project site does not occur within the Airport Influence Area (AIA) for this airport (RCALUC, 2011, Map PV-1). The Project site also is located approximately 9.5 miles southeast of the March Air Reserve Base (MARB). The Project site is located within the AIA for the MARB and occurs within Compatibility Zone E, which does not identify any restrictions on residential density or nonresidential intensity. (RCALUC, 2014, p. 9 and Map MA-1)

4.14.4 Applicable Regulatory Requirements

A. SCAG Regional Transportation Plan

The Southern California Association of Governments (SCAG) is a regional agency established pursuant to California Government Code § 6500, also referred to as the Joint Powers Authority law. SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO). The Project site is within SCAG's regional authority. On April 7, 2016, SCAG adopted the 2016-2040 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) with goals to: 1) Align the plan investments and policies with improving regional economic development and competitiveness; 2) Maximize mobility and accessibility for all people and goods in the region; 3) Ensure travel safety and reliability for all people and goods in the region; 4) Preserve and ensure a sustainable regional transportation system; 5) Maximize the productivity of our transportation system; 6) Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking); 7) Actively encourage and create incentives for energy efficiency, where possible; 8) Encourage

land use and growth patterns that facilitate transit and active transportation; and 9) Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies (SCAG, 2016). Performance measures and funding strategies also are included to ensure that the adopted goals are achieved through implementation of the RTP.

B. County of Riverside Congestion Management Program

The Riverside County Transportation Commission (RCTC) adopted its current Congestion Management Program (CMP) in December 2011. The purpose of the CMP is to more directly link land use, transportation, and air quality, thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related impacts, and improve air quality. Additionally, the CMP establishes a minimum LOS of E for CMP roadway facilities within Riverside County. (RCTC, 2011, p. ES-1) As indicated in Table 4.14-1, there are 12 study area intersections that are ramp-to-arterial intersections with Riverside County CMP facilities, which are listed below:

- I-215 SB Ramps at SR-74/Bonnie Drive (Intersection #9)
- I-215 SB Ramps at Ethanac Road (Intersection #10)
- I-215 SB Ramps at McCall Boulevard (Intersection #11)
- I-215 NB Ramps at SR-74 (Intersection # 12)
- I-215 NB Ramps at Ethanac Road (Intersection #13)
- I-215 NB Ramps at McCall Boulevard (Intersection #14)
- Menifee Road at SR-74 (Intersection #42)
- I-215 SB Ramps at Newport Road (Intersection #46)
- I-215 NB Ramps at Newport Road (Intersection #47)

C. City of Menifee General Plan Circulation Element

The City of Menifee General Plan includes a Circulation Element (2015), a core component of the General Plan that discusses transportation facilities as well as alternative modes of transportation, and establishes objectives and policies associated with transportation within the County. The General Plan Circulation Element identifies the circulation facilities located on-site and in the vicinity the Project site; discusses planned circulation system improvements on and in the vicinity of the Project site; and issues standards for the design and construction of new roadways within the City.

D. Western Riverside County Association of Governments Transportation Uniform Mitigation Fee

The Transportation Uniform Mitigation Fee (TUMF) program is administered by Western Riverside Council of Governments (WRCOG) based upon a regional Nexus Study completed in early 2003 and updated in 2016 to address major changes in right of way acquisition and improvement cost factors. TUMF identifies a network of backbone and local roadways that are needed to accommodate growth through 2035. This regional program was put into place to ensure that development pays its fair share and that funding is in place for construction of facilities needed to maintain the requisite level of service and critical to mobility in the region. (Urban Crossroads, 2019d, p. 259)

TUMF fees are imposed on new residential, industrial, and commercial development through application of the TUMF fee ordinance and fees are collected at the building or occupancy permit stage. In addition, an annual inflation adjustment is considered each year in January. In this way, TUMF fees are adjusted upwards

on a regular basis to ensure that the development impact fees collected keep pace with construction and labor costs, etc. (Urban Crossroads, 2019d, p. 259)

A number of the facilities within the Project's study area are programmed for improvements through the TUMF program. The Project Applicant will be subject to the TUMF fee program and will pay the requisite TUMF fees at the rates then in effect pursuant to the City's TUMF Ordinance. WRCOG has a successful track record funding and overseeing the construction of improvements funded through the TUMF program. In total, the TUMF program is anticipated to generate nearly $5 billion in transportation projects for Western Riverside County. (Urban Crossroads, 2019d, p. 259)

E. Development Impact Fees

The City of Menifee has adopted a Development Impact Fee (DIF) program to impose and collect fees from new residential, commercial, and industrial development for the purpose of funding roadways and intersections necessary to accommodate City growth as identified in the City's currently adopted General Plan Circulation Element. The City's DIF program includes facilities that are not part of or which may exceed improvements identified and covered by the TUMF program. As a result, the pairing of the regional and local fee programs provides a more comprehensive funding and implementation plan to ensure an adequate and interconnected transportation system. Under the City's DIF program, the City may grant to developers a credit against specific components of fees when those developers construct certain facilities and landscaped medians identified in the list of improvements funded by the DIF program. (Urban Crossroads, 2019d, p. 288)

The timing to use the DIF monies is established through periodic capital improvement programs which are overseen by the City's Public Works Department. Periodic traffic counts, review of traffic accidents, and a review of traffic trends throughout the City are also periodically performed by City staff and the City's consultants. The City uses this data to determine the timing of implementing the improvements listed in its facilities list. The City also uses this data to ensure that the improvements listed on the facilities list are constructed before the LOS falls below the LOS performance standards adopted by the City. In this way, the improvements are constructed before the LOS falls below the City's LOS performance thresholds. (Urban Crossroads, 2019d, p. 288)

4.14.5 Basis for Determining Significance

Section XVII of Appendix G to the CEQA Guidelines addresses typical adverse effects to transportation and includes the following threshold questions to evaluate the Project's impacts on transportation (OPR, 2018). A significant impact would occur if the Project would:

a. *Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;*

b. *Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b);*

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

d. *Result in inadequate emergency access.*

4.14.6 IMPACT ANALYSIS

Threshold a: ***Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?***

The analysis of Threshold a focuses on potential impacts to local roadway intersections and roadway segments, based on acceptable LOS standards established by the City of Menifee, County of Riverside, City of Riverside, and Caltrans, as discussed in Subsection 4.14.2. Traffic during the Project's construction phase is not analyzed herein because based on the construction characteristics identified in EIR Subsection 3.0, *Project Description*, the volume of construction-related traffic would result in fewer peak hour and daily trips than would result from operation of the Project; thus, the analyses of the Project's operational traffic covers any impacts that could occur from construction-related traffic.

A. Traffic Modeling Assumptions

1. Project Trip Generation, Distribution, and Assignment

- **Project Trip Generation**

Trip generation represents the amount of traffic which is both attracted to and produced by a development. Determining traffic generation for a specific project is therefore based upon 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. (Urban Crossroads, 2019d, p. 61)

Trip generation rates used to estimate Project traffic and a summary of the Project's trip generation for all three phases of the Project are shown in Table 4.14-16, *Project Trip Generation Summary*. Trip generation rates for the Single Family Detached Residential (ITE Land Use Code 210) and Commercial Retail (ITE Land Use Code 820) land uses are based upon data collected by the Institute of Transportation Engineers (ITE) in their published Trip Generation Manual, 9th Edition, 2012. Because no rates are specified in the ITE Land Use Code for the Community Park, trip generation rates for the Community Park ("Park Land" land use) are based upon data collected by the San Diego Municipal Code in their published Land Development Code Trip Generation Manual, 2003. (Urban Crossroads, 2019d, p. 61)

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 fast-food restaurants, coffee/donut shops with drive-through windows, and banks with drive-through windows just to name a few. As the Project is proposed to include these types of land uses, pass-by percentages have been obtained from the ITE Trip Generation Handbook (3rd Edition, 2014) for the applicable land uses. (Urban Crossroads, 2019d, p. 63)

Internal capture is a percentage reduction that can be applied to the trip generation estimates for individual land uses to account for trips internal to the site. In other words, trips may be made between individual retail uses on-site and can be made either by walking or using internal roadways without using external streets. As such, the trip generation for the site was estimated based on the ITE Trip Generation Handbook methodology to recognize the interactions that would occur between the various complementary land uses. For example, patrons of the commercial use may also be residents and would interact with one another without leaving the site and are therefore considered as vehicle trips that are internal to the site. The internal capture reduction percentage applied has been reviewed and approved by City staff. (Urban Crossroads, 2019d, p. 63)

Table 4.14-16 Project Trip Generation Summary

Land Use	Units[2]	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Project Trip Generation Rates[1]									
Single Family Detached Residential	DU	210	0.19	0.56	0.75	0.63	0.37	1.00	9.52
Shopping Center[3]	TSF	820	0.71	0.43	1.14	2.20	2.39	4.59	51.17
Sports Park	AC	--[4]	1.00	1.00	2.00	2.00	2.00	4.00	50.00
Recreational Community Center	TSF	495	1.35	0.70	2.05	1.34	1.40	2.74	33.82

Land Use	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Phase 1									
Single Family Detached Residential	500	DU	**95**	**280**	**375**	**315**	**185**	**500**	**4,760**
Phase 2									
Single Family Detached Residential	731	DU	139	409	548	461	270	731	6,960
Community Center	10.000	TSF	14	7	21	13	14	27	340
Sports Park	11.23	AC	11	11	22	22	22	45	562
TOTAL			**164**	**428**	**591**	**497**	**307**	**803**	**7,862**
Project Buildout									
Single Family Detached Residential	1,061	DU	202	594	796	668	393	1,061	10,102
Community Center	10.000	TSF	14	7	21	13	14	27	340
Sports Park	11.23	AC	11	11	22	22	22	45	562
Subtotal			226	612	839	704	429	1,133	11,004
Internal Capture[5]			-4	-6	-10	-140	-50	-190	-1,846
Residential Subtotal			**222**	**606**	**829**	**564**	**379**	**943**	**9,158**
Shopping Center	225.000	TSF	160	97	257	495	538	1,033	11,514
Internal Capture[5]			-6	-4	-10	-50	-140	-190	-2,118
Pass-by Reduction (PM/Daily: 34%)[6]			0	0	0	-151	-135	-286	-3,196
Shopping Center Subtotal			**154**	**93**	**247**	**294**	**263**	**557**	**6,200**
TOTAL			**376**	**699**	**1,075**	**858**	**642**	**1,500**	**15,357**

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Ninth Edition (2012).

[2] DU = dwelling units; TSF = thousand square feet

[3] Trip generation rates are based on the regression equation for ITE Land Use 820.

[4] Source: San Diego Municipal Code Land Development Code Trip Generation Manual, May 2003 (Park Land Use).

[5] ITE methodology has been utilized to determine the internal capture reduction for the site.

[6] Pass-by reduction percentages are from the ITE Trip Generation Handbook (3rd Edition, 2014): Table F.9.

(Urban Crossroads, 2019d, Table 4-1)

As shown in Table 4.14-16, at buildout, the Project is estimated to generate 15,357 total trip-ends per day with an estimated 1,075 AM peak hour trips and 1,500 PM peak hour trips. (Urban Crossroads, 2019d, p. 63)

❑ Project Trip Distribution

Trip distributions for the Project's residential trip distribution patterns under Phase 1 and Phase 2 conditions are illustrated on Figure 4.14-4, *Project Phases 1 and 2 (Residential, Community Park, and Community Center) Trip Distribution*. Figure 4.14-5, *Project Phases 1 through 3 (Residential, Community Park, and Community Center) Trip Distribution*, illustrates the expected Project trip distribution patterns utilized for Phase 3 (residential buildout and community park) conditions. Figure 4.14-6, *Project Buildout (Residential, Commercial, Community Park and Community Center) Trip Distribution*, illustrates the expected Project trip distribution patterns for Project buildout conditions (residential, commercial retail, and community park). Lastly, Figure 4.14-7, *Project Horizon Year Trip Distribution*, illustrates the expected long-range Project trip distribution patterns for all land uses. These distributions were developed based on a "select zone" model run from the City of Menifee's version of the Riverside County Transportation Analysis Model (RivTAM). Further refinements to these distributions have been made based on the proposed land uses, existing transportation network, and anticipated travel patterns. (Urban Crossroads, 2019d, p. 63)

❑ Modal Split

Although the use of public transit, walking, and/or bicycling have the potential to reduce Project-related traffic, such reductions have not been taken into consideration in the TIA in order to provide a conservative (i.e., "worst case") analysis of the Project's potential to contribute to circulation system deficiencies.

❑ Project Trip Assignment

The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, 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) and peak hour intersection turning movement volumes for each phase's traffic conditions are shown on Figure 4.14-8 through Figure 4.14-13. Project ADT and peak hour intersection turning movement volumes for Horizon Year traffic conditions are shown on Figure 4.14-14 and Figure 4.14-15. (Urban Crossroads, 2019d, p. 68)

2. Background Traffic

Opening Year traffic forecasts have been based upon 8 years of background (ambient) growth at 2% per year for 2020, 2023 and 2025 traffic conditions. The total ambient growth is 6.12% for 2020 traffic conditions, 10.41% for 2023 traffic conditions, and 17.17% for 2025 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 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. (Urban Crossroads, 2019d, p. 77)

In context, the 2.0 percent annual increase in ambient traffic reflected in this analysis roughly matches the currently adopted Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (April 2016) growth forecasts for the City of Menifee and identifies projected growth in population of 81,600 in 2012 to 121,100 in 2040, or a 48.41 percent increase over the 28-year period. The change in population equates to roughly a 1.42 percent growth rate per year,

compounded annually. Similarly, growth over the same 28-year period in households is projected to increase by 69.37 percent, or a 1.90 percent growth rate per year, compounded annually. Finally, growth in employment over the same 28-year period is projected to increase by 128.16 percent, or a 2.99 percent growth rate per year, compounded annually. On average, Menifee is estimated to experience a growth rate of 2.10 percent per year over the 28-year period. (Urban Crossroads, 2019d, p. 77)

Based on a comparison of Existing traffic volumes to the Horizon Year (2040) forecasts, the average growth rate is estimated at approximately 7.15 percent compounded annually between Existing and Horizon Year (2040) traffic conditions. The annual growth rate at each individual intersection is not lower than 2.33 percent to as high as 28.62 percent compounded annually over the same time period. Therefore, the annual growth rate utilized for the purposes of the Project's TIA (*Technical Appendix K*) would appear to conservatively approximate the anticipated regional growth in traffic volumes in the City of Menifee for near-term and long-range traffic conditions, especially when considered along with the addition of cumulative development project traffic and project-related traffic. As such, the growth in traffic volumes assumed in the TIA would tend to overstate, as opposed to understate, the potential impacts to traffic and circulation. (Urban Crossroads, 2019d, p. 77)

3. Cumulative Development Traffic

A cumulative project list was developed for the purposes of this analysis through consultation with the City of Menifee, City of Perris, and County of Riverside. The list consists of cumulative projects that are anticipated to contribute traffic to any study area facility. EIR Figure 4.0-1 (previously presented) illustrates the cumulative development location map. A summary of cumulative development projects and their proposed land uses was previously shown on EIR Table 4.0-1 (previously presented). (Urban Crossroads, 2019d, p. 77)

4. Traffic Forecasts

To provide a comprehensive assessment of the potential circulation system deficiencies, two types of analyses, "buildup" and "buildout," were performed in the Project's TIA. The "buildup" method was used to approximate traffic forecasts for both E+P and Opening Year Cumulative traffic conditions. The E+P scenario has been included to discern potential deficiencies of the Project absent peripheral effects of projected ambient growth or development of related projects while the Opening Year Cumulative scenario is intended to identify near-term deficiencies on both the existing and planned near-term circulation system. The E+P traffic conditions include existing traffic in addition to the traffic generated by the Project. The Opening Year Cumulative traffic conditions include background traffic, traffic generated by other cumulative development projects within the study area, and the traffic generated by the Project. The "buildout" approach is used to forecast Horizon Year (2040) without and with Project traffic conditions of the study area. (Urban Crossroads, 2019d, p. 85)

5. Opening Year Cumulative Conditions

The "buildup" approach combines existing traffic counts with a background ambient growth factor to forecast the near-term 2020, 2023, and 2025 traffic conditions. An ambient growth factor of 6.12% for 2020, 10.41% for 2023, and 17.17% for 2025 accounts for background (area-wide) traffic increases that occur over time from the year 2017. Traffic volumes generated by cumulative development projects are then added to assess the Opening Year Cumulative traffic conditions. Lastly, Project traffic is added to assess Opening Year Cumulative "with Project" traffic conditions. The Opening Year Cumulative traffic analysis includes the following traffic conditions, with the various traffic components: (Urban Crossroads, 2019d, p. 85)

- Opening Year Cumulative Without Project
  - Existing 2017 counts
  - Ambient growth traffic (6.12% for 2020, 10.41% for 2023, and 17.17% for 2025)
  - Cumulative Development Project traffic

- Opening Year Cumulative With Project
  - Existing 2017 counts
  - Ambient growth traffic (6.12% for 2020, 10.41% for 2023, and 17.17% for 2025)
  - Cumulative Development Project traffic
  - Project traffic

6. Horizon Year (2040) Conditions

Traffic projections for Horizon Year with Project conditions were derived from the City of Menifee refined version of the RivTAM modified to represent General Plan Buildout conditions for the City of Menifee using accepted procedures for model forecast refinement and smoothing. (Urban Crossroads, 2019d, p. 85)

The Horizon Year traffic conditions analyses are utilized to determine if improvements funded through regional transportation mitigation fee programs, such as the TUMF, City of Menifee DIF programs, or other approved funding mechanism can accommodate the long-range cumulative traffic at the target LOS identified in the City of Menifee General Plan. Other improvements needed beyond the "funded" improvements (such as localized improvements to non-TUMF or DIF facilities) are identified as such. (Urban Crossroads, 2019d, pp. 85-86)

In some instances, the RivTAM model zone structure is not designed to provide accurate turning movements along arterial roadways unless refinement and reasonableness checking is performed. Horizon Year turning volumes were compared to Opening Year Cumulative volumes in order to ensure a minimum growth of ten percent as a part of the refinement process, where applicable. The minimum growth includes any additional growth between Opening Year Cumulative With Project and Horizon Year with Project traffic conditions that is not accounted for by the traffic generated by cumulative development projects and the ambient growth between Existing and Opening Year Cumulative With Project conditions. The initial estimate of the future Horizon Year With Project peak hour turning movements was then reviewed by Urban Crossroads for reasonableness at intersections where model results showed unreasonable turning movements. The initial raw model estimates were adjusted to achieve flow conservation (where applicable), reasonable growth, and reasonable diversion between parallel routes. Postprocessing worksheets for Horizon Year With Project traffic conditions are provided in Appendix 4.1 to the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 86)

B. Existing Plus Project Traffic Conditions

This scenario includes Existing traffic volumes plus Project traffic (E+P). The lane configurations and traffic controls assumed to be in place for E+P conditions consist of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are assumed to be in place for E+P conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways). Improvements include construction of site adjacent roadways (e.g., Rouse Road, Sherman Road, Chambers Avenue, etc.) and intersections needed for site access. (Urban Crossroads, 2019d, p. 87)

Exhibits 5-1, 5-2, and 5-3 from the TIA (*Technical Appendix K*) show the number of through lanes and intersection controls which can be expected for E+P (Phase 1), E+P (Phase 2) and E+P (Project Buildout) traffic conditions, respectively. E+P (Phase 1), E+P (Phase 2) and E+P (Project Buildout) ADT volumes are shown on TIA Exhibits 5-4, 5-6, and 5-8, respectively. E+P (Phase 1), E+P (Phase 2) and E+P (Project Buildout) AM and PM peak hour intersection turning movement volumes are shown on TIA Exhibits 5-5, 5-7, and 5-9, respectively. (Urban Crossroads, 2019d, p. 87)

1. Intersection Operations Analysis – E+P Conditions

E+P peak hour traffic operations have been evaluated for the study area intersections and are summarized in Table 4.14-17, *Intersection Analysis for E+P (Phase 1) Conditions*, Table 4.14-18, *Intersection Analysis for E+P (Phase 2) Conditions*, and Table 4.14-19, *Intersection Analysis for E+P (Project Buildout) Conditions*, for Phases 1, 2, and 3 of the Project, respectively. As indicated, there are no additional study area intersections anticipated to experience unacceptable levels of service during one or more peak hours beyond those previously identified as already operating at deficient LOS under Existing traffic conditions. Although the following intersection would operate at a deficient LOS without the addition of Project traffic, the addition of Project traffic would exacerbate the existing LOS deficiency (i.e., by degrading the LOS from LOS E to LOS F). Accordingly, Project impacts to the following intersection would represent a direct impact of the Project: (Urban Crossroads, 2019d, pp. 87-106)

- Encanto Dr. / Ethanac Rd. (Intersection #15) – LOS F AM and PM peak hours

Additionally, Table 4.14-17 shows that the following intersection would operate at a deficient LOS E during both the AM and PM peak hours under E+P Phase 1 traffic conditions; however, the Project would contribute fewer than 50 peak hour trips under Phase 1 traffic conditions and impacts would therefore be less-than-cumulatively considerable under E+P Phase 1 traffic conditions. However, the Project would contribute more than 50 peak hour trips under E+P Phase 2 and E+P Project buildout conditions; thus, Project impacts to the following intersection would be cumulatively considerable under E+P Phase 2 and E+P Project buildout conditions: (Urban Crossroads, 2019d, pp. 87-106)

- Menifee Rd. / SR-74 (Intersection #42) – LOS E AM and PM peak hours

The intersection operations analysis worksheets for each phase are included in Appendices 5.1, 5.2, and 5.3 of the Project's TIA (*Technical Appendix K*).

Table 4.14-17 Intersection Analysis for E+P (Phase 1) Conditions

#	Intersection	Traffic Control[3]	Existing (2017)				E+P (Phase 1)			
			Delay[2] (secs.)		Level of Service		Delay[2] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Goetz Rd. & Ethanac Rd.	TS	32.1	31.6	C	C	32.9	32.3	C	C
2	Murrieta Rd. & Ethanac Rd.	TS	33.3	32.7	C	C	33.5	33.1	C	C
3	Murrieta Rd. & McCall Bl.	TS	22.5	26.6	C	C	23.0	27.4	C	C
4	Sun City Bl. & McCall Bl.	TS	29.2	31.1	C	C	29.3	32.1	C	C
5	Barnett Rd. & Ethanac Rd.	TS	17.9	14.1	B	B	18.7	14.1	B	B
6	Case Rd. & Ethanac Rd.	TS	22.2	26.4	C	C	22.3	26.4	C	C
7	Bradley Rd. & McCall Bl.	TS	44.6	50.3	D	D	47.8	52.9	D	D
8	Bradley Rd. & Cherry Hills Bl.	AWS	10.8	13.1	B	B	11.0	13.8	B	B
9	I-215 SB Ramps/SR-74 & Bonnie Dr.	TS	12.9	15.9	B	B	Not an Analysis Location			
10	I-215 SB Ramps & Ethanac Rd.	TS	18.6	19.0	B	B	18.9	19.6	B	B
11	I-215 SB Ramps & McCall Bl.	TS	23.4	28.0	C	C	23.6	34.9	C	C
12	I-215 NB Ramps & SR-74	TS	12.8	12.8	B	B	Not an Analysis Location			
13	I-215 NB Ramps & Ethanac Rd.	TS	30.1	27.0	C	C	36.0	27.6	D	C
14	I-215 NB Ramps & McCall Bl.	TS	21.8	26.2	C	C	22.0	27.0	C	C
15	Encanto Dr. & Ethanac Rd.	CSS	**69.4**	**40.4**	**F**	**E**	**>100.0**	**>100.0**	**F**	**F**
16	Encanto Dr. & McLaughlin Rd.	CSS	9.4	10.9	A	B	10.1	12.4	B	B
17	Encanto Dr. & Rouse Rd.	CSS	11.1	10.4	B	B	12.1	12.0	B	B
18	Encanto Dr. & Chambers Av.	**CSS**	Future Intersection				Not an Analysis Location			
19	Encanto Dr. & Shadel Rd.	CSS	12.6	11.4	B	B	12.9	11.6	B	B
20	Encanto Dr. & McCall Bl.	TS	24.9	25.9	C	C	27.3	28.2	C	C
21	Trumble Rd. & SR-74	TS	16.0	12.5	B	B	Not an Analysis Location			
22	Trumble Rd. & Ethanac Rd.	TS	28.2	28.8	C	C	28.2	28.8	C	C
23	Trumble Rd. & Rouse Rd.	CSS	8.9	8.7	A	A	9.6	9.2	A	A
24	Brady Ln./St. A & Rouse Rd.	CSS	8.6	8.5	A	A	9.9	10.5	A	B
25	St. A & Chambers Av.	**CSS**	Future Intersection				Not an Analysis Location			
26	Sherman Rd. & SR-74	TS	13.5	14.8	B	B	Not an Analysis Location			
27	Sherman Rd. & Ethanac Rd.	CSS	21.6	25.7	C	D	21.6	25.7	C	D
28	Sherman Rd. & McLaughlin Rd.	AWS	6.9	7.0	A	A	6.9	7.0	A	A
29	Sherman Rd. & Rouse Rd.	AWS	7.1	7.1	A	A	7.5	7.8	A	A
30	Sherman Rd. & St. B	**RA**	Future Intersection				10.4	12.0	B	B
31	Sherman Rd. & Chambers Av.	AWS	8.4	7.2	A	A	9.4	10.9	A	B
32	Sherman Rd. & Shadel Rd.	AWS	9.2	7.4	A	A	10.9	9.0	B	A
33	Sherman Rd. & McCall Bl.	TS	27.1	21.8	C	C	37.0	31.3	D	C
34	Dawson Rd. & Rouse Rd.	UC/**CSS**	0.0	0.0	A	A	9.3	9.0	A	A
35	St. C/Concord Ln. & Chambers Av.	CSS	8.6	8.6	A	A	8.6	8.6	A	A
36	Antelope Rd. & Ethanac Rd.	CSS	15.5	11.6	C	B	15.5	11.6	C	B
37	Antelope Rd. & Rouse Rd. (North)	**CSS**	Future Intersection				Future Intersection			
38	Antelope Rd. & Rouse Rd. (South)	**CSS**	Future Intersection				Future Intersection			
39	Antelope Rd. & Chambers Av.	**CSS**	Future Intersection				Future Intersection			
40	Antelope Rd. & McCall Bl.	CSS	20.0	16.7	C	C	21.1	17.3	C	C

Table 4.14-17 Intersection Analysis for E+P (Phase 1) Conditions (Cont'd)

#	Intersection	Traffic Control[3]	Existing (2017)				E+P (Phase 1)			
			Delay[2] (secs.)		Level of Service		Delay[2] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
41	Palomar Rd. & SR-74	TS	21.5	20.4	C	C	Not an Analysis Location			
42	Menifee Rd. & SR-74	TS	**55.6**	**58.6**	**E**	**E**	**56.8**	**61.6**	**E**	**E**
43	Menifee Rd. & Rouse Rd./Turtle Point Dr.	TS	6.8	5.1	A	A	6.8	5.1	A	A
44	Menifee Rd. & McCall Bl.	TS	42.2	31.2	D	C	43.5	31.5	D	C
45	Menifee Rd. & Simpson Rd.	TS	16.3	18.1	B	B	16.7	18.6	B	B
46	I-215 SB Ramps & Newport Rd.	TS	12.2	15.0	B	B	12.3	15.1	B	B
47	I-215 NB Ramps & Newport Rd.	TS	14.4	18.7	B	B	14.4	18.7	B	B

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] Per the 2010 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; RA = Roundabout; UC = Uncontrolled; **CSS** = Improvement

(Urban Crossroads, 2019d, Table 5-1)

Table 4.14-18 Intersection Analysis for E+P (Phase 2) Conditions

#	Intersection	Traffic Control[3]	Existing (2017)				E+P (Phase 2)			
			Delay[2] (secs.)		Level of Service		Delay[2] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Goetz Rd. & Ethanac Rd.	TS	32.1	31.6	C	C	33.4	32.7	C	C
2	Murrieta Rd. & Ethanac Rd.	TS	33.3	32.7	C	C	33.7	33.4	C	C
3	Murrieta Rd. & McCall Bl.	TS	22.5	26.6	C	C	23.3	27.8	C	C
4	Sun City Bl. & McCall Bl.	TS	29.2	31.1	C	C	29.4	31.9	C	C
5	Barnett Rd. & Ethanac Rd.	TS	17.9	14.1	B	B	18.7	14.1	B	B
6	Case Rd. & Ethanac Rd.	TS	22.2	26.4	C	C	22.4	26.4	C	C
7	Bradley Rd. & McCall Bl.	TS	44.6	50.3	D	D	49.8	59.8	D	E
8	Bradley Rd. & Cherry Hills Bl.	AWS	10.8	13.1	B	B	11.1	14.2	B	B
9	I-215 SB Ramps/SR-74 & Bonnie Dr.	TS	12.9	15.9	B	B	Not an Analysis Location			
10	I-215 SB Ramps & Ethanac Rd.	TS	18.6	19.0	B	B	19.3	20.1	B	B
11	I-215 SB Ramps & McCall Bl.	TS	23.4	28.0	C	C	23.7	36.5	C	D
12	I-215 NB Ramps & SR-74	TS	12.8	12.8	B	B	Not an Analysis Location			
13	I-215 NB Ramps & Ethanac Rd.	TS	30.1	27.0	C	C	31.2	28.9	C	C
14	I-215 NB Ramps & McCall Bl.	TS	21.8	26.2	C	C	22.2	27.5	C	C
15	Encanto Dr. & Ethanac Rd.	CSS	**69.4**	**40.4**	**F**	**E**	**>100.0**	**>100.0**	**F**	**F**
16	Encanto Dr. & McLaughlin Rd.	CSS	9.4	10.9	A	B	10.5	13.5	B	B
17	Encanto Dr. & Rouse Rd.	CSS/**TS**	11.1	10.4	B	B	20.7	22.1	C	C
18	Encanto Dr. & Chambers Av.	**TS**	Future Intersection				4.5	5.3	A	A
19	Encanto Dr. & Shadel Rd.	CSS	12.6	11.4	B	B	13.1	11.8	B	B
20	Encanto Dr. & McCall Bl.	TS	24.9	25.9	C	C	29.4	30.5	C	C
21	Trumble Rd. & SR-74	TS	16.0	12.5	B	B	Not an Analysis Location			
22	Trumble Rd. & Ethanac Rd.	TS	28.2	28.8	C	C	28.4	30.2	C	C
23	Trumble Rd. & Rouse Rd.	CSS	8.9	8.7	A	A	10.0	9.6	B	A
24	Brady Ln./St. A & Rouse Rd.	CSS	8.6	8.5	A	A	10.7	11.7	B	B
25	St. A & Chambers Av.	**CSS**	Future Intersection				8.5	8.5	A	A
26	Sherman Rd. & SR-74	TS	13.5	14.8	B	B	Not an Analysis Location			
27	Sherman Rd. & Ethanac Rd.	CSS	21.6	25.7	C	D	21.6	25.7	C	D
28	Sherman Rd. & McLaughlin Rd.	AWS	6.9	7.0	A	A	6.9	7.0	A	A
29	Sherman Rd. & Rouse Rd.	AWS	7.1	7.1	A	A	7.8	8.4	A	A
30	Sherman Rd. & St. B	**RA**	Future Intersection				4.8	5.9	A	A
31	Sherman Rd. & Chambers Av.	AWS	8.4	7.2	A	A	10.6	18.7	B	C
32	Sherman Rd. & Shadel Rd.	AWS	9.2	7.4	A	A	12.6	10.7	B	B
33	Sherman Rd. & McCall Bl.	TS	27.1	21.8	C	C	39.8	49.0	D	D
34	Dawson Rd. & Rouse Rd.	UC/**CSS**	0.0	0.0	A	A	9..9	9.2	A	A
35	St. C/Concord Ln. & Chambers Av.	CSS	8.6	8.6	A	A	8.7	8.7	A	A
36	Antelope Rd. & Ethanac Rd.	CSS	15.5	11.6	C	B	15.5	11.6	C	B
37	Antelope Rd. & Rouse Rd. (North)	**CSS**	Future Intersection				Future Intersection			
38	Antelope Rd. & Rouse Rd. (South)	**CSS**	Future Intersection				Future Intersection			
39	Antelope Rd. & Chambers Av.	**CSS**	Future Intersection				Future Intersection			
40	Antelope Rd. & McCall Bl.	CSS	20.0	16.7	C	C	21.7	17.8	C	C

Table 4.14-18Intersection Analysis for E+P (Phase 2) Conditions (Cont'd)

#	Intersection	Traffic Control[3]	Existing (2017)				E+P (Phase 2)			
			Delay[2] (secs.)		Level of Service		Delay[2] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
41	Palomar Rd. & SR-74	TS	21.5	20.4	C	C	Not an Analysis Location			
42	Menifee Rd. & SR-74	TS	**55.6**	**58.6**	**E**	**E**	**57.8**	**63.5**	**E**	**E**
43	Menifee Rd. & Rouse Rd./Turtle Point Dr.	TS	6.8	5.1	A	A	6.9	5.1	A	A
44	Menifee Rd. & McCall Bl.	TS	42.2	31.2	D	C	43.8	31.8	D	C
45	Menifee Rd. & Simpson Rd.	TS	16.3	18.1	B	B	16.9	18.9	B	B
46	I-215 SB Ramps & Newport Rd.	TS	12.2	15.0	B	B	12.4	15.2	B	B
47	I-215 NB Ramps & Newport Rd.	TS	14.4	18.7	B	B	14.4	18.7	B	B

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] Per the 2010 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; RA = Roundabout UC = Uncontrolled; **CSS** = Improvement

(Urban Crossroads, 2019d, Table 5-2)

Table 4.14-19 Intersection Analysis for E+P (Project Buildout) Conditions

#	Intersection	Traffic Control[3]	Existing (2017)				E+P (Project Buildout)			
			Delay[2] (secs.)		Level of Service		Delay[2] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Goetz Rd. & Ethanac Rd.	TS	32.1	31.6	C	C	34.0	32.9	C	C
2	Murrieta Rd. & Ethanac Rd.	TS	33.3	32.7	C	C	33.8	33.5	C	C
3	Murrieta Rd. & McCall Bl.	TS	22.5	26.6	C	C	23.8	28.4	C	C
4	Sun City Bl. & McCall Bl.	TS	29.2	31.1	C	C	29.5	32.5	C	C
5	Barnett Rd. & Ethanac Rd.	TS	17.9	14.1	B	B	18.7	14.1	B	B
6	Case Rd. & Ethanac Rd.	TS	22.2	26.4	C	C	22.5	26.4	C	C
7	Bradley Rd. & McCall Bl.	TS	44.6	50.3	D	D	76.9	69.0	E	E
8	Bradley Rd. & Cherry Hills Bl.	AWS	10.8	13.1	B	B	11.3	14.8	B	B
9	I-215 SB Ramps/SR-74 & Bonnie Dr.	TS	12.9	15.9	B	B	Not an Analysis Location			
10	I-215 SB Ramps & Ethanac Rd.	TS	18.6	19.0	B	B	19.9	21.3	B	C
11	I-215 SB Ramps & McCall Bl.	TS	23.4	28.0	C	C	27.2	45.5	C	D
12	I-215 NB Ramps & SR-74	TS	12.8	12.8	B	B	Not an Analysis Location			
13	I-215 NB Ramps & Ethanac Rd.	TS	30.1	27.0	C	C	51.5	38.0	D	D
14	I-215 NB Ramps & McCall Bl.	TS	21.8	26.2	C	C	22.8	30.0	C	C
15	Encanto Dr. & Ethanac Rd.	CSS	**69.4**	**40.4**	**F**	**E**	**>100.0**	**>100.0**	**F**	**F**
16	Encanto Dr. & McLaughlin Rd.	CSS	9.4	10.9	A	B	11.4	17.2	B	C
17	Encanto Dr. & Rouse Rd.	CSS/**TS**	11.1	10.4	B	B	21.1	23.3	C	C
18	Encanto Dr. & Chambers Av.	**TS**	Future Intersection				10.4	13.7	B	B
19	Encanto Dr. & Shadel Rd.	CSS	12.6	11.4	B	B	19.1	16.7	C	C
20	Encanto Dr. & McCall Bl.	TS	24.9	25.9	C	C	44.3	43.5	D	D
21	Trumble Rd. & SR-74	TS	16.0	12.5	B	B	Not an Analysis Location			
22	Trumble Rd. & Ethanac Rd.	TS	28.2	28.8	C	C	30.0	30.2	C	C
23	Trumble Rd. & Rouse Rd.	CSS	8.9	8.7	A	A	10.3	9.7	B	A
24	Brady Ln./St. A & Rouse Rd.	CSS	8.6	8.5	A	A	11.2	11.9	B	B
25	St. A & Chambers Av.	**CSS**	Future Intersection				9.6	9.8	A	A
26	Sherman Rd. & SR-74	TS	13.5	14.8	B	B	Not an Analysis Location			
27	Sherman Rd. & Ethanac Rd.	CSS	21.6	25.7	C	D	21.8	26.3	C	D
28	Sherman Rd. & McLaughlin Rd.	AWS	6.9	7.0	A	A	6.9	7.0	A	A
29	Sherman Rd. & Rouse Rd.	AWS	7.1	7.1	A	A	8.0	8.5	A	A
30	Sherman Rd. & St. B	**RA**	Future Intersection				4.8	5.1	A	A
31	Sherman Rd. & Chambers Av.	AWS	8.4	7.2	A	A	11.4	19.4	B	C
32	Sherman Rd. & Shadel Rd.	AWS	9.2	7.4	A	A	13.9	10.6	B	B
33	Sherman Rd. & McCall Bl.	TS	27.1	21.8	C	C	50.1	47.6	D	D
34	Dawson Rd. & Rouse Rd.	UC/**CSS**	0.0	0.0	A	A	10.0	9.1	B	A
35	St. C/Concord Ln. & Chambers Av.	CSS	8.6	8.6	A	A	11.9	11.3	B	B
36	Antelope Rd. & Ethanac Rd.	CSS	15.5	11.6	C	B	15.5	11.6	C	B
37	Antelope Rd. & Rouse Rd. (North)	**CSS**	Future Intersection				Future Intersection			
38	Antelope Rd. & Rouse Rd. (South)	**CSS**	Future Intersection				Future Intersection			
39	Antelope Rd. & Chambers Av.	**CSS**	Future Intersection				Future Intersection			
40	Antelope Rd. & McCall Bl.	CSS	20.0	16.7	C	C	23.2	19.0	C	C

Table 4.14-19 Intersection Analysis for E+P (Project Buildout) Conditions (Cont'd)

#	Intersection	Traffic Control[3]	Existing (2017)				E+P (Project Buildout)			
			Delay[2] (secs.)		Level of Service		Delay[2] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
41	Palomar Rd. & SR-74	TS	21.5	20.4	C	C	Not an Analysis Location			
42	Menifee Rd. & SR-74	TS	**55.6**	**58.6**	**E**	**E**	**59.3**	**65.0**	**E**	**E**
43	Menifee Rd. & Rouse Rd./Turtle Point Dr.	TS	6.8	5.1	A	A	6.9	5.1	A	A
44	Menifee Rd. & McCall Bl.	TS	42.2	31.2	D	C	45.1	32.3	D	C
45	Menifee Rd. & Simpson Rd.	TS	16.3	18.1	B	B	17.2	19.4	B	B
46	I-215 SB Ramps & Newport Rd.	TS	12.2	15.0	B	B	12.6	15.3	B	B
47	I-215 NB Ramps & Newport Rd.	TS	14.4	18.7	B	B	14.4	18.7	B	B

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] Per the 2010 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; RA = Roundabout; UC = Uncontrolled; **CSS** = Improvement

(Urban Crossroads, 2019d, Table 5-3)

2. Roadway Segment Capacity Analysis – E+P Conditions

The City of Menifee TIA Guidelines provide roadway volume capacity values. These roadway segment capacities are approximate figures only, and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet traffic demand. Table 4.14-20, *Roadway Segment Capacity Analysis for E+P (Phase 1) Conditions*, Table 4.14-21, *Roadway Segment Capacity Analysis for E+P (Phase 2) Conditions*, and Table 4.14-22, *Roadway Segment Capacity Analysis for E+P (Project Buildout) Conditions*, provide a summary of the E+P (Phase 1), E+P (Phase 2) and E+P (Project Buildout) conditions roadway segment capacity analysis, respectively, based on the City of Menifee Roadway Segment Capacity Thresholds. As shown, the following roadway segments experience deficiencies under existing conditions; thus, the Project's contribution to these roadway segments would represent a cumulatively-considerable impact of the Project under each phase of the Project:

- Ethanac Rd., I-215 Freeway to Encanto Dr. (Roadway Segment #6) – LOS F
- Ethanac Rd., Encanto Dr. to Trumble Rd. (Roadway Segment #7) – LOS F
- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25) – LOS F

Although Table 4.14-11, Table 4.14-20, Table 4.14-21, and Table 4.14-22 indicate that the roadway segment of Mathews Road between I-215 NB Ramps and Trumble Road (Roadway Segment #2) would operate at a deficient LOS E, the Project contributes fewer than 50 peak hour trips to this roadway segment under E+P conditions; thus, Project impacts to Roadway Segment #2 would be less-than-cumulatively considerable. (Urban Crossroads, 2019d, p. 206)

The roadway segment analysis results indicate that the addition of Project Phase 1 traffic would cumulatively impact the following intersection, while the addition of traffic from Phase 2 and Project buildout would result in direct impacts to the following intersection: (Urban Crossroads, 2019d, p. 106)

- McCall Bl., Bradley Rd. to I-215 SB Ramps (Roadway Segment #21) – LOS F

Table 4.14-20 Roadway Segment Capacity Analysis for E+P (Phase 1) Conditions

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	Existing (2017)	V/C[2]	LOS[3]	Project Only Phase 1	E+P Phase 1	V/C[2]	LOS[3]	General Plan Classification
1	SR-74	Bonnie Dr. to I-215 NB Ramps	3D	Major	25,575	18,878	0.74	C	0	Not an Analysis Location			Major
2	SR-74	I-215 NB Ramps to Trumble Rd.	4D	Major	34,100	**32,399**	**0.95**	**E**	0	Not an Analysis Location			Major
3	Ethanac Rd.	Goetz Rd. to Murrieta Rd.	4D	Arterial	37,000	12,499	0.34	A	238	12,737	0.34	A	Expressway
4	Ethanac Rd.	Murrieta Rd. to Barnett Rd.	4D	Arterial	37,000	15,327	0.41	A	476	15,803	0.43	A	Expressway
5	Ethanac Rd.	Case Rd. to I-215 Freeway	4D	Arterial	37,000	23,341	0.63	B	714	24,055	0.65	B	Expressway
6	Ethanac Rd.	I-215 Freeway to Encanto Dr.	2U	Collector	13,000	**13,992**	**1.08**	**F**	1,428	**15,420**	**1.19**	**F**	Expressway
7	Ethanac Rd.	Encanto Dr. to Trumble Rd.	2U	Collector	13,000	**13,239**	**1.02**	**F**	0	**13,239**	**1.02**	**F**	Expressway
8	Ethanac Rd.	Trumble Rd. to Sherman Rd.	2U	Collector	13,000	10,480	0.81	D	0	10,480	0.81	D	Expressway
9	Ethanac Rd.	Sherman Rd. to Antelope Rd.	2U	Collector	13,000	7,266	0.56	A	0	7,266	0.56	A	Expressway
10	SR-74	Antelope Rd. to Palomar Rd.	4D	Major	34,100	25,742	0.75	C	0	Not an Analysis Location			Expressway
11	Rouse Rd.	Encanto Dr. to Trumble Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	1,899	0.29	A	1,666	3,565	0.14	A	Secondary
12	Rouse Rd.	Brady Ln. to Sherman Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	711	0.11	A	1,190	1,901	0.07	A	Secondary
13	Rouse Rd.	Sherman Rd. to Dawson Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	457	0.07	A	952	1,409	0.05	A	Secondary
14	Rouse Rd.	Dawson Rd. to Antelope Rd.	--	Secondary	12,950	Does Not Exist			0	Does Not Exist			Secondary
15	Rouse Rd.	Antelope Rd. (N) to Menifee Rd.	2U	Major	12,950	63	0.00	A	0	63	0.00	A	Major
16	Chambers Av.	Encanto Dr. to St. A	--	Secondary	25,900	Does Not Exist			0	Not an Analysis Location			Secondary
17	Chambers Av.	St. A to Sherman Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	35	0.01	A	0	35	0.00	A	Secondary
18	Chambers Av.	Sherman Rd. to Concord Ln.	**4U**	Local/**Secondary**	6,500/**25,900**	475	0.07	A	0	475	0.02	A	Secondary
19	McCall Bl.	Murrieta Rd. to Sun City Bl.	6D	Major	34,100	10,829	0.32	A	570	11,399	0.33	A	Major
20	McCall Bl.	Sun City Bl. to Bradley Rd.	4D	Major	34,100	18,607	0.55	A	810	19,417	0.57	A	Major
21	McCall Bl.	Bradley Rd. to I-215 Freeway	4D	Major	34,100	**32,750**	**0.96**	**E**	1,286	**34,036**	**1.00**	**E**	Major
22	McCall Bl.	I-215 Freeway to Encanto Dr.	4D	Major	34,100	30,696	0.90	D	2,000	**32,696**	**0.96**	**E**	Urban Arterial
23	McCall Bl.	Encanto Dr. to Sherman Rd.	4D	Major	34,100	24,133	0.71	C	1,762	25,895	0.76	C	Urban Arterial
24	McCall Bl.	Sherman Rd. to Antelope Rd.	4D	Major	34,100	18,910	0.55	A	1,000	19,910	0.58	A	Urban Arterial
25	McCall Bl.	Antelope Rd. to Menifee Rd.	2D	Major	17,050	**19,203**	**1.13**	**F**	1,000	**20,203**	**1.18**	**F**	Urban Arterial
26	Trumble Rd.	North of Ethanac Rd.	2U	Collector	13,000	1,981	0.15	A	0	1,981	0.15	A	Collector
27	Encanto Dr.	Ethanac Rd. to McLaughlin Rd.	2U	Collector	13,000	3,132	0.24	A	1,428	4,560	0.35	A	Major
28	Encanto Dr.	McLaughlin Rd. to Rouse Rd.	2U	Collector	13,000	3,280	0.25	A	1,428	4,708	0.36	A	Major
29	Encanto Dr.	Rouse Rd. to Chambers Av.	2U	Collector	13,000	4,253	0.33	A	238	4,491	0.35	A	Major
30	Encanto Dr.	Chambers Av. to Shadel Rd.	2U	Collector	13,000	4,679	0.36	A	238	4,917	0.38	A	Major
31	Encanto Dr.	Shadel Rd. to McCall Bl.	2U	Collector	13,000	5,016	0.39	A	238	5,254	0.40	A	Major

Table 4.14-20 Roadway Segment Capacity Analysis for E+P (Phase 1) Conditions (Cont'd)

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	Existing (2017)	V/C[2]	LOS[3]	Project Only Phase 1	E+P Phase 1	V/C[2]	LOS[3]	General Plan Classification
32	Sherman Rd.	SR-74 to Ethanac Rd.	2U	Local	6,500	3,208	0.49	A	0	3,208	0.49	A	Major
33	Sherman Rd.	Ethanac Rd. to McLaughlin Rd.	2U	Local	6,500	361	0.06	A	0	361	0.06	A	Major
34	Sherman Rd.	McLaughlin Rd. to Rouse Rd.	2U	Local	6,500	359	0.06	A	0	359	0.06	A	Major
35	Sherman Rd.	Rouse Rd. to St. B	**4D**	Major	34,100	Does Not Exist			1,190	1,190	0.03	--	Major
36	Sherman Rd.	St. B to Chambers Av.	**4D**	Major	34,100	Does Not Exist			3,094	3,094	0.09	--	Major
37	Sherman Rd.	Chambers Av. to Shadel Rd.	4D	Major	34,100	508	0.01	A	3,094	3,602	0.11	A	Major
38	Sherman Rd.	Shadel Rd. to McCall Bl.	3D	Major	25,575	2,485	0.10	A	2,998	5,483	0.21	A	Major
39	Antelope Rd.	Rouse Rd. (N) to Rouse Rd. (S)	--	Major	34,100	Does Not Exist			--	Does Not Exist			Major
40	Antelope Rd.	Rouse Rd. (S) to Chambers Av.	--	Major	34,100	Does Not Exist			--	Does Not Exist			Major
41	Antelope Rd.	Chambers Av. to McCall Bl.	--	Major	17,050	Does Not Exist			--	Does Not Exist			Major
42	Menifee Rd.	SR-74 to Biscayne Av.	4D	Arterial	37,000	11,186	0.30	A	380	11,566	0.31	A	Urban Arterial
43	Menifee Rd.	Biscayne Av. to Rouse Rd.	2U	Collector	13,000	11,186	0.86	D	380	11,566	0.89	D	Urban Arterial
44	Menifee Rd.	Rouse Rd. to McCall Bl.	4D	Major	34,100	13,055	0.38	A	380	13,435	0.39	A	Urban Arterial
45	Menifee Rd.	McCall Bl. to Simpson Rd.	4D	Major	34,100	10,931	0.32	A	190	11,121	0.33	A	Arterial

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

4U = Improvement

[1] These maximum roadway capacities have been extracted from the following source: City of Menifee Traffic Impact Analysis Guidelines and Requirements (Attachment B). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. By using the LOS E capacity for each roadway facility type, volume-to-capacity (v/c) values between 0.00-0.60 will represent LOS A, 0.61-0.70 will represent LOS B, 0.71-0.80 will represent LOS C, 0.81-0.90 will represent LOS D, 0.91-1.00 will represent LOS E, and v/c values greater than 1.00 will represent LOS F operations. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] v/c = Volume to Capacity ratio

[3] LOS = Level of Service

[4] Where the average daily volume (ADT) based roadway segment analysis indicates a deficiency (unacceptable LOS), a review of the more detailed peak hour intersection analysis is undertaken. The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. While this traffic study recognizes LOS D is the City's target LOS for roadway segments, a review of the more detailed peak hour intersection analysis is necessary to determine whether roadway widening along the segment is necessary. For the purposes of this analysis, if the peak hour intersection operations on either side of the roadway segment are anticipated to operate at LOS D or better, then additional roadway segment widening is not recommended. Therefore, for the purposes of this assessment, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes. Furthermore, it is likely that a roadway segment can have a volume-to-capacity ratio of up to 1.10 if the adjacent intersections are anticipated to operate at acceptable LOS, without the need for additional widening. As the LOS threshold for the study area intersections is LOS D, LOS D have also been utilized as the minimum LOS criteria for roadway segments for the purposes of this analysis.

(Urban Crossroads, 2019d, Table 5-4)

Table 4.14-21 Roadway Segment Capacity Analysis for E+P (Phase 2) Conditions

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	Existing (2017)	V/C[2]	LOS[3]	Project Only Phase 2	E+P Phase 2	V/C[2]	LOS[3]	General Plan Classification
1	SR-74	Bonnie Dr. to I-215 NB Ramps	3D	Major	25,575	18,878	0.74	C	0	Not an Analysis Location			Major
2	SR-74	I-215 NB Ramps to Trumble Rd.	4D	Major	34,100	**32,399**	**0.95**	**E**	0	Not an Analysis Location			Major
3	Ethanac Rd.	Goetz Rd. to Murrieta Rd.	4D	Arterial	37,000	12,499	0.34	A	394	12,893	0.35	A	Expressway
4	Ethanac Rd.	Murrieta Rd. to Barnett Rd.	4D	Arterial	37,000	15,327	0.41	A	788	16,115	0.44	A	Expressway
5	Ethanac Rd.	Case Rd. to I-215 Freeway	4D	Arterial	37,000	23,341	0.63	B	1,180	24,521	0.66	B	Expressway
6	Ethanac Rd.	I-215 Freeway to Encanto Dr.	2U	Collector	13,000	**13,992**	**1.08**	**F**	2,359	**16,351**	**1.26**	**F**	Expressway
7	Ethanac Rd.	Encanto Dr. to Trumble Rd.	2U	Collector	13,000	**13,239**	**1.02**	**F**	0	**13,239**	**1.02**	**F**	Expressway
8	Ethanac Rd.	Trumble Rd. to Sherman Rd.	2U	Collector	13,000	10,480	0.81	D	0	10,480	0.81	D	Expressway
9	Ethanac Rd.	Sherman Rd. to Antelope Rd.	2U	Collector	13,000	7,266	0.56	A	0	7,266	0.56	A	Expressway
10	SR-74	Antelope Rd. to Palomar Rd.	4D	Major	34,100	25,742	0.75	C	0	Not an Analysis Location			Expressway
11	Rouse Rd.	Encanto Dr. to Trumble Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	1,899	0.29	A	2,708	4,607	0.18	A	Secondary
12	Rouse Rd.	Brady Ln. to Sherman Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	711	0.11	A	1,966	2,677	0.10	A	Secondary
13	Rouse Rd.	Sherman Rd. to Dawson Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	457	0.07	A	1,530	1,987	0.08	A	Secondary
14	Rouse Rd.	Dawson Rd. to Antelope Rd.	--	Secondary	12,950	Does Not Exist			0	Does Not Exist			Secondary
15	Rouse Rd.	Antelope Rd. (N) to Menifee Rd.	2U	Major	12,950	63	0.00	A	0	63	0.00	A	Major
16	Chambers Av.	Encanto Dr. to St. A	--	Secondary	25,900	Does Not Exist			136	Not an Analysis Location			Secondary
17	Chambers Av.	St. A to Sherman Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	35	0.01	A	182	217	0.01	A	Secondary
18	Chambers Av.	Sherman Rd. to Concord Ln.	**4U**	Local/**Secondary**	6,500/**25,900**	475	0.07	A	136	611	0.02	A	Secondary
19	McCall Bl.	Murrieta Rd. to Sun City Bl.	6D	Major	34,100	10,829	0.32	A	944	11,773	0.35	A	Major
20	McCall Bl.	Sun City Bl. to Bradley Rd.	4D	Major	34,100	18,607	0.55	A	1,338	19,945	0.58	A	Major
21	McCall Bl.	Bradley Rd. to I-215 Freeway	4D	Major	34,100	**32,750**	**0.96**	**E**	2,122	**34,872**	**1.02**	**F**	Major
22	McCall Bl.	I-215 Freeway to Encanto Dr.	4D	Major	34,100	30,696	0.90	D	3,302	**33,998**	**1.00**	**E**	Urban Arterial
23	McCall Bl.	Encanto Dr. to Sherman Rd.	4D	Major	34,100	24,133	0.71	C	2,890	27,023	0.79	C	Urban Arterial
24	McCall Bl.	Sherman Rd. to Antelope Rd.	4D	Major	34,100	18,910	0.55	A	1,652	20,562	0.60	A	Urban Arterial
25	McCall Bl.	Antelope Rd. to Menifee Rd.	2D	Major	17,050	**19,203**	**1.13**	**F**	1,652	**20,855**	**1.22**	**F**	Urban Arterial
26	Trumble Rd.	North of Ethanac Rd.	2U	Collector	13,000	1,981	0.15	A	0	1,981	0.15	A	Collector
27	Encanto Dr.	Ethanac Rd. to McLaughlin Rd.	2U	Collector	13,000	3,132	0.24	A	2,360	5,492	0.42	A	Major
28	Encanto Dr.	McLaughlin Rd. to Rouse Rd.	2U	Collector	13,000	3,280	0.25	A	2,360	5,640	0.43	A	Major
29	Encanto Dr.	Rouse Rd. to Chambers Av.	**4D**	Collector	13,000	4,253	0.33	A	440	4,693	0.36	A	Major
30	Encanto Dr.	Chambers Av. to Shadel Rd.	2U	Collector	13,000	4,679	0.36	A	484	5,163	0.40	A	Major
31	Encanto Dr.	Shadel Rd. to McCall Bl.	2U	Collector	13,000	5,016	0.39	A	484	5,500	0.42	A	Major

Table 4.14-21 Roadway Segment Capacity Analysis for E+P (Phase 2) Conditions (Cont'd)

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	Existing (2017)	V/C[2]	LOS[3]	Project Only Phase 2	E+P Phase 2	V/C[2]	LOS[3]	General Plan Classification
32	Sherman Rd.	SR-74 to Ethanac Rd.	2U	Local	6,500	3,208	0.49	A	0	3,208	0.49	A	Major
33	Sherman Rd.	Ethanac Rd. to McLaughlin Rd.	2U	Local	6,500	361	0.06	A	0	361	0.06	A	Major
34	Sherman Rd.	McLaughlin Rd. to Rouse Rd.	2U	Local	6,500	359	0.06	A	0	359	0.06	A	Major
35	Sherman Rd.	Rouse Rd. to St. B	4D	Major	34,100	Does Not Exist			1,920	1,920	0.06	A	Major
36	Sherman Rd.	St. B to Chambers Av.	4D	Major	34,100	Does Not Exist			4,886	4,886	0.14	A	Major
37	Sherman Rd.	Chambers Av. to Shadel Rd.	4D	Major	34,100	508	0.01	A	5,020	5,528	0.16	A	Major
38	Sherman Rd.	Shadel Rd. to McCall Bl.	3D	Major	25,575	2,485	0.10	A	4,862	7,347	0.29	A	Major
39	Antelope Rd.	Rouse Rd. (N) to Rouse Rd. (S)	--	Major	34,100	Does Not Exist			0	Does Not Exist			Major
40	Antelope Rd.	Rouse Rd. (S) to Chambers Av.	--	Major	34,100	Does Not Exist			0	Does Not Exist			Major
41	Antelope Rd.	Chambers Av. to McCall Bl.	--	Major	17,050	Does Not Exist			0	Does Not Exist			Major
42	Menifee Rd.	SR-74 to Biscayne Av.	4D	Arterial	37,000	11,186	0.30	A	628	11,814	0.32	A	Urban Arterial
43	Menifee Rd.	Biscayne Av. to Rouse Rd.	2U	Collector	13,000	11,186	0.86	D	628	**11,814**	**0.91**	**E**	Urban Arterial
44	Menifee Rd.	Rouse Rd. to McCall Bl.	4D	Major	34,100	13,055	0.38	A	628	13,683	0.40	A	Urban Arterial
45	Menifee Rd.	McCall Bl. to Simpson Rd.	4D	Major	34,100	10,931	0.32	A	314	11,245	0.33	A	Arterial

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

4U = Improvement

[1] These maximum roadway capacities have been extracted from the following source: City of Menifee Traffic Impact Analysis Guidelines and Requirements (Attachment B). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. By using the LOS E capacity for each roadway facility type, volume-to-capacity (v/c) values between 0.00-0.60 will represent LOS A, 0.61-0.70 will represent LOS B, 0.71-0.80 will represent LOS C, 0.81-0.90 will represent LOS D, 0.91-1.00 will represent LOS E, and v/c values greater than 1.00 will represent LOS F operations. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] v/c = Volume to Capacity ratio

[3] LOS = Level of Service

[4] Where the average daily volume (ADT) based roadway segment analysis indicates a deficiency (unacceptable LOS), a review of the more detailed peak hour intersection analysis is undertaken. The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. While this traffic study recognizes LOS D is the City's target LOS for roadway segments, a review of the more detailed peak hour intersection analysis is necessary to determine whether roadway widening along the segment is necessary. For the purposes of this analysis, if the peak hour intersection operations on either side of the roadway segment are anticipated to operate at LOS D or better, then additional roadway segment widening is not recommended. Therefore, for the purposes of this assessment, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes. Furthermore, it is likely that a roadway segment can have a volume-to-capacity ratio of up to 1.10 if the adjacent intersections are anticipated to operate at acceptable LOS, without the need for additional widening. As the LOS threshold for the study area intersections is LOS D, LOS D have also been utilized as the minimum LOS criteria for roadway segments for the purposes of this analysis.

(Urban Crossroads, 2019d, Table 5-5)

Table 4.14-22 Roadway Segment Capacity Analysis for E+P (Project Buildout) Conditions

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	Existing (2017)	V/C[2]	LOS[3]	Project Only Buildout	E+P Project Buildout	V/C[2]	LOS[3]	General Plan Classification
1	SR-74	Bonnie Dr. to I-215 NB Ramps	3D	Major	25,575	18,878	0.74	C	0	Not an Analysis Location			Major
2	SR-74	I-215 NB Ramps to Trumble Rd.	4D	Major	34,100	**32,399**	**0.95**	**E**	0	Not an Analysis Location			Major
3	Ethanac Rd.	Goetz Rd. to Murrieta Rd.	4D	Arterial	37,000	12,499	0.34	A	520	13,019	0.35	A	Expressway
4	Ethanac Rd.	Murrieta Rd. to Barnett Rd.	4D	Arterial	37,000	15,327	0.41	A	978	16,305	0.44	A	Expressway
5	Ethanac Rd.	Case Rd. to I-215 Freeway	4D	Arterial	37,000	23,341	0.63	B	1,560	24,901	0.67	B	Expressway
6	Ethanac Rd.	I-215 Freeway to Encanto Dr.	2U	Collector	13,000	**13,992**	**1.08**	**F**	4,478	**18,470**	**1.42**	**F**	Expressway
7	Ethanac Rd.	Encanto Dr. to Trumble Rd.	2U	Collector	13,000	**13,239**	**1.02**	**F**	124	**13,363**	**1.03**	**F**	Expressway
8	Ethanac Rd.	Trumble Rd. to Sherman Rd.	2U	Collector	13,000	10,480	0.81	D	124	10,604	0.82	D	Expressway
9	Ethanac Rd.	Sherman Rd. to Antelope Rd.	2U	Collector	13,000	7,266	0.56	A	0	7,266	0.56	A	Expressway
10	SR-74	Antelope Rd. to Palomar Rd.	4D	Major	34,100	25,742	0.75	C	0	Not an Analysis Location			Expressway
11	Rouse Rd.	Encanto Dr. to Trumble Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	1,899	0.29	A	2,872	4,771	0.18	A	Secondary
12	Rouse Rd.	Brady Ln. to Sherman Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	711	0.11	A	2,352	3,063	0.12	A	Secondary
13	Rouse Rd.	Sherman Rd. to Dawson Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	457	0.07	A	1,382	1,839	0.07	A	Secondary
14	Rouse Rd.	Dawson Rd. to Antelope Rd.	--	Secondary	12,950	Does Not Exist			0	Does Not Exist			Secondary
15	Rouse Rd.	Antelope Rd. (N) to Menifee Rd.	2U	Major	12,950	63	0.00	A	0	63	0.00	A	Major
16	Chambers Av.	Encanto Dr. to St. A	**4U**	Secondary	25,900	Does Not Exist			4,824	4,824	0.19	A	Secondary
17	Chambers Av.	St. A to Sherman Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	35	0.01	A	2,090	2,125	0.08	A	Secondary
18	Chambers Av.	Sherman Rd. to Concord Ln.	**4U**	Local/**Secondary**	6,500/**25,900**	475	0.07	A	1,560	2,035	0.08	A	Secondary
19	McCall Bl.	Murrieta Rd. to Sun City Bl.	6D	Major	34,100	10,829	0.32	A	1,408	12,237	0.36	A	Major
20	McCall Bl.	Sun City Bl. to Bradley Rd.	4D	Major	34,100	18,607	0.55	A	1,990	20,597	0.60	A	Major
21	McCall Bl.	Bradley Rd. to I-215 Freeway	4D	Major	34,100	**32,750**	**0.96**	**E**	3,154	**35,904**	**1.05**	**F**	Major
22	McCall Bl.	I-215 Freeway to Encanto Dr.	4D	Major	34,100	30,696	0.90	D	6,394	**37,090**	**1.09**	**F**	Urban Arterial
23	McCall Bl.	Encanto Dr. to Sherman Rd.	4D	Major	34,100	24,133	0.71	C	4,134	28,267	0.83	D	Urban Arterial
24	McCall Bl.	Sherman Rd. to Antelope Rd.	4D	Major	34,100	18,910	0.55	A	2,852	21,762	0.64	B	Urban Arterial
25	McCall Bl.	Antelope Rd. to Menifee Rd.	2D	Major	17,050	**19,203**	**1.13**	**F**	2,606	**21,809**	**1.28**	**F**	Urban Arterial
26	Trumble Rd.	North of Ethanac Rd.	2U	Collector	13,000	1,981	0.15	A	0	1,981	0.15	A	Collector
27	Encanto Dr.	Ethanac Rd. to McLaughlin Rd.	2U	Collector	13,000	3,132	0.24	A	4,602	7,734	0.59	A	Major
28	Encanto Dr.	McLaughlin Rd. to Rouse Rd.	2U	Collector	13,000	3,280	0.25	A	4,602	7,882	0.61	B	Major
29	Encanto Dr.	Rouse Rd. to Chambers Av.	**4D**	Collector/**Major**	13,000/**34,100**	4,253	0.33	A	4,518	8,771	0.26	A	Major
30	Encanto Dr.	Chambers Av. to Shadel Rd.	2U	Collector	13,000	4,679	0.36	A	5,224	9,903	0.76	C	Major
31	Encanto Dr.	Shadel Rd. to McCall Bl.	2U	Collector	13,000	5,016	0.39	A	5,162	10,178	0.78	C	Major

Table 4.14-22 Roadway Segment Capacity Analysis for E+P (Project Buildout) Conditions (Cont'd)

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	Existing (2017)	V/C[2]	LOS[3]	Project Only Buildout	E+P Project Buildout	V/C[2]	LOS[3]	General Plan Classification
32	Sherman Rd.	SR-74 to Ethanac Rd.	2U	Local	6,500	3,208	0.49	A	124	3,332	0.51	A	Major
33	Sherman Rd.	Ethanac Rd. to McLaughlin Rd.	2U	Local	6,500	361	0.06	A	0	361	0.06	A	Major
34	Sherman Rd.	McLaughlin Rd. to Rouse Rd.	2U	Local	6,500	359	0.06	A	62	421	0.06	A	Major
35	Sherman Rd.	Rouse Rd. to St. B	**4D**	Major	34,100	Does Not Exist			1,824	1,824	0.05	A	Major
36	Sherman Rd.	St. B to Chambers Av.	**4D**	Major	34,100	Does Not Exist			3,664	3,664	0.11	A	Major
37	Sherman Rd.	Chambers Av. to Shadel Rd.	4D	Major	34,100	508	0.01	A	5,100	5,608	0.16	A	Major
38	Sherman Rd.	Shadel Rd. to McCall Bl.	3D	Major	25,575	2,485	0.10	A	4,916	7,401	0.29	A	Major
39	Antelope Rd.	Rouse Rd. (N) to Rouse Rd. (S)	--	Major	34,100	Does Not Exist			0	Does Not Exist			Major
40	Antelope Rd.	Rouse Rd. (S) to Chambers Av.	--	Major	34,100	Does Not Exist			0	Does Not Exist			Major
41	Antelope Rd.	Chambers Av. to McCall Bl.	--	Major	17,050	Does Not Exist			0	Does Not Exist			Major
42	Menifee Rd.	SR-74 to Biscayne Av.	4D	Arterial	37,000	11,186	0.30	A	918	12,104	0.33	A	Urban Arterial
43	Menifee Rd.	Biscayne Av. to Rouse Rd.	2U	Collector	13,000	11,186	0.86	D	918	**12,104**	**0.93**	**E**	Urban Arterial
44	Menifee Rd.	Rouse Rd. to McCall Bl.	4D	Major	34,100	13,055	0.38	A	918	13,973	0.41	A	Urban Arterial
45	Menifee Rd.	McCall Bl. to Simpson Rd.	4D	Major	34,100	10,931	0.32	A	614	11,545	0.34	A	Arterial

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

4U = Improvement

[1] These maximum roadway capacities have been extracted from the following source: City of Menifee Traffic Impact Analysis Guidelines and Requirements (Attachment B). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. By using the LOS E capacity for each roadway facility type, volume-to-capacity (v/c) values between 0.00-0.60 will represent LOS A, 0.61-0.70 will represent LOS B, 0.71-0.80 will represent LOS C, 0.81-0.90 will represent LOS D, 0.91-1.00 will represent LOS E, and v/c values greater than 1.00 will represent LOS F operations. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] v/c = Volume to Capacity ratio

[3] LOS = Level of Service

[4] Where the average daily volume (ADT) based roadway segment analysis indicates a deficiency (unacceptable LOS), a review of the more detailed peak hour intersection analysis is undertaken. The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. While this traffic study recognizes LOS D is the City's target LOS for roadway segments, a review of the more detailed peak hour intersection analysis is necessary to determine whether roadway widening along the segment is necessary. For the purposes of this analysis, if the peak hour intersection operations on either side of the roadway segment are anticipated to operate at LOS D or better, then additional roadway segment widening is not recommended. Therefore, for the purposes of this assessment, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes. Furthermore, it is likely that a roadway segment can have a volume-to-capacity ratio of up to 1.10 if the adjacent intersections are anticipated to operate at acceptable LOS, without the need for additional widening. As the LOS threshold for the study area intersections is LOS D, LOS D have also been utilized as the minimum LOS criteria for roadway segments for the purposes of this analysis.

(Urban Crossroads, 2019d, Table 5-6)

The roadway segment analysis results indicate that the addition of Project Phase 1, Phase 2, and Buildout traffic is anticipated to result in the following additional roadway segment deficiencies; thus, Project impacts to the following intersections represent a direct impact of the Project: (Urban Crossroads, 2019d, p. 106)

- McCall Bl., I-215 Freeway to Encanto Dr. (Roadway Segment #22) – LOS F

The roadway segment analysis results indicate that the addition of traffic from Phase 2 and Project buildout would directly result in impacts to the following roadway segment: (Urban Crossroads, 2019d, p. 106)

- Menifee Rd., from Biscayne Ave to Rouse Rd. (Roadway Segment #43) – LOS E

3. Traffic Signal Warrants Analysis – E+P Conditions

Table 4.14-23, *Traffic Signal Warrants Analysis for E+P Conditions*, provides a summary of the intersections that are anticipated to meet the daily volume-based traffic signal warrants. As shown, the following intersection warrants a traffic signal under existing conditions; however, and as shown in Table 4.14-19, the following intersection would operate at an acceptable LOS under E+P (Project Buildout) conditions, and impacts would therefore be less than significant: (Urban Crossroads, 2019d, p. 113)

- Antelope Road at McCall Boulevard (Intersection #40)

As shown in Table 4.14-23, under E+P Phase 1 (2020) conditions, the following additional intersection meets the Peak Hour Signal Warrant; thus, impacts to the following intersection represents a direct impact of Phase 1 of the Project:

- Encanto Drive at Ethanac Road (Intersection #15): Peak Hour Warrant Met

There are no additional intersections that meet traffic signal warrants under E+P Phase 2 (2023) conditions. However, with buildout of the Project, the following additional intersection meets the Peak Hour Signal Warrant under E+P conditions:

- Encanto Drive at Rouse Road (Intersection #17): Peak Hour Warrant Met
- Encanto Drive at Chambers Avenue (Intersection #18): Daily Volume Warrant Met

However, as shown in Table 4.14-19, Encanto Drive at Rouse Road (Intersection #17) and Encanto Drive at Chambers Avenue (Intersection #18) would operate at an acceptable LOS under E+P (Project Buildout) conditions; thus, Project impacts due to signal warrants being met at Intersections #17 and #18 would be less than significant.

Table 4.14-23 Traffic Signal Warrants Analysis for E+P Conditions

	INTERSECTION	E+P Ph 1	E+P Ph 2	E+P Ph 3
8	Bradley Rd. & Cherry Hills Bl.			
15	Encanto Dr. & Ethanac Rd.	PH		
16	Encanto Dr. & McLaughlin Rd.			
17	Encanto Dr. & Rouse Rd.			PH
18	Encanto Dr. & Chambers Av.	DNE	DNE	ADT
19	Encanto Dr. & Shadel Rd.			
23	Trumble Rd. & Rouse Rd.			
24	Brady Ln./St. A & Rouse Rd.			
25	St. A & Chambers Av.	DNE	DNE	
27	Sherman Rd. & Ethanac Rd.			
28	Sherman Rd. & McLaughlin Rd.			
29	Sherman Rd. & Rouse Rd.			
31	Sherman Rd. & Chambers Av.			
32	Sherman Rd. & Shadel Rd.			
34	Dawson Rd. & Rouse Rd.			
35	St. C/Concord Ln. & Chambers Av.			
36	Antelope Rd. & Ethanac Rd.			
37	Antelope Rd. & Rouse Rd. (North)	DNE	DNE	DNE
38	Antelope Rd. & Rouse Rd. (South)	DNE	DNE	DNE
39	Antelope Rd. & Chambers Av.	DNE	DNE	DNE
40	Antelope Rd. & McCall Bl.			

= Warranted under a previous scenario

DNE = Does not Exist

PH = Peak Hour Warrant Met

ADT = Daily Volume Warrant Met

(Urban Crossroads, 2019d, p. 112)

4. Off-Ramp Queuing Analysis – E+P Conditions

A queuing analysis was performed for the northbound and southbound off-ramps at the I-215 Freeway and Ethanac Road, McCall Boulevard, and Newport Road interchanges to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially "spill back" onto the I-215 Freeway mainline. Queuing analysis findings are presented in Table 4.14-24, *Freeway Off-Ramp Queuing Summary for E+P (Phase 1) Conditions*, Table 4.14-25, *Freeway Off-Ramp Queuing Summary for E+P (Phase 2) Conditions*, and Table 4.14-26, *Freeway Off-Ramp Queuing Summary for E+P (Project Buildout) Conditions*, for E+P (Phase 1), E+P (Phase 2), and E+P (Project Buildout) traffic conditions, respectively. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown on Table 4.14-24, Table 4.14-25, and Table 4.14-26, and consistent with Existing traffic conditions, there are no queuing issues anticipated during the AM or PM peak 95th percentile traffic flows for any E+P traffic conditions. As such, impacts to off-ramp queuing would be less than significant under all E+P scenarios. Worksheets for E+P conditions off-ramp queuing analysis are provided in Appendices 5.7, 5.8, and 5.9 of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 113)

Table 4.14-24 Freeway Off-Ramp Queuing Summary for E+P (Phase 1) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	Existing (2017)				E+P (Phase 1)			
			95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Ramps & Ethanac Rd.	SBL/T	1,450	69	79	Yes	Yes	79	111	Yes	Yes
	SBR	240	53	63	Yes	Yes	53	73	Yes	Yes
I-215 SB Ramps & McCall Bl.	SBL/T	1,440	200	279	Yes	Yes	200	307[2]	Yes	Yes
	SBR	450	146	477[2]	Yes	Yes[3]	179[2]	522[2]	Yes	Yes[3]
I-215 NB Ramps & Ethanac Rd.	NBL/T	1,440	305[2]	268[2]	Yes	Yes	311[2]	268[2]	Yes	Yes
	NBR	270	41	42	Yes	Yes	41	42	Yes	Yes
I-215 NB Ramps & McCall Bl.	NBL/T	1,870	196[2]	387[2]	Yes	Yes	196[2]	387[2]	Yes	Yes
	NBR	240	57	374[2]	Yes	Yes[3]	59	464[2]	Yes	Yes[3]
I-215 SB Ramps & Newport Rd.	SBL	1,660	311	431	Yes	Yes	317	436	Yes	Yes
	SBR	1,660	229	243	Yes	Yes	231	244	Yes	Yes
I-215 NB Ramps & Newport Rd.	NBL	1,520	314	554	Yes	Yes	314	554	Yes	Yes
	NBR	1,520	312	382	Yes	Yes	313	382	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-215 Freeway mainline.

(Urban Crossroads, 2019d, Table 5-7)

Table 4.14-25 Freeway Off-Ramp Queuing Summary for E+P (Phase 2) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	Existing (2017)				E+P (Phase 2)			
			95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Ramps & Ethanac Rd.	SBL/T	1,450	69	79	Yes	Yes	79	130	Yes	Yes
	SBR	240	53	63	Yes	Yes	56	79	Yes	Yes
I-215 SB Ramps & McCall Bl.	SBL/T	1,440	200	279	Yes	Yes	200	307[2]	Yes	Yes
	SBR	450	146	477[2]	Yes	Yes[3]	207[2]	531[2]	Yes	Yes[3]
I-215 NB Ramps & Ethanac Rd.	NBL/T	1,440	305[2]	268[2]	Yes	Yes	307[2]	268[2]	Yes	Yes
	NBR	270	41	42	Yes	Yes	41	42	Yes	Yes
I-215 NB Ramps & McCall Bl.	NBL/T	1,870	196[2]	387[2]	Yes	Yes	196[2]	387[2]	Yes	Yes
	NBR	240	57	374[2]	Yes	Yes[3]	61	517[2]	Yes	Yes[3]
I-215 SB Ramps & Newport Rd.	SBL	1,660	311	431	Yes	Yes	320	437	Yes	Yes
	SBR	1,660	229	243	Yes	Yes	232	245	Yes	Yes
I-215 NB Ramps & Newport Rd.	NBL	1,520	314	554	Yes	Yes	314	554	Yes	Yes
	NBR	1,520	312	382	Yes	Yes	313	382	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-215 Freeway mainline.

(Urban Crossroads, 2019d, Table 5-8)

Table 4.14-26 Freeway Off-Ramp Queuing Summary for E+P (Project Buildout) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	Existing (2017)				E+P (Project Buildout)			
			95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Ramps & Ethanac Rd.	SBL/T	1,450	69	79	Yes	Yes	120	190	Yes	Yes
	SBR	240	53	63	Yes	Yes	65	86	Yes	Yes
I-215 SB Ramps & McCall Bl.	SBL/T	1,440	200	279	Yes	Yes	221[2]	345[2]	Yes	Yes
	SBR	450	146	477[2]	Yes	Yes[3]	231[2]	543[2]	Yes	Yes[3]
I-215 NB Ramps & Ethanac Rd.	NBL/T	1,440	305[2]	268[2]	Yes	Yes	311[2]	268[2]	Yes	Yes
	NBR	270	41	42	Yes	Yes	41	42	Yes	Yes
I-215 NB Ramps & McCall Bl.	NBL/T	1,870	196[2]	387[2]	Yes	Yes	196[2]	387[2]	Yes	Yes
	NBR	240	57	374[2]	Yes	Yes[3]	66	648[2]	Yes	Yes[3]
I-215 SB Ramps & Newport Rd.	SBL	1,660	311	431	Yes	Yes	326	447	Yes	Yes
	SBR	1,660	229	243	Yes	Yes	234	248	Yes	Yes
I-215 NB Ramps & Newport Rd.	NBL	1,520	314	554	Yes	Yes	314	564	Yes	Yes
	NBR	1,520	312	382	Yes	Yes	313	389	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-215 Freeway mainline.

(Urban Crossroads, 2019d, Table 5-9)

5. Basic Freeway Segment Analysis – E+P Conditions

E+P (Phase 1), E+P (Phase 2), and E+P (Project Buildout) mainline directional volumes for the AM and PM peak hours are provided on Exhibits 5-13, 5-14, and 5-15, respectively, of the Project's TIA (*Technical Appendix K*). As shown on Table 4.14-27, *Basic Freeway Segment Analysis for E+P (Phase 1) Conditions*, Table 4.14-28, *Basic Freeway Segment Analysis for E+P (Phase 2) Conditions*, and Table 4.14-29, *Basic Freeway Segment Analysis for E+P (Project Buildout) Conditions*, I-215 Freeway segments analyzed in the Project's TIA are anticipated to operate at an acceptable LOS (i.e., LOS D or better) during the peak hours for all three phases, consistent with Existing traffic conditions; thus, impacts to freeway segments under all E+P scenarios would be less than significant. E+P (Phase 1), E+P (Phase 2), and E+P (Project Buildout) basic freeway segment analysis worksheets are provided in Appendices 5.10, 5.11 and 5.12 of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 117)

Table 4.14-27 Basic Freeway Segment Analysis for E+P (Phase 1) Conditions

Freeway	Direction[1]	Mainline Segment	Lanes[2]	Existing (2017)				E+P (Phase 1)			
				Density[3]		LOS[4]		Density[3]		LOS[4]	
				AM	PM	AM	PM	AM	PM	AM	PM
I-215 Freeway	SB	SR-74 to Ethanac Rd.	3	27.4	33.3	D	D	27.5	33.8	D	D
		Ethanac Rd. to McCall Bl.	3	29.4	33.6	D	D	29.4	33.6	D	D
		McCall Bl. to Newport Rd.	3	32.1	31.7	D	D	32.5	31.9	D	D
	NB	SR-74 to Ethanac Rd.	3	17.1	19.5	B	C	17.4	19.7	B	C
		Ethanac Rd. to McCall Bl.	3	18.0	20.3	B	C	18.0	20.3	B	C
		McCall Bl. to Newport Rd.	3	15.9	22.7	B	C	16.0	23.0	B	C

[1] NB = Northbound; SB = Southbound

[2] Number of lanes are in the specified direction and is based on existing conditions.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

(Urban Crossroads, 2019d, Table 5-10)

Table 4.14-28 Basic Freeway Segment Analysis for E+P (Phase 2) Conditions

Freeway	Direction[1]	Mainline Segment	Lanes[2]	Existing (2017)				E+P (Phase 2)			
				Density[3]		LOS[4]		Density[3]		LOS[4]	
				AM	PM	AM	PM	AM	PM	AM	PM
I-215 Freeway	SB	SR-74 to Ethanac Rd.	3	27.4	33.3	D	D	27.6	34.1	D	D
		Ethanac Rd. to McCall Bl.	3	29.4	33.6	D	D	29.4	33.6	D	D
		McCall Bl. to Newport Rd.	3	32.1	31.7	D	D	32.7	32.1	D	D
	NB	SR-74 to Ethanac Rd.	3	17.1	19.5	B	C	17.5	19.8	B	C
		Ethanac Rd. to McCall Bl.	3	18.0	20.3	B	C	18.0	20.3	B	C
		McCall Bl. to Newport Rd.	3	15.9	22.7	B	C	16.1	23.2	B	C

[1] NB = Northbound; SB = Southbound

[2] Number of lanes are in the specified direction and is based on existing conditions.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

(Urban Crossroads, 2019d, Table 5-11)

Table 4.14-29 Basic Freeway Segment Analysis for E+P (Project Buildout) Conditions

Freeway	Direction[1]	Mainline Segment	Lanes[2]	Existing (2017)				E+P (Project Buildout)			
				Density[3]		LOS[4]		Density[3]		LOS[4]	
				AM	PM	AM	PM	AM	PM	AM	PM
I-215 Freeway	SB	SR-74 to Ethanac Rd.	3	27.4	33.3	D	D	28.0	34.8	D	D
		Ethanac Rd. to McCall Bl.	3	29.4	33.6	D	D	29.5	33.8	D	D
		McCall Bl. to Newport Rd.	3	32.1	31.7	D	D	33.2	32.8	D	D
	NB	SR-74 to Ethanac Rd.	3	17.1	19.5	B	C	17.8	20.3	B	C
		Ethanac Rd. to McCall Bl.	3	18.0	20.3	B	C	18.0	20.3	B	C
		McCall Bl. to Newport Rd.	3	15.9	22.7	B	C	16.3	23.7	B	C

[1] NB = Northbound; SB = Southbound

[2] Number of lanes are in the specified direction and is based on existing conditions.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

(Urban Crossroads, 2019d, Table 5-12)

6. *Freeway Merge/Diverge Analysis – E+P Conditions*

Ramp merge and diverge operations were also evaluated for E+P conditions and the results of this analysis are presented in Table 4.14-30, *Freeway Ramp Junction Merge/Diverge Analysis for E+P (Phase 1) Conditions*, Table 4.14-31, *Freeway Ramp Junction Merge/Diverge Analysis for E+P (Phase 2) Conditions*, and Table 4.14-32, *Freeway Ramp Junction Merge/Diverge Analysis for E+P (Project Buildout) Conditions*, for Phase 1, Phase 2, and Project Buildout conditions, respectively. As shown, there are no additional I-215 Freeway ramp merge and diverge areas that are anticipated to operate at LOS E or worse for all three phases, in addition to those previously identified under Existing (2017) conditions. The Project would contribute to, but would not directly cause, impacts to the following freeway merge/diverge analysis locations; thus, Project impacts to the following freeway merge/diverge analysis locations would be cumulatively considerable under all phases of the Project under E+P conditions: (Urban Crossroads, 2019d, p. 117)

- I-215 Freeway – Southbound, Off-Ramp at Ethanac Road (Merge/Diverge Location #1)– LOS E PM peak hour only

- I-215 Freeway – Southbound, Off-Ramp at McCall Boulevard (Merge/Diverge Location #3)– LOS E PM peak hour only

E+P freeway ramp junction operations analysis worksheets are provided in Appendices 5.13, 5.14 and 5.15 of the Project's TIA (*Technical Appendix K*).

Table 4.14-30 Freeway Ramp Junction Merge/Diverge Analysis for E+P (Phase 1) Conditions

Freeway	Direction[1]	Ramp or Segment	Lanes on Freeway[2]	Existing (2017)				E+P (Phase 1)			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[3]	LOS[4]	Density[3]	LOS[4]	Density[3]	LOS[4]	Density[3]	LOS[4]
I-215 Freeway	SB	Off-Ramp at Ethanac Rd.	3	32.3	D	**35.4**	E	32.3	D	**35.7**	E
		On-Ramp at Ethanac Rd.	3	30.2	D	32.0	D	30.2	D	32.0	D
		Off-Ramp at McCall Bl.	3	33.7	D	**36.2**	E	33.7	D	**36.2**	E
		On-Ramp at McCall Bl.	3	33.6	D	32.6	D	34.0	D	32.8	D
	NB	On-Ramp at Ethanac Rd.	3	19.8	B	22.1	C	20.1	C	22.4	C
		Off-Ramp at Ethanac Rd.	3	25.1	C	27.3	C	25.1	C	27.3	C
		On-Ramp at McCall Bl.	3	22.7	C	23.9	C	22.7	C	23.9	C
		Off-Ramp at McCall Bl.	3	23.0	C	30.1	D	23.1	C	30.5	D

* **BOLD** = Unacceptable Level of Service

[1] NB = Northbound; SB = Southbound, EB = Eastbound; WB = Westbound

[2] Number of lanes are in the specified direction and is based on existing conditions.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

(Urban Crossroads, 2019d, Table 5-13)

Table 4.14-31 Freeway Ramp Junction Merge/Diverge Analysis for E+P (Phase 2) Conditions

Freeway	Direction[1]	Ramp or Segment	Lanes on Freeway[2]	Existing (2017)				E+P (Phase 2)			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[3]	LOS[4]	Density[3]	LOS[4]	Density[3]	LOS[4]	Density[3]	LOS[4]
I-215 Freeway	SB	Off-Ramp at Ethanac Rd.	3	32.3	D	**35.4**	**E**	32.4	D	**35.8**	**E**
		On-Ramp at Ethanac Rd.	3	30.2	D	32.0	D	30.2	D	32.0	D
		Off-Ramp at McCall Bl.	3	33.7	D	**36.2**	**E**	33.7	D	**36.2**	**E**
		On-Ramp at McCall Bl.	3	33.6	D	32.6	D	34.2	D	33.0	D
	NB	On-Ramp at Ethanac Rd.	3	19.8	B	22.1	C	20.3	C	22.5	C
		Off-Ramp at Ethanac Rd.	3	25.1	C	27.3	C	25.1	C	27.3	C
		On-Ramp at McCall Bl.	3	22.7	C	23.9	C	22.7	C	23.9	C
		Off-Ramp at McCall Bl.	3	23.0	C	30.1	D	23.2	C	30.6	D

BOLD = Unacceptable Level of Service

[1] NB = Northbound; SB = Southbound, EB = Eastbound; WB = Westbound

[2] Number of lanes are in the specified direction and is based on existing conditions.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

(Urban Crossroads, 2019d, Table 5-14)

Table 4.14-32 Freeway Ramp Junction Merge/Diverge Analysis for E+P (Project Buildout) Conditions

Freeway	Direction[1]	Ramp or Segment	Lanes on Freeway[2]	Existing (2017)				E+P (Project Buildout)			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[3]	LOS[4]	Density[3]	LOS[4]	Density[3]	LOS[4]	Density[3]	LOS[4]
I-215 Freeway	SB	Off-Ramp at Ethanac Rd.	3	32.3	D	**35.4**	E	32.7	D	**36.4**	E
		On-Ramp at Ethanac Rd.	3	30.2	D	32.0	D	30.2	D	32.1	D
		Off-Ramp at McCall Bl.	3	33.7	D	**36.2**	E	33.7	D	**36.3**	E
		On-Ramp at McCall Bl.	3	33.6	D	32.6	D	34.6	D	33.6	D
	NB	On-Ramp at Ethanac Rd.	3	19.8	B	22.1	C	20.7	C	23.2	C
		Off-Ramp at Ethanac Rd.	3	25.1	C	27.3	C	25.2	C	27.3	C
		On-Ramp at McCall Bl.	3	22.7	C	23.9	C	22.8	C	24.0	C
		Off-Ramp at McCall Bl.	3	23.0	C	30.1	D	23.6	C	31.2	D

* **BOLD** = Unacceptable Level of Service

[1] NB = Northbound; SB = Southbound, EB = Eastbound; WB = Westbound

[2] Number of lanes are in the specified direction and is based on existing conditions.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

(Urban Crossroads, 2019d, Table 5-15)

C. *Opening Year Cumulative (2020) Traffic Conditions*

This subsection discusses the methods used to develop Opening Year Cumulative (2020) Without and With Phase 1 Project traffic forecasts, and the resulting intersection operations, roadway segment operations, freeway mainline operations, and traffic signal warrant analyses. (Urban Crossroads, 2019d, p. 133)

The lane configurations and traffic controls assumed to be in place for Opening Year Cumulative (2020) conditions are as follows: (Urban Crossroads, 2019d, p. 133)

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Opening Year Cumulative conditions (e.g., intersection and roadway improvements along the Project and cumulative development's frontage and driveways). Improvements include construction of site adjacent roadways (e.g., Rouse Road, Sherman Road, Chambers Avenue, etc.) and intersections needed for site access. (Urban Crossroads, 2019d, p. 133)

- Driveways and those facilities assumed to be constructed by other development projects to provide site access are also assumed to be in place for Opening Year Cumulative conditions (e.g., intersection and roadway improvements along the cumulative developments' frontages and driveways). (Urban Crossroads, 2019d, p. 133)

The Opening Year Cumulative (2020) Without Project conditions includes Existing traffic volumes plus an ambient growth factor of 6.12% plus traffic from pending and approved but not yet constructed known development projects in the area. The number of through lanes and intersection controls for Opening Year Cumulative (2020) conditions is shown on Exhibit 6-1 of the Project's TIA (*Technical Appendix K*). The ADT and AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2020) Without Project traffic conditions are shown on Exhibits 6-2 and 6-3, respectively, of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 133)

The Opening Year Cumulative (2020) With Phase 1 Project conditions includes existing traffic volumes, an ambient growth factor of 6.12%, traffic from pending and approved but not yet constructed known development projects in the area, and the addition of Project (2020) traffic. The number of through lanes and intersection controls for Opening Year Cumulative (2020) conditions is shown on Exhibit 6-1 of the Project's TIA (*Technical Appendix K*). The ADT and AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2020) With Phase 1 Project traffic conditions are shown on Exhibits 6-4 and 65, respectively, of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 133)

1. Intersection Operations Analysis – Opening Year Cumulative (2020)

LOS calculations were conducted for the study intersections to evaluate their operations under Opening Year Cumulative (2020) Without Project conditions with roadway and intersection geometrics as described above. The intersection analysis results are summarized in Table 4.14-33, *Intersection Analysis for Opening Year Cumulative (2020) Conditions*, which indicates that the following intersections are anticipated to experience unacceptable LOS (i.e., LOS E or worse) during one or more peak hours for Opening Year Cumulative (2020) Without Project traffic conditions; as such, because the Project would contribute to but would not cause the LOS deficiencies at the following intersections, Project impacts to the following intersections would be significant on a cumulatively-considerable basis: (Urban Crossroads, 2019d, p. 139)

- Bradley Rd. / McCall Bl. (Intersection #7) –LOS F PM peak hour only
- I-215 SB Ramps / McCall Bl. (Intersection #11) – LOS E PM peak hour only
- Encanto Dr. / Ethanac Rd. (Intersection #15) – LOS F AM and PM peak hours
- Antelope Rd. / McCall Bl. (Intersection #40) – LOS F AM and PM peak hours
- Menifee Rd. / McCall Bl. (Intersection #44) – LOS E AM peak hour only

Although Table 4.14-33 indicates the following intersections would operate at a deficient LOS under Opening Year Cumulative (2020) Without Project conditions, the Project would contribute fewer than 50 peak hour trips to these facilities; accordingly, Project impacts to the following intersections would be less than significant under Opening Year Cumulative (2020) conditions:

- Murrieta Rd. / Ethanac Rd. (Intersection #2) – LOS E PM peak hour only
- Trumble Rd. / Ethanac Rd. (Intersection #22) – LOS F AM and PM peak hours
- Sherman Rd. / Ethanac Rd. (Intersection #27) – LOS F AM and PM peak hours
- Antelope Rd. / Ethanac Rd. (Intersection #36) – LOS F AM and PM peak hours
- Menifee Rd. / SR-74 (Intersection #42) – LOS F AM and PM peak hours

Table 4.14-33 Intersection Analysis for Opening Year Cumulative (2020) Conditions

#	Intersection	Traffic Control[2]	2020 Without Project				2020 With Project			
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Goetz Rd. & Ethanac Rd.	TS	48.6	42.8	D	D	50.9	46.0	D	D
2	Murrieta Rd. & Ethanac Rd.	TS	51.5	**63.4**	D	**E**	51.9	**68.4**	D	**E**
3	Murrieta Rd. & McCall Bl.	TS	25.0	30.2	C	C	25.6	31.2	C	C
4	Sun City Bl. & McCall Bl.	TS	30.7	35.2	C	D	30.8	35.5	C	D
5	Barnett Rd. & Ethanac Rd.	TS	18.3	13.2	B	B	18.5	13.3	B	B
6	Case Rd. & Ethanac Rd.	TS	20.9	26.7	C	C	21.1	26.7	C	C
7	Bradley Rd. & McCall Bl.	TS	56.7	**83.2**	E	**F**	61.9	**95.4**	E	**F**
8	Bradley Rd. & Cherry Hills Bl.	AWS	12.4	17.7	B	C	12.7	19.1	B	C
9	I-215 SB Ramps/SR-74 & Bonnie Dr.	TS	Not an Analysis Location				Not an Analysis Location			
10	I-215 SB Ramps & Ethanac Rd.	TS	50.1	**77.5**	D	**E**	50.2	**81.8**	D	**F**
11	I-215 SB Ramps & McCall Bl.	TS	27.8	**55.5**	C	**E**	28.8	**59.0**	C	**E**
12	I-215 NB Ramps & SR-74	TS	Not an Analysis Location				Not an Analysis Location			
13	I-215 NB Ramps & Ethanac Rd.	TS	**79.8**	**>200.0**	**E**	**F**	**98.2**	**>200.0**	**F**	**F**
14	I-215 NB Ramps & McCall Bl.	TS	23.1	30.2	C	C	23.8	36.0	C	D
15	Encanto Dr. & Ethanac Rd.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**
16	Encanto Dr. & McLaughlin Rd.	CSS	10.4	13.6	B	B	11.2	16.2	B	C
17	Encanto Dr. & Rouse Rd.	CSS/**TS**	13.1	12.7	B	B	18.1	18.1	C	C
18	Encanto Dr. & Chambers Av.	**TS**	Future Intersection				Not an Analysis Location			
19	Encanto Dr. & Shadel Rd.	CSS	15.0	12.7	C	B	15.4	13.0	C	B
20	Encanto Dr. & McCall Bl.	TS	38.6	41.5	D	D	45.5	51.4	D	D
21	Trumble Rd. & SR-74	TS	Not an Analysis Location				Not an Analysis Location			
22	Trumble Rd. & Ethanac Rd.	TS	**135.2**	**>200.0**	**F**	**F**	**135.2**	**>200.0**	**F**	**F**
23	Trumble Rd. & Rouse Rd.	CSS	9.4	9.2	A	A	10.2	9.8	B	A
24	Brady Ln./St. A & Rouse Rd.	CSS	9.0	8.8	A	A	11.0	12.1	B	B
25	St. A & Chambers Av.	**CSS**	Future Intersection				Not an Analysis Location			
26	Sherman Rd. & SR-74	TS	Not an Analysis Location				Not an Analysis Location			
27	Sherman Rd. & Ethanac Rd.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**
28	Sherman Rd. & McLaughlin Rd.	AWS	7.2	7.2	A	A	7.2	7.2	A	A
29	Sherman Rd. & Rouse Rd.	AWS	7.5	7.9	A	A	8.1	8.8	A	A
30	Sherman Rd. & St. B	**RA**	Future Intersection				4.2	4.8	A	A
31	Sherman Rd. & Chambers Av.	AWS	8.4	7.2	A	A	9.4	10.8	A	B
32	Sherman Rd. & Shadel Rd.	AWS	9.4	7.4	A	A	11.3	9.0	B	A
33	Sherman Rd. & McCall Bl.	TS	**72.4**	43.7	**E**	D	**111.0**	54.0	**F**	D
34	Dawson Rd. & Rouse Rd.	UC/**CSS**	0.0	0.0	A	A	11.8	10.0	B	B
35	St. C/Concord Ln. & Chambers Av.	CSS	8.6	8.6	A	A	8.6	8.6	A	A
36	Antelope Rd. & Ethanac Rd.	CSS	**89.2**	**54.4**	**F**	**F**	**89.2**	**54.4**	**F**	**F**
37	Antelope Rd. & Rouse Rd. (North)	**CSS**	Future Intersection				Future Intersection			
38	Antelope Rd. & Rouse Rd. (South)	**CSS**	Future Intersection				Future Intersection			
39	Antelope Rd. & Chambers Av.	**CSS**	Future Intersection				Future Intersection			
40	Antelope Rd. & McCall Bl.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**

Table 4.14-33 Intersection Analysis for Opening Year Cumulative (2020) Conditions (Cont'd)

#	Intersection	Traffic Control[2]	2020 Without Project				2020 With Project			
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
41	Palomar Rd. & SR-74	TS	Not an Analysis Location				Not an Analysis Location			
42	Menifee Rd. & SR-74	TS	**126.4**	**195.9**	**F**	**F**	**130.7**	**>200.0**	**F**	**F**
43	Menifee Rd. & Rouse Rd./Turtle Point Dr.	TS	11.5	10.2	B	B	11.6	10.3	B	B
44	Menifee Rd. & McCall Bl.	TS	**63.7**	45.2	**E**	D	**66.4**	47.2	**E**	D
45	Menifee Rd. & Simpson Rd.	TS	18.8	20.5	B	C	19.1	21.4	B	C
46	I-215 SB Ramps & Newport Rd.	TS	13.2	16.8	B	B	13.4	16.9	B	B
47	I-215 NB Ramps & Newport Rd.	TS	15.5	19.7	B	B	15.5	19.7	B	B

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] Per the 2010 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; RA = Roundabout; UC = Uncontrolled;**CSS** = Improvement

(Urban Crossroads, 2019d, Table 6-1)

As shown on Table 4.14-33, although the following intersections would operate at a deficient LOS without the addition of Project traffic, the addition of Project traffic would exacerbate the existing LOS deficiency (i.e., by degrading the LOS from LOS E to LOS F). Accordingly, Project impacts to the following intersection would represent a direct impact of the Project Opening Year Cumulative (2020) With Phase 1 Project traffic conditions. (Urban Crossroads, 2019d, p. 158)

- I-215 SB Ramps / Ethanac Rd. (Intersection #10) – LOS F PM peak hour only
- I-215 NB Ramps / Ethanac Rd. (Intersection #13) – LOS E AM peak hour; LOS F PM peak hour
- Sherman Rd. / McCall Bl. (Intersection #33) – LOS E AM peak hour only

Exhibit 6-6 of the Project's TIA (*Technical Appendix K*) summarizes the AM and PM peak hour study area intersection LOS under Opening Year Cumulative (2020) Without Project traffic conditions, consistent with the summary provided in Table 4.14-33. The intersection operations analysis worksheets for Opening Year Cumulative (2020) Without Project conditions are included in Appendix 6.1 of the Project's TIA (*Technical Appendix K*). The intersection operations analysis worksheets for Opening Year Cumulative (2020) With Phase 1 Project traffic conditions are included in Appendix 6.2 of the Project's TIA. (Urban Crossroads, 2019d, p. 139)

2. Roadway Segment Capacity Analysis – Opening Year Cumulative (2020)

The City of Menifee TIA Guidelines provide roadway volume capacity values. These roadway segment capacities are approximate figures only, and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet traffic demand. Table 4.14-34, *Roadway Segment Capacity Analysis for Opening Year Cumulative (2020) Conditions*, provides a summary of the Opening Year Cumulative (2020) conditions roadway segment capacity analysis based on the City of Menifee Roadway Segment Capacity Thresholds. As shown, the following roadway segments would be impacted under 2020 Without Project conditions; therefore, Project impacts to the following roadway segments would be cumulatively-considerable under Opening Year Cumulative (2020) conditions: (Urban Crossroads, 2019d, p. 144)

Table 4.14-34 Roadway Segment Capacity Analysis for Opening Year Cumulative (2020) Conditions

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	2020 NP	V/C[2]	LOS[3]	Project Only Phase 1	2020 WP	V/C[2]	LOS[3]	General Plan Classification
1	SR-74	Bonnie Dr. to I-215 NB Ramps	3D	Major	25,575	Not an Analysis Location			0	Not an Analysis Location			Major
2	SR-74	I-215 NB Ramps to Trumble Rd.	4D	Major	34,100	Not an Analysis Location			0	Not an Analysis Location			Major
3	Ethanac Rd.	Goetz Rd. to Murrieta Rd.	4D	Arterial	37,000	17,809	0.48	A	238	18,047	0.49	A	Expressway
4	Ethanac Rd.	Murrieta Rd. to Barnett Rd.	4D	Arterial	37,000	22,161	0.60	A	476	22,637	0.61	B	Expressway
5	Ethanac Rd.	Case Rd. to I-215 Freeway	4D	Arterial	37,000	31,705	0.86	D	714	32,419	0.88	D	Expressway
6	Ethanac Rd.	I-215 Freeway to Encanto Dr.	2U	Collector	13,000	**24,519**	**1.89**	**F**	1,428	**25,947**	**2.00**	**F**	Expressway
7	Ethanac Rd.	Encanto Dr. to Trumble Rd.	2U	Collector	13,000	**21,957**	**1.69**	**F**	0	**21,957**	**1.69**	**F**	Expressway
8	Ethanac Rd.	Trumble Rd. to Sherman Rd.	2U	Collector	13,000	**18,963**	**1.46**	**F**	0	**18,963**	**1.46**	**F**	Expressway
9	Ethanac Rd.	Sherman Rd. to Antelope Rd.	2U	Collector	13,000	**15,552**	**1.20**	**F**	0	**15,552**	**1.20**	**F**	Expressway
10	SR-74	Antelope Rd. to Palomar Rd.	--	Major	34,100	Not an Analysis Location			0	Not an Analysis Location			Expressway
11	Rouse Rd.	Encanto Dr. to Trumble Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	2,717	0.42	A	1,666	4,383	0.17	A	Secondary
12	Rouse Rd.	Brady Ln. to Sherman Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	1,457	0.22	A	1,190	2,647	0.10	A	Secondary
13	Rouse Rd.	Sherman Rd. to Dawson Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	1,187	0.18	A	952	2,139	0.08	A	Secondary
14	Rouse Rd.	Dawson Rd. to Antelope Rd.	**2U**	Secondary	12,950	658	0.05	A	0	658	0.05	A	Secondary
15	Rouse Rd.	Antelope Rd. (N) to Menifee Rd.	2U	Major	12,950	3,138	0.24	A	0	3,138	0.24	A	Major
16	Chambers Av.	Encanto Dr. to St. A	--	Secondary	25,900	Does Not Exist			0	Not an Analysis Location			Secondary
17	Chambers Av.	St. A to Sherman Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	37	0.01	A	0	37	0.00	A	Secondary
18	Chambers Av.	Sherman Rd. to Concord Ln.	**4U**	Local/**Secondary**	6,500/**25,900**	504	0.08	A	0	504	0.02	A	Secondary
19	McCall Bl.	Murrieta Rd. to Sun City Bl.	4D	Major	34,100	14,752	0.43	A	570	15,322	0.45	A	Major
20	McCall Bl.	Sun City Bl. to Bradley Rd.	4D	Major	34,100	24,107	0.71	B	810	24,917	0.73	C	Major
21	McCall Bl.	Bradley Rd. to I-215 Freeway	4D	Major	34,100	**40,302**	**1.18**	**F**	1,286	**41,588**	**1.22**	**F**	Major
22	McCall Bl.	I-215 Freeway to Encanto Dr.	4D	Major	34,100	**41,753**	**1.22**	**F**	2,000	**43,753**	**1.28**	**F**	Urban Arterial
23	McCall Bl.	Encanto Dr. to Sherman Rd.	4D	Major	34,100	**33,599**	**0.99**	**E**	1,762	**35,361**	**1.04**	**F**	Urban Arterial
24	McCall Bl.	Sherman Rd. to Antelope Rd.	4D	Major	34,100	28,056	0.82	C	1,000	29,056	0.85	D	Urban Arterial
25	McCall Bl.	Antelope Rd. to Menifee Rd.	2D	Major	17,050	**26,572**	**1.56**	**F**	1,000	**27,572**	**1.62**	**F**	Urban Arterial
26	Trumble Rd.	North of Ethanac Rd.	2U	Collector	13,000	2,102	0.16	A	0	2,102	0.16	A	Collector
27	Encanto Dr.	Ethanac Rd. to McLaughlin Rd.	2U	Collector	13,000	7,003	0.54	A	1,428	8,431	0.65	B	Major
28	Encanto Dr.	McLaughlin Rd. to Rouse Rd.	2U	Collector	13,000	5,378	0.41	A	1,428	6,806	0.52	A	Major
29	Encanto Dr.	Rouse Rd. to Chambers Av.	2U	Collector	13,000	6,410	0.49	A	238	6,648	0.51	A	Major
30	Encanto Dr.	Chambers Av. to Shadel Rd.	2U	Collector	13,000	6,862	0.53	A	238	7,100	0.55	A	Major
31	Encanto Dr.	Shadel Rd. to McCall Bl.	2U	Collector	13,000	7,536	0.58	A	238	7,774	0.60	A	Major

Table 4.14-34 Roadway Segment Capacity Analysis for Opening Year Cumulative (2020) Conditions (Cont'd)

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	2020 NP	V/C[2]	LOS[3]	Project Only Phase 1	2020 WP	V/C[2]	LOS[3]	General Plan Classification
32	Sherman Rd.	SR-74 to Ethanac Rd.	2U	Local	6,500	4,742	0.73	C	0	4,742	0.73	C	Major
33	Sherman Rd.	Ethanac Rd. to McLaughlin Rd.	2U	Local	6,500	**7,684**	**1.18**	**F**	0	**7,684**	**1.18**	**F**	Major
34	Sherman Rd.	McLaughlin Rd. to Rouse Rd.	2U	Local	6,500	381	0.06	A	0	381	0.06	A	Major
35	Sherman Rd.	Rouse Rd. to St. B	**4D**	Major	34,100	Does Not Exist			1,190	1,190	0.03	A	Major
36	Sherman Rd.	St. B to Chambers Av.	**4D**	Major	34,100	Does Not Exist			3,094	3,094	0.09	A	Major
37	Sherman Rd.	Chambers Av. to Shadel Rd.	4D	Major	34,100	539	0.02	A	3,094	3,633	0.11	A	Major
38	Sherman Rd.	Shadel Rd. to McCall Bl.	3D	Major	25,575	2,637	0.10	A	2,998	5,635	0.22	A	Major
39	Antelope Rd.	Rouse Rd. (N) to Rouse Rd. (S)	**2U**	Major	34,100	2,500	0.07	A	0	2,500	0.07	A	Major
40	Antelope Rd.	Rouse Rd. (S) to Chambers Av.	**2U**	Major	34,100	1,977	0.06	A	0	1,977	0.06	A	Major
41	Antelope Rd.	Chambers Av. to McCall Bl.	**4D**	Major	34,100	2,746	0.08	A	0	2,746	0.08	A	Major
42	Menifee Rd.	SR-74 to Biscayne Av.	4D	Arterial	37,000	18,025	0.49	A	380	18,405	0.50	A	Urban Arterial
43	Menifee Rd.	Biscayne Av. to Rouse Rd.	2U	Collector	13,000	**18,025**	**1.39**	**F**	380	**18,405**	**1.42**	**F**	Urban Arterial
44	Menifee Rd.	Rouse Rd. to McCall Bl.	4D	Major	34,100	20,220	0.59	A	380	20,600	0.60	A	Urban Arterial
45	Menifee Rd.	McCall Bl. to Simpson Rd.	4D	Major	34,100	12,724	0.37	A	190	12,914	0.38	A	Arterial

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

4U = Improvement

[1] These maximum roadway capacities have been extracted from the following source: City of Menifee Traffic Impact Analysis Guidelines and Requirements (Attachment B). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. By using the LOS E capacity for each roadway facility type, volume-to-capacity (v/c) values between 0.00-0.60 will represent LOS A, 0.61-0.70 will represent LOS B, 0.71-0.80 will represent LOS C, 0.81-0.90 will represent LOS D, 0.91-1.00 will represent LOS E, and v/c values greater than 1.00 will represent LOS F operations. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] v/c = Volume to Capacity ratio

[3] LOS = Level of Service

[4] Where the average daily volume (ADT) based roadway segment analysis indicates a deficiency (unacceptable LOS), a review of the more detailed peak hour intersection analysis is undertaken. The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. While this traffic study recognizes LOS D is the City's target LOS for roadway segments, a review of the more detailed peak hour intersection analysis is necessary to determine whether roadway widening along the segment is necessary. For the purposes of this analysis, if the peak hour intersection operations on either side of the roadway segment are anticipated to operate at LOS D or better, then additional roadway segment widening is not recommended. Therefore, for the purposes of this assessment, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes. Furthermore, it is likely that a roadway segment can have a volume-to-capacity ratio of up to 1.10 if the adjacent intersections are anticipated to operate at acceptable LOS, without the need for additional widening. As the LOS threshold for the study area intersections is LOS D, LOS D have also been utilized as the minimum LOS criteria for roadway segments for the purposes of this analysis.

(Urban Crossroads, 2019d, Table 6-2)

- Ethanac Rd., I-215 Freeway to Encanto Dr. (Roadway Segment #6) – LOS F
- Ethanac Rd., Encanto Dr. to Trumble Rd. (Roadway Segment #7) – LOS F
- Ethanac Rd., Trumble Rd. to Sherman Rd. (Roadway Segment #8) – LOS F
- Ethanac Rd., Sherman Rd. to Antelope Rd. (Roadway Segment #9) – LOS F
- McCall Bl., Bradley Rd. to the I-215 Freeway (Roadway Segment #21) – LOS F
- McCall Bl., I-215 Freeway to Encanto Dr. (Roadway Segment #22) – LOS F
- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25) – LOS F
- Sherman Rd., Ethanac Rd. to McLaughlin Rd. (Roadway Segment #33) – LOS F
- Menifee Rd., from Biscayne Ave to Rouse Rd. (Roadway Segment #43) – LOS F

Table 4.14-34 shows that the LOS for the following roadway segment would degrade from unacceptable LOS E to unacceptable LOS F during one or more peak hours for Opening Year Cumulative (2020) conditions with the addition of Project traffic. Therefore, Project impacts to the following roadway segment would represent a significant direct impact under Opening Year Cumulative (2020) conditions: (Urban Crossroads, 2019d, p. 144)

- McCall Bl., Encanto Dr. to Sherman Rd. (Roadway Segment #23) – LOS E

3. Traffic Signal Warrants Analysis – Opening Year Cumulative (2020)

Traffic signal warrants have been performed on unsignalized intersections that have not warranted a signal under Existing conditions for Opening Year Cumulative Without Project traffic conditions. For Opening Year Cumulative (2020) Without Project conditions, Table 4.14-35, *Traffic Signal Warrants Analysis for Opening Year Cumulative (2020) Conditions*, presents the list of intersections that appear to warrant a traffic signal in addition to those currently warranted under Existing conditions. As shown on Table 4.14-35, the following intersections meet signal warrants under previous analysis scenarios (Urban Crossroads, 2019d, p. 147):

- Encanto Drive at Ethanac Road (Intersection #15)
- Encanto Drive at Rouse Road (Intersection #17)
- Antelope Road at McCall Boulevard (Intersection #40)

However, as shown in Table 4.14-33, the intersection of Encanto Drive at Rouse Road (Intersection #17) would operate at an acceptable LOS under Opening Year Cumulative (2020) conditions; thus, Project impacts due to signal warrants being met at Intersection #17 would be less than significant. The contribution of Project traffic to the intersections of Encanto Drive at Ethanac Road (Intersection #15) and Antelope Road at McCall Boulevard (Intersection #40) represent cumulatively-considerable impacts of the Project under Opening Year Cumulative (2020) conditions.

Additionally, although Table 4.14-33 indicates the following intersection meets the traffic signal warrant, the Project would contribute no vehicular trips to these intersections under Opening Year Cumulative (2020) conditions; therefore, Project impacts due to signal warrants at the following intersection would not occur:

- Sherman Road at Ethanac Road (Intersection #27)
- Antelope Road at Ethanac Road (Intersection #36)

Table 4.14-35 Traffic Signal Warrants Analysis for Opening Year Cumulative (2020) Conditions

	INTERSECTION	2020 NP	2020 WP
8	Bradley Rd. & Cherry Hills Bl.		
15	Encanto Dr. & Ethanac Rd.		
16	Encanto Dr. & McLaughlin Rd.	PH	
17	Encanto Dr. & Rouse Rd.		
18	Encanto Dr. & Chambers Av.	DNE	DNE
19	Encanto Dr. & Shadel Rd.		
23	Trumble Rd. & Rouse Rd.		
24	Brady Ln./St. A & Rouse Rd.		
25	St. A & Chambers Av.	DNE	DNE
27	Sherman Rd. & Ethanac Rd.	PH	
28	Sherman Rd. & McLaughlin Rd.		
29	Sherman Rd. & Rouse Rd.		
31	Sherman Rd. & Chambers Av.		
32	Sherman Rd. & Shadel Rd.		
34	Dawson Rd. & Rouse Rd.		
35	St. C/Concord Ln. & Chambers Av.		
36	Antelope Rd. & Ethanac Rd.	PH	
37	Antelope Rd. & Rouse Rd. (North)		
38	Antelope Rd. & Rouse Rd. (South)		
39	Antelope Rd. & Chambers Av.		
40	Antelope Rd. & McCall Bl.		

= Warranted under a previous scenario

DNE = Does not Exist

PH = Peak Hour Warrant Met

ADT = Daily Volume Warrant Met

(Urban Crossroads, 2019d, p. 139)

As also shown in Table 4.14-33, the addition of Project traffic is anticipated to warrant the following traffic signal under Opening Year Cumulative (2020) With Phase 1 Project traffic conditions, in addition to those previously warranted under Existing (2017) and E+P traffic conditions: (Urban Crossroads, 2019d, p. 147)

- Encanto Drive at McLaughlin Road (Intersection #16): Peak Hour Warrant Met

However, Table 4.14-33 shows that, without signalization, the above-listed intersection would operate at an acceptable LOS B in the AM peak hour and an acceptable LOS C during the PM peak hour; thus, the Project's impacts due to signal warrants at the above-listed intersection would be less than significant. As noted previously, a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this 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 LOS. (Urban Crossroads, 2019d, p. 147)

4. Off-Ramp Queuing Analysis – Opening Year Cumulative (2020)

A queuing analysis was performed for the northbound and southbound off-ramps at the I-215 Freeway and Ethanac Road, McCall Boulevard, and Newport Road interchanges to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may

potentially "spill back" onto the I-215 Freeway mainline. Queuing analysis findings are presented in Table 4.14-36, *Freeway Off-Ramp Queuing Summary for Opening Year Cumulative (2020) Conditions*, for Opening Year Cumulative (2020) Without Project traffic conditions. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. (Urban Crossroads, 2019d, p. 148)

As shown on Table 4.14-36, there are no queuing issues anticipated during the AM or PM peak 95th percentile traffic flows for Opening Year Cumulative (2020) Without Project traffic conditions. The addition of Project traffic is not anticipated to result in any potential queuing issues. Accordingly, Project impacts to off-ramp queuing issues would be less than significant under Opening Year Cumulative (2020) conditions. Worksheets for Opening Year Cumulative (2020) Without Project conditions off-ramp queuing analysis are provided in Appendix 6.5 to the Project's TIA, while worksheets for Opening Year Cumulative (2020) With Project conditions off-ramp queuing analysis are provided in Appendix 6.6 of the TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 148)

Table 4.14-36 Freeway Off-Ramp Queuing Summary for Opening Year Cumulative (2020) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	Without Project				With Project			
			95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Ramps & Ethanac Rd.	SBL/T	1,450	168	189	Yes	Yes	184 [2]	256 [2]	Yes	Yes
	SBR	240	116	275 [2]	Yes	Yes[3]	125	281 [2]	Yes	Yes[3]
I-215 SB Ramps & McCall Bl.	SBL/T	1,440	332 [2]	517 [2]	Yes	Yes	332 [2]	575 [2]	Yes	Yes
	SBR	450	264 [2]	653 [2]	Yes	Yes[3]	292 [2]	695 [2]	Yes	Yes[3]
I-215 NB Ramps & Ethanac Rd.	NBL/T	1,440	381 [2]	392 [2]	Yes	Yes	388 [2]	392 [2]	Yes	Yes
	NBR	270	102	119	Yes	Yes	108	139	Yes	Yes
I-215 NB Ramps & McCall Bl.	NBL/T	1,870	236 [2]	474 [2]	Yes	Yes	259 [2]	463 [2]	Yes	Yes
	NBR	240	72	527 [2]	Yes	Yes[3]	88	593 [2]	Yes[3]	Yes[3]
I-215 SB Ramps & Newport Rd.	SBL	1,660	344	517	Yes	Yes	351	521	Yes	Yes
	SBR	1,660	289	313	Yes	Yes	290	314	Yes	Yes
I-215 NB Ramps & Newport Rd.	NBL	1,520	365	607 [2]	Yes	Yes	365	607 [2]	Yes	Yes
	NBR	1,520	340	418	Yes	Yes	340	418	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-215 Freeway mainline.

(Urban Crossroads, 2019d, Table 6-3)

5. Basic Freeway Segment Analysis – Opening Year Cumulative (2020)

Opening Year Cumulative (2020) Without and With Project peak hour mainline directional volumes are provided on Exhibits 6-8 and 6-9, respectively, of the Project's TIA (*Technical Appendix K*). As shown on Table 4.14-37, *Basic Freeway Segment Analysis for Opening Year Cumulative (2020) Conditions*, I-215 Freeway segments analyzed in the TIA are anticipated to operate at an acceptable LOS (i.e., LOS D or better) during the peak hours for Opening Year Cumulative (2020) Without Project traffic conditions, with the exception of following: (Urban Crossroads, 2019d, p. 148)

- I-215 Freeway Southbound, Case Rd. to Ethanac Rd. (Freeway Segment #1) – LOS E PM peak hour only
- I-215 Freeway Southbound, Ethanac Rd. to McCall Bl. (Freeway Segment #2) – LOS E PM peak hour only
- I-215 Freeway Southbound, McCall Bl. to Newport Rd. (Freeway Segment #3) – LOS E AM and PM peak hours

The Project would contribute to, but would not directly cause, the LOS deficiencies at the above-listed freeway segments; accordingly, Project impacts to the above-listed freeway segment would represent cumulatively-considerable impacts of the Project.

The addition of Project traffic is not anticipated to result in any additional LOS deficiencies, beyond those described above for Opening Year Cumulative (2020) Without Project traffic conditions; thus, the Project's direct impacts would be less than significant. Opening Year Cumulative Without and With Project conditions basic freeway segment analysis worksheets are provided in Appendix 6.7 and Appendix 6.8 of the Project's TIA (*Technical Appendix K*), respectively. (Urban Crossroads, 2019d, p. 148)

Table 4.14-37 Basic Freeway Segment Analysis for Opening Year Cumulative (2020) Conditions

Freeway	Direction[1]	Mainline Segment	Lanes[2]	Without Project				With Project			
				Density[3]		LOS[4]		Density[3]		LOS[4]	
				AM	PM	AM	PM	AM	PM	AM	PM
I-215 Freeway	SB	SR-74 to Ethanac Rd.	3	30.9	**40.3**	D	**E**	31.0	**41.0**	D	**E**
		Ethanac Rd. to McCall Bl.	3	33.1	**42.0**	D	**E**	33.1	**42.0**	D	**E**
		McCall Bl. to Newport Rd.	3	**36.7**	**38.3**	**E**	**E**	**37.2**	**38.6**	**E**	**E**
	NB	SR-74 to Ethanac Rd.	3	19.2	23.2	C	C	19.3	23.4	C	C
		Ethanac Rd. to McCall Bl.	3	20.2	23.3	C	C	20.2	23.3	C	C
		McCall Bl. to Newport Rd.	3	17.7	26.1	B	D	17.8	26.4	B	D

* **BOLD** = Unacceptable Level of Service

[1] NB = Northbound; SB = Southbound

[2] Number of lanes are in the specified direction and is based on existing conditions.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

(Urban Crossroads, 2019d, Table 6-4)

6. Freeway Merge/Diverge Analysis – Opening Year Cumulative (2020)

Ramp merge and diverge operations were also evaluated for Opening Year Cumulative (2020) Without and With Project conditions and the results of this analysis are presented in Table 4.14-38, *Freeway Ramp Junction Merge/Diverge Analysis for Opening Year Cumulative (2020) Conditions*. As shown in Table 4.14-38, the following merge/diverge ramp locations are anticipated to operate at an unacceptable LOS (LOS E or worse) during one or more peak hours under Opening Year Cumulative (2020) Without Project conditions: (Urban Crossroads, 2019d, p. 153)

- I-215 Freeway Southbound, Off-Ramp at Ethanac Road (Merge/Diverge Location #1) – LOS E PM peak hour only
- I-215 Freeway Southbound, On-Ramp at Ethanac Road (Merge/Diverge Location #2) – LOS E PM peak hour only
- I-215 Freeway Southbound, Off-Ramp at McCall Boulevard (Merge/Diverge Location #3) – LOS E AM and PM peak hours
- I-215 Freeway Southbound, On-Ramp at McCall Bl. (Merge/Diverge Location #4) – LOS E AM peak hour only

The Project would contribute to, but would not directly cause, the above-describe deficiencies; accordingly, Project impacts to the above-listed freeway merge/diverge locations would be cumulatively considerable.

Table 4.14-38 Freeway Ramp Junction Merge/Diverge Analysis for Opening Year Cumulative (2020) Conditions

Freeway	Direction[1]	Ramp or Segment	Lanes on Freeway[2]	Without Project				With Project			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[3]	LOS[4]	Density[3]	LOS[4]	Density[3]	LOS[4]	Density[3]	LOS[4]
I-215 Freeway	SB	Off-Ramp at Ethanac Rd.	3	34.4	D	**38.4**	E	34.5	D	**38.9**	E
		On-Ramp at Ethanac Rd.	3	32.7	D	**36.5**	E	32.7	D	**36.5**	E
		Off-Ramp at McCall Bl.	3	**35.6**	E	**39.5**	E	**35.6**	E	**39.5**	E
		On-Ramp at McCall Bl.	3	**36.3**	E	**36.1**	E	**36.6**	E	**36.4**	E
	NB	On-Ramp at Ethanac Rd.	3	22.1	C	26.2	C	22.4	C	26.4	C
		Off-Ramp at Ethanac Rd.	3	27.6	C	30.1	D	27.6	C	30.1	D
		On-Ramp at McCall Bl.	3	24.9	C	26.8	C	25.2	C	26.8	C
		Off-Ramp at McCall Bl.	3	25.0	C	32.8	D	25.1	C	33.1	D

* **BOLD** = Unacceptable Level of Service

[1] NB = Northbound; SB = Southbound, EB = Eastbound; WB = Westbound

[2] Number of lanes are in the specified direction and is based on existing conditions.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

(Urban Crossroads, 2019d, Table 6-5)

There are no additional freeway ramp junctions anticipated to operate at unacceptable LOS with the addition of Project traffic under Opening Year Cumulative (2020) Conditions; therefore, the Project's direct impacts to freeway merge/diverge locations would be less than significant. Opening Year Cumulative Without and With Project conditions freeway ramp junction operations analysis worksheets are provided in Appendix 6.9 and Appendix 6.10 of the Project's TIA (*Technical Appendix K*), respectively. (Urban Crossroads, 2019d, p. 153)

D. Opening Year Cumulative (2023) Traffic Conditions

This subsection discusses the methods used to develop Opening Year Cumulative (2023) Without and With Phase 2 Project traffic forecasts, and the resulting intersection operations, roadway segment operations, freeway mainline operations, and traffic signal warrant analyses. (Urban Crossroads, 2019d, p. 163)

The lane configurations and traffic controls assumed to be in place for Opening Year Cumulative (2023) conditions are as follows:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Opening Year Cumulative conditions (e.g., intersection and roadway improvements along the Project and cumulative development's frontage and driveways). Improvements include construction of site adjacent roadways (e.g., Rouse Road, Sherman Road, Chambers Avenue, etc.) and intersections needed for site access. (Urban Crossroads, 2019d, p. 163)

- Driveways and those facilities assumed to be constructed by other development projects to provide site access are also assumed to be in place for Opening Year Cumulative conditions (e.g., intersection and roadway improvements along the cumulative developments' frontages and driveways). (Urban Crossroads, 2019d, p. 163)

The Opening Year Cumulative (2023) Without Project conditions include Existing traffic volumes plus an ambient growth factor of 10.41% plus traffic from pending and approved but not yet constructed known development projects in the area. The number of through lanes and intersection controls for Opening Year Cumulative (2023) conditions is shown on Exhibit 7-1 of the Project's TIA (*Technical Appendix K*). The ADT and AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2023) Without Project traffic conditions are shown on Exhibits 7-2 and 7-3, respectively, of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 163)

The Opening Year Cumulative (2023) With Project conditions includes existing traffic volumes, an ambient growth factor of 10.41%, traffic from pending and approved but not yet constructed known development projects in the area and the addition of Project (2023) traffic. The number of through lanes and intersection controls for Opening Year Cumulative (2023) conditions is shown on Exhibit 7-1 of the Project's TIA (*Technical Appendix K*). The ADT and AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2023) With Phase 2 Project traffic conditions are shown on Exhibits 7-4 and 7-5, respectively, of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 163)

1. Intersection Operations Analysis – Opening Year Cumulative (2023)

LOS calculations were conducted for the study intersections to evaluate their operations under Opening Year Cumulative (2023) Without Project conditions with roadway and intersection geometrics as described above. The intersection analysis results are summarized in Table 4.14-39, *Intersection Analysis for Opening Year Cumulative (2023) Conditions*. The following intersections are identified as being impacted under Opening Year Cumulative (2023) conditions without the addition of Project traffic. Therefore, because the Project would contribute to but would not cause the projected LOS deficiencies, Project impacts to the following intersections would be cumulatively-considerable: (Urban Crossroads, 2019d, p. 169)

- Murrieta Rd. / Ethanac Rd. (Intersection #2)
- Bradley Rd. / McCall Bl. (Intersection #7)
- I-215 SB Ramps / Ethanac Rd. (Intersection #10)
- I-215 NB Ramps / Ethanac Rd. (Intersection #13)
- Encanto Dr. / Ethanac Rd. (Intersection #15)
- Antelope Rd. / McCall Bl. (Intersection #40)
- Menifee Rd. / SR-74 (Intersection #42)
- Menifee Rd. / McCall Bl. (Intersection #44)

Although Table 4.14-39 shows the following intersections would operate at a deficient LOS, the Project would contribute fewer than 50 peak hour trips; therefore, Project impacts to the following intersections would be less than significant:

Table 4.14-39 Intersection Analysis for Opening Year Cumulative (2023) Conditions

#	Intersection	Traffic Control[2]	2023 Without Project				2023 With Project			
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Goetz Rd. & Ethanac Rd.	TS	**69.2**	**62.0**	**E**	**E**	**74.8**	**70.7**	**E**	**E**
2	Murrieta Rd. & Ethanac Rd.	TS	**76.6**	**98.7**	**E**	**F**	**77.6**	**>100.0**	**E**	**F**
3	Murrieta Rd. & McCall Bl.	TS	26.5	32.7	C	C	27.5	34.4	C	C
4	Sun City Bl. & McCall Bl.	TS	31.9	40.3	C	D	32.4	42.4	C	D
5	Barnett Rd. & Ethanac Rd.	TS	18.1	14.0	B	B	18.5	14.1	B	B
6	Case Rd. & Ethanac Rd.	TS	21.8	26.9	C	C	22.2	26.9	C	C
7	Bradley Rd. & McCall Bl.	TS	69.1	**106.3**	E	**F**	79.0	**126.6**	E	**F**
8	Bradley Rd. & Cherry Hills Bl.	AWS	13.5	22.4	B	C	14.2	26.5	B	C
9	I-215 SB Ramps/SR-74 & Bonnie Dr.	TS	Not an Analysis Location				Not an Analysis Location			
10	I-215 SB Ramps & Ethanac Rd.	TS	**82.6**	**142.6**	**F**	**F**	**85.3**	**153.9**	**F**	**F**
11	I-215 SB Ramps & McCall Bl.	TS	35.4	**70.4**	D	**E**	39.9	**98.8**	D	**F**
12	I-215 NB Ramps & SR-74	TS	Not an Analysis Location				Not an Analysis Location			
13	I-215 NB Ramps & Ethanac Rd.	TS	**123.8**	**>200.0**	**F**	**F**	**154.3**	**>200.0**	**F**	**F**
14	I-215 NB Ramps & McCall Bl.	TS	23.7	42.7	C	D	25.7	48.8	C	D
15	Encanto Dr. & Ethanac Rd.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**
16	Encanto Dr. & McLaughlin Rd.	CSS	11.0	15.9	B	C	12.7	23.0	B	C
17	Encanto Dr. & Rouse Rd.	CSS/**TS**	14.8	14.6	B	B	21.8	23.4	C	C
18	Encanto Dr. & Chambers Av.	**TS**	Future Intersection				1.9	2.1	A	A
19	Encanto Dr. & Shadel Rd.	CSS	16.9	13.7	C	B	17.9	14.2	C	B
20	Encanto Dr. & McCall Bl.	TS	53.3	68.3	D	E	70.9	**102.6**	E	**F**
21	Trumble Rd. & SR-74	TS	Not an Analysis Location				Not an Analysis Location			
22	Trumble Rd. & Ethanac Rd.	TS	**145.0**	**>200.0**	**F**	**F**	**145.0**	**>200.0**	**F**	**F**
23	Trumble Rd. & Rouse Rd.	CSS	9.4	9.2	A	A	10.7	10.2	B	B
24	Brady Ln./St. A & Rouse Rd.	CSS	9.1	8.8	A	A	12.1	13.9	B	B
25	St. A & Chambers Av.	**CSS**	Future Intersection				8.5	8.5	A	A
26	Sherman Rd. & SR-74	TS	Not an Analysis Location				Not an Analysis Location			
27	Sherman Rd. & Ethanac Rd.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**
28	Sherman Rd. & McLaughlin Rd.	AWS	7.2	7.2	A	A	7.2	7.2	A	A
29	Sherman Rd. & Rouse Rd.	AWS	7.5	7.9	A	A	8.5	9.7	A	A
30	Sherman Rd. & St. B	**RA**	Future Intersection				4.8	5.9	A	A
31	Sherman Rd. & Chambers Av.	AWS	8.4	7.2	A	A	10.7	18.7	B	C
32	Sherman Rd. & Shadel Rd.	AWS	9.5	7.4	A	A	13.4	10.7	B	B
33	Sherman Rd. & McCall Bl.	TS	**81.7**	47.7	**F**	D	**129.2**	**78.0**	**F**	**E**
34	Dawson Rd. & Rouse Rd.	UC/**CSS**	0.0	0.0	A	A	13.1	10.3	B	B
35	St. C/Concord Ln. & Chambers Av.	CSS	8.6	8.6	A	A	8.7	8.7	A	A
36	Antelope Rd. & Ethanac Rd.	CSS	**>100.0**	**60.0**	**F**	**F**	**>100.0**	**60.0**	**F**	**F**
37	Antelope Rd. & Rouse Rd. (North)	**CSS**	Future Intersection				Future Intersection			
38	Antelope Rd. & Rouse Rd. (South)	**CSS**	Future Intersection				Future Intersection			
39	Antelope Rd. & Chambers Av.	**CSS**	Future Intersection				Future Intersection			
40	Antelope Rd. & McCall Bl.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**

Table 4.14-39 Intersection Analysis for Opening Year Cumulative (2023) Conditions (Cont'd)

#	Intersection	Traffic Control[2]	2023 Without Project				2023 With Project			
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
41	Palomar Rd. & SR-74	TS	Not an Analysis Location				Not an Analysis Location			
42	Menifee Rd. & SR-74	TS	**186.2**	**>200.0**	**F**	**F**	**194.5**	**>200.0**	**F**	**F**
43	Menifee Rd. & Rouse Rd./Turtle Point Dr.	TS	13.0	11.9	B	B	13.3	12.1	B	B
44	Menifee Rd. & McCall Bl.	TS	**86.7**	**66.2**	**F**	**E**	**93.0**	**71.2**	**F**	**E**
45	Menifee Rd. & Simpson Rd.	TS	21.4	24.7	C	C	22.6	26.9	C	C
46	I-215 SB Ramps & Newport Rd.	TS	13.9	18.3	B	B	14.1	18.4	B	B
47	I-215 NB Ramps & Newport Rd.	TS	16.4	21.7	B	C	16.3	21.7	B	C

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] Per the 2010 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; RA = Roundabout; UC = Uncontrolled;**CSS** = Improvement

(Urban Crossroads, 2019d, Table 7-1)

- Goetz Rd. / Ethanac Rd. (Intersection #1)
- Trumble Rd. / Ethanac Rd. (Intersection #22)
- Sherman Rd. / Ethanac Rd. (Intersection #27)
- Antelope Rd. / Ethanac Rd. (Intersection #36)

As also shown on Table 4.14-39 and illustrated on Exhibit 7-5 of the Project's TIA (*Technical Appendix K*), the addition of Project traffic is anticipated to result in the following additional significant impacts; thus, Project impacts to the following intersections would represent a direct impact of the Project Opening Year Cumulative (2023) With Phase 2 Project traffic conditions. (Urban Crossroads, 2019d, p. 169)

- I-215 SB Ramps / McCall Bl. (Intersection #11) – LOS F PM peak hour only
- Encanto Dr. / McCall Blvd (Intersection #20) – LOS F PM peak hour only
- Sherman Rd. / McCall Blvd (Intersection #33) – LOS F AM peak hour and LOS E PM peak hour

The intersection operations analysis worksheets for Opening Year Cumulative (2023) With Phase 2 Project traffic conditions are included in Appendix 7.2 of the Project's TIA (*Technical Appendix K*).

2. Roadway Segment Capacity Analysis

The City of Menifee TIA Guidelines provide roadway volume capacity values. These roadway segment capacities are approximate figures only, and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet traffic demand. Table 4.14-40, *Roadway Segment Capacity Analysis for Opening Year Cumulative (2023) Conditions*, provides a summary of the Opening Year Cumulative (2023) conditions roadway segment capacity analysis based on the City of Menifee Roadway Segment Capacity Thresholds. As shown in Table 4.14-40, the Project would contribute traffic to the following roadway segments that are shown to operate at a deficient LOS (i.e., LOS E or F) without the addition of Project traffic; therefore, Project impacts to the following roadway segments would be cumulatively considerable under Opening Year Cumulative (2023) conditions: (Urban Crossroads, 2019d, p. 169)

Table 4.14-40 Roadway Segment Capacity Analysis for Opening Year Cumulative (2023) Conditions

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	2023 NP	V/C[2]	LOS[3]	Project Only Phase 2	2023 WP	V/C[2]	LOS[3]	General Plan Classification
1	SR-74	Bonnie Dr. to I-215 NB Ramps	3D	Major	25,575	Not an Analysis Location			0	Not an Analysis Location			Major
2	SR-74	I-215 NB Ramps to Trumble Rd.	4D	Major	34,100	Not an Analysis Location			0	Not an Analysis Location			Major
3	Ethanac Rd.	Goetz Rd. to Murrieta Rd.	4D	Arterial	37,000	20,893	0.56	A	394	21,287	0.58	A	Expressway
4	Ethanac Rd.	Murrieta Rd. to Barnett Rd.	4D	Arterial	37,000	26,104	0.71	C	788	26,892	0.73	C	Expressway
5	Ethanac Rd.	Case Rd. to I-215 Freeway	4D	Arterial	37,000	**36,988**	**1.00**	**F**	1,180	**38,168**	**1.03**	**F**	Expressway
6	Ethanac Rd.	I-215 Freeway to Encanto Dr.	2U	Collector	13,000	**30,263**	**2.33**	**F**	2,359	**32,622**	**2.51**	**F**	Expressway
7	Ethanac Rd.	Encanto Dr. to Trumble Rd.	2U	Collector	13,000	**26,771**	**2.06**	**F**	0	**26,771**	**2.06**	**F**	Expressway
8	Ethanac Rd.	Trumble Rd. to Sherman Rd.	2U	Collector	13,000	**23,564**	**1.81**	**F**	0	**23,564**	**1.81**	**F**	Expressway
9	Ethanac Rd.	Sherman Rd. to Antelope Rd.	2U	Collector	13,000	**19,945**	**1.53**	**F**	0	**19,945**	**1.53**	**F**	Expressway
10	SR-74	Antelope Rd. to Palomar Rd.	--	Major	34,100	Not an Analysis Location			0	Not an Analysis Location			Expressway
11	Rouse Rd.	Encanto Dr. to Trumble Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	3,192	0.49	A	2,708	5,900	0.23	A	Secondary
12	Rouse Rd.	Brady Ln. to Sherman Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	1,854	0.29	A	1,966	3,820	0.15	A	Secondary
13	Rouse Rd.	Sherman Rd. to Dawson Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	1,568	0.24	A	1,530	3,098	0.12	A	Secondary
14	Rouse Rd.	Dawson Rd. to Antelope Rd.	**2U**	Secondary	12,950	987	0.08	A	0	987	0.08	A	Secondary
15	Rouse Rd.	Antelope Rd. (N) to Menifee Rd.	2U	Major	12,950	4,677	0.36	A	0	4,677	0.36	A	Major
16	Chambers Av.	Encanto Dr. to St. A	--	Secondary	25,900	Does Not Exist			136	Not an Analysis Location			Secondary
17	Chambers Av.	St. A to Sherman Rd.	2U	Local/**Secondary**	6,500/**25,900**	39	0.01	A	182	221	0.01	A	Secondary
18	Chambers Av.	Sherman Rd. to Concord Ln.	2U	Local/**Secondary**	6,500/**25,900**	535	0.08	A	136	671	0.03	A	Secondary
19	McCall Bl.	Murrieta Rd. to Sun City Bl.	4D	Major	34,100	17,085	0.50	A	944	18,029	0.53	A	Major
20	McCall Bl.	Sun City Bl. to Bradley Rd.	4D	Major	34,100	27,496	0.81	D	1,338	28,834	0.85	D	Major
21	McCall Bl.	Bradley Rd. to I-215 Freeway	4D	Major	34,100	**45,202**	**1.33**	**F**	2,122	**47,324**	**1.39**	**F**	Major
22	McCall Bl.	I-215 Freeway to Encanto Dr.	4D	Major	34,100	**48,336**	**1.42**	**F**	3,302	**51,638**	**1.51**	**F**	Urban Arterial
23	McCall Bl.	Encanto Dr. to Sherman Rd.	4D	Major	34,100	**39,160**	**1.15**	**F**	2,890	**42,050**	**1.23**	**F**	Urban Arterial
24	McCall Bl.	Sherman Rd. to Antelope Rd.	4D	Major	34,100	**33,278**	**0.98**	**E**	1,652	**34,930**	**1.02**	**F**	Urban Arterial
25	McCall Bl.	Antelope Rd. to Menifee Rd.	2D	Major	17,050	**30,917**	**1.81**	**F**	1,652	**32,569**	**1.91**	**F**	Urban Arterial
26	Trumble Rd.	North of Ethanac Rd.	2U	Collector	13,000	2,231	0.17	A	0	2,231	0.17	A	Collector
27	Encanto Dr.	Ethanac Rd. to McLaughlin Rd.	2U	Collector	13,000	9,046	0.70	B	2,360	11,406	0.88	D	Major
28	Encanto Dr.	McLaughlin Rd. to Rouse Rd.	2U	Collector	13,000	6,539	0.50	A	2,360	8,899	0.68	B	Major
29	Encanto Dr.	Rouse Rd. to Chambers Av.	2U	Collector	13,000	7,635	0.59	A	440	8,075	0.62	B	Major
30	Encanto Dr.	Chambers Av. to Shadel Rd.	2U	Collector	13,000	8,115	0.62	B	484	8,599	0.66	B	Major
31	Encanto Dr.	Shadel Rd. to McCall Bl.	2U	Collector	13,000	8,968	0.69	B	484	9,452	0.73	C	Major

Table 4.14-40 Roadway Segment Capacity Analysis for Opening Year Cumulative (2023) Conditions (Cont'd)

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	2023 NP	V/C[2]	LOS[3]	Project Only Phase 2	2023 WP	V/C[2]	LOS[3]	General Plan Classification
32	Sherman Rd.	SR-74 to Ethanac Rd.	2U	Local	6,500	5,620	0.86	D	0	5,620	0.86	D	Major
33	Sherman Rd.	Ethanac Rd. to McLaughlin Rd.	2U	Local	6,500	**11,357**	**1.75**	**F**	0	**11,357**	**1.75**	**F**	Major
34	Sherman Rd.	McLaughlin Rd. to Rouse Rd.	2U	Local	6,500	404	0.06	A	0	404	0.06	A	Major
35	Sherman Rd.	Rouse Rd. to St. B	**4D**	Major	34,100	Does Not Exist			1,920	1,920	0.06	A	Major
36	Sherman Rd.	St. B to Chambers Av.	**4D**	Major	34,100	Does Not Exist			4,886	4,886	0.14	A	Major
37	Sherman Rd.	Chambers Av. to Shadel Rd.	4D	Major	34,100	572	0.02	A	5,020	5,592	0.16	A	Major
38	Sherman Rd.	Shadel Rd. to McCall Bl.	3D	Major	25,575	2,799	0.11	A	4,862	7,661	0.30	A	Major
39	Antelope Rd.	Rouse Rd. (N) to Rouse Rd. (S)	**2U**	Major	34,100	3,750	0.11	A	0	3,750	0.11	A	Major
40	Antelope Rd.	Rouse Rd. (S) to Chambers Av.	**2U**	Major	34,100	2,966	0.09	A	0	2,966	0.09	A	Major
41	Antelope Rd.	Chambers Av. to McCall Bl.	**4D**	Major	34,100	4,119	0.12	A	0	4,119	0.12	A	Major
42	Menifee Rd.	SR-74 to Biscayne Av.	4D	Arterial	37,000	21,828	0.59	A	628	22,456	0.61	A	Urban Arterial
43	Menifee Rd.	Biscayne Av. to Rouse Rd.	2U	Collector	13,000	**21,828**	**1.68**	**F**	628	**22,456**	**1.73**	**F**	Urban Arterial
44	Menifee Rd.	Rouse Rd. to McCall Bl.	4D	Major	34,100	24,251	0.71	C	628	24,879	0.73	C	Urban Arterial
45	Menifee Rd.	McCall Bl. to Simpson Rd.	4D	Major	34,100	13,995	0.41	A	314	14,309	0.42	A	Arterial

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

4U = Improvement

[1] These maximum roadway capacities have been extracted from the following source: City of Menifee Traffic Impact Analysis Guidelines and Requirements (Attachment B). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. By using the LOS E capacity for each roadway facility type, volume-to-capacity (v/c) values between 0.00-0.60 will represent LOS A, 0.61-0.70 will represent LOS B, 0.71-0.80 will represent LOS C, 0.81-0.90 will represent LOS D, 0.91-1.00 will represent LOS E, and v/c values greater than 1.00 will represent LOS F operations. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] v/c = Volume to Capacity ratio

[3] LOS = Level of Service

[4] Where the average daily volume (ADT) based roadway segment analysis indicates a deficiency (unacceptable LOS), a review of the more detailed peak hour intersection analysis is undertaken. The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. While this traffic study recognizes LOS D is the City's target LOS for roadway segments, a review of the more detailed peak hour intersection analysis is necessary to determine whether roadway widening along the segment is necessary. For the purposes of this analysis, if the peak hour intersection operations on either side of the roadway segment are anticipated to operate at LOS D or better, then additional roadway segment widening is not recommended. Therefore, for the purposes of this assessment, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes. Furthermore, it is likely that a roadway segment can have a volume-to-capacity ratio of up to 1.10 if the adjacent intersections are anticipated to operate at acceptable LOS, without the need for additional widening. As the LOS threshold for the study area intersections is LOS D, LOS D have also been utilized as the minimum LOS criteria for roadway segments for the purposes of this analysis.

(Urban Crossroads, 2019d, Table 7-2)

- Ethanac Rd., Goetz Rd. to Murrieta Rd. (Roadway Segment #5)
- Ethanac Rd., I-215 Freeway to Encanto Dr. (Roadway Segment #6)
- Ethanac Rd., Encanto Dr. to Trumble Rd. (Roadway Segment #7)
- Ethanac Rd., Trumble Rd. to Sherman Rd. (Roadway Segment #8)
- Ethanac Rd., Sherman Rd. to Antelope Rd. (Roadway Segment #9)
- McCall Bl., Bradley Rd. to the I-215 Freeway (Roadway Segment #21)
- McCall Bl., I-215 Freeway to Encanto Dr. (Roadway Segment #22)
- McCall Bl., Encanto Dr. to Sherman Rd. (Roadway Segment #23)
- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25)
- Sherman Rd., Ethanac Rd. to McLaughlin Rd. (Roadway Segment #33)
- Menifee Rd., from Biscayne Ave to Rouse Rd. (Roadway Segment #43)

The roadway segment analysis results indicate that the addition of Project (2023) traffic is anticipated to degrade the projected LOS for the following roadway segment from LOS E to LOS F under Opening Year Cumulative (2023) without Project conditions; therefore, implementation of Phase 2 of the proposed Project would result in a direct impact to the following location under Opening Year Cumulative (2023) conditions:

- McCall Bl., Sherman Rd. to Antelope Rd. (Roadway Segment #24) - LOS F

3. Traffic Signal Warrants Analysis – Opening Year Cumulative (2023)

Traffic signal warrants have been performed on unsignalized intersections that have not warranted a signal under existing conditions for Opening Year Cumulative Without Project traffic conditions. As shown in Table 4.14-41, *Traffic Signal Warrants Analysis for Opening Year Cumulative (2023) Conditions*, for Opening Year Cumulative (2023) Without Project conditions, there are no new intersections that appear to warrant a traffic signal. However, the Project would contribute traffic to the following intersections that were identified as meeting traffic signal warrants under Existing and/or Opening Year Cumulative (2020) Without Project conditions: (Urban Crossroads, 2019d, p. 174)

- Encanto Drive at Ethanac Road (Intersection #15)
- Encanto Drive at McLaughlin Road (Intersection #16)
- Encanto Drive at Rouse Road (Intersection #17)
- Antelope Road at McCall Boulevard (Intersection #40)

However, as shown in Table 4.14-39, the intersections of Encanto Drive at McLaughlin Road (Intersection #16) and Encanto Drive at Rouse Road (Intersection #17) would operate at an acceptable LOS without a traffic signal under Opening Year Cumulative (2023) conditions; accordingly, Project impacts due to the signal warrant being met at Intersections #16 and #17 would be less than significant. Project impacts to the intersections of Encanto Drive at Ethanac Road (Intersection #15) and Antelope Road at McCall Boulevard (Intersection #40) would be cumulatively considerable under Opening Year Cumulative (2023) conditions.

Although Table 4.14-41 shows the following intersection as meeting traffic signal warrants under Opening Year Cumulative (2023) conditions, the Project would contribute no vehicular trips to these intersections under Phase 2 Project conditions; therefore, the Project would result in no impacts to the following intersection under Opening Year Cumulative (2023) conditions:

Table 4.14-41 Traffic Signal Warrants Analysis for Opening Year Cumulative (2023) Conditions

	INTERSECTION	2023 NP	2023 WP
8	Bradley Rd. & Cherry Hills Bl.		
15	Encanto Dr. & Ethanac Rd.		
16	Encanto Dr. & McLaughlin Rd.		
17	Encanto Dr. & Rouse Rd.		
18	Encanto Dr. & Chambers Av.	DNE	DNE
19	Encanto Dr. & Shadel Rd.		
23	Trumble Rd. & Rouse Rd.		
24	Brady Ln./St. A & Rouse Rd.		
25	St. A & Chambers Av.	DNE	DNE
27	Sherman Rd. & Ethanac Rd.		
28	Sherman Rd. & McLaughlin Rd.		
29	Sherman Rd. & Rouse Rd.		
31	Sherman Rd. & Chambers Av.		
32	Sherman Rd. & Shadel Rd.		
34	Dawson Rd. & Rouse Rd.		
35	St. C/Concord Ln. & Chambers Av.		
36	Antelope Rd. & Ethanac Rd.		
37	Antelope Rd. & Rouse Rd. (North)		
38	Antelope Rd. & Rouse Rd. (South)		
39	Antelope Rd. & Chambers Av.		
40	Antelope Rd. & McCall Bl.		

= Warranted under a previous scenario

DNE = Does not Exist

PH = Peak Hour Warrant Met

ADT = Daily Volume Warrant Met

(Urban Crossroads, 2019d, p. 165)

- Sherman Road at Ethanac Road (Intersection #27)
- Antelope Road at Ethanac Road (Intersection #36)

As noted previously, a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this 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 LOS. (Urban Crossroads, 2019d, p. 174)

4. Off-Ramp Queuing Analysis – Opening Year Cumulative (2023)

A queuing analysis was performed for the northbound and southbound off-ramps at the I-215 Freeway and Ethanac Road, McCall Boulevard, and Newport Road interchanges to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially "spill back" onto the I-215 Freeway mainline. Queuing analysis findings are presented in Table 4.14-42, *Freeway Off-Ramp Queuing Summary for Opening Year Cumulative (2023) Conditions*, for Opening Year Cumulative (2023) Without Project traffic conditions. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. (Urban Crossroads, 2019d, p. 177)

Table 4.14-42 Freeway Off-Ramp Queuing Summary for Opening Year Cumulative (2023) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	Without Project				With Project			
			95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Ramps & Ethanac Rd.	SBL/T	1,450	261 [2]	295 [2]	Yes	Yes	292	385 [2]	Yes	Yes
	SBR	240	163 [2]	341 [2]	Yes	Yes[3]	188 [2]	341 [2]	Yes	Yes[3]
I-215 SB Ramps & McCall Bl.	SBL/T	1,440	399 [2]	644 [2]	Yes	Yes	399 [2]	679 [2]	Yes	Yes
	SBR	450	323 [2]	731 [2]	Yes	Yes[3]	359 [2]	762 [2]	Yes	Yes[3]
I-215 NB Ramps & Ethanac Rd.	NBL/T	1,440	425 [2]	457 [2]	Yes	Yes	432 [2]	457 [2]	Yes	Yes
	NBR	270	220	246	Yes	Yes	228	246 [2]	Yes	Yes
I-215 NB Ramps & McCall Bl.	NBL/T	1,870	259 [2]	520 [2]	Yes	Yes	282 [2]	508 [2]	Yes	Yes
	NBR	240	125	595 [2]	Yes	Yes[3]	178 [2]	703 [2]	Yes[3]	Yes[3]
I-215 SB Ramps & Newport Rd.	SBL	1,660	366	573	Yes	Yes	377	581	Yes	Yes
	SBR	1,660	326	356	Yes	Yes	328	359	Yes	Yes
I-215 NB Ramps & Newport Rd.	NBL	1,520	398	659 [2]	Yes	Yes	398	659 [2]	Yes	Yes
	NBR	1,520	360	444	Yes	Yes	360	444	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-215 Freeway mainline.

(Urban Crossroads, 2019d, Table 7-3)

As shown on Table 4.14-42, there are no queuing issues anticipated during the AM or PM peak 95th percentile traffic flows for Opening Year Cumulative (2023) Without Project traffic conditions. The addition of Project traffic is not anticipated to result in any potential queuing issues. Accordingly, impacts to off-ramp queuing locations would be less than significant under Opening Year Cumulative (2023) conditions. Worksheets for Opening Year Cumulative (2023) Without Project conditions off-ramp queuing analysis are provided in Appendix 7.5 to the TIA, while worksheets for Opening Year Cumulative (2023) With Project conditions off-ramp queuing analysis are provided in Appendix 7.7 of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 177)

5. Basic Freeway Segment Analysis – Opening Year Cumulative (2023)

Opening Year Cumulative (2023) Without and With Project peak hour mainline directional volumes are provided on Exhibits 7-8 and 7-9, respectively, of the Project's TIA (*Technical Appendix K*). As shown on Table 4.14-43, *Basic Freeway Segment Analysis for Opening Year Cumulative (2023) Conditions*, there are no additional I-215 Freeway segments anticipated to operate at an unacceptable LOS during the peak hours for Opening Year Cumulative (2023) Without Project traffic conditions. As previously noted under Opening Year Cumulative (2020) conditions, the Project would contribute traffic to, but would not directly cause, deficient LOS along the following freeway segments; thus, Project impacts to the following freeway segments would be cumulatively considerable under Opening Year Cumulative (2023) conditions: (Urban Crossroads, 2019d, p. 177)

Table 4.14-43 Basic Freeway Segment Analysis for Opening Year Cumulative (2023) Conditions

Freeway	Direction[1]	Mainline Segment	Lanes[2]	Without Project				With Project			
				Density[3]		LOS[4]		Density[3]		LOS[4]	
				AM	PM	AM	PM	AM	PM	AM	PM
I-215 Freeway	SB	SR-74 to Ethanac Rd.	3	34.0	**46.7**	D	F	34.2	**48.0**	D	F
		Ethanac Rd. to McCall Bl.	3	**36.5**	**49.5**	E	F	**36.5**	**49.5**	E	F
		McCall Bl. to Newport Rd.	3	**40.8**	**44.1**	E	E	**41.7**	**44.8**	E	E
	NB	SR-74 to Ethanac Rd.	3	20.6	25.8	C	C	20.9	26.1	C	D
		Ethanac Rd. to McCall Bl.	3	21.8	25.5	C	C	21.8	25.5	C	C
		McCall Bl. to Newport Rd.	3	19.0	28.8	C	D	19.1	29.4	C	D

* **BOLD** = Unacceptable Level of Service

[1] NB = Northbound; SB = Southbound

[2] Number of lanes are in the specified direction and is based on existing conditions.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

(Urban Crossroads, 2019d, Table 7-4)

- I-215 Freeway Southbound, Case Rd. to Ethanac Rd. (Freeway Segment #1) – LOS E PM peak hour only
- I-215 Freeway Southbound, Ethanac Rd. to McCall Bl. (Freeway Segment #2) – LOS E PM peak hour only
- I-215 Freeway Southbound, McCall Bl. to Newport Rd. (Freeway Segment #3) – LOS E AM and PM peak hours

Table 4.14-43 also shows that the addition of Project traffic is not anticipated to result in any additional LOS deficiencies, in addition to those identified above under Opening Year Cumulative (2023) Without Project traffic conditions; therefore, the Project would not result in any significant direct impacts to freeway segments under Opening Year Cumulative (2023) traffic conditions. Opening Year Cumulative Without and With Project conditions basic freeway segment analysis worksheets are provided in Appendix 7.7 and Appendix 7.8, respectively, of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 177)

6. Freeway Merge/Diverge Analysis – Opening Year Cumulative (2023)

Ramp merge and diverge operations were also evaluated for Opening Year Cumulative (2023) Without and With Project conditions and the results of this analysis are presented in Table 4.14-44, *Freeway Ramp Junction Merge/Diverge Analysis for Opening Year Cumulative (2023) Conditions*.

Table 4.14-44 Freeway Ramp Junction Merge/Diverge Analysis for Opening Year Cumulative (2023) Conditions

Freeway	Direction[1]	Ramp or Segment	Lanes on Freeway[2]	Without Project				With Project			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[3]	LOS[4]	Density[3]	LOS[4]	Density[3]	LOS[4]	Density[3]	LOS[4]
I-215 Freeway	SB	Off-Ramp at Ethanac Rd.	3	**35.9**	E	**42.5**	F	**36.1**	E	**43.2**	F
		On-Ramp at Ethanac Rd.	3	34.5	D	**39.0**	F	34.5	D	**39.0**	F
		Off-Ramp at McCall Bl.	3	**37.0**	E	**44.0**	F	**37.0**	E	**44.0**	F
		On-Ramp at McCall Bl.	3	**38.2**	E	**38.6**	E	**38.7**	E	**38.9**	E
	NB	On-Ramp at Ethanac Rd.	3	23.6	C	28.7	D	24.1	C	29.0	D
		Off-Ramp at Ethanac Rd.	3	29.1	D	31.9	D	29.1	D	31.9	D
		On-Ramp at McCall Bl.	3	26.9	C	28.7	D	26.9	C	28.7	D
		Off-Ramp at McCall Bl.	3	26.3	C	34.6	D	26.5	C	34.9	D

* **BOLD** = Unacceptable Level of Service

[1] NB = Northbound; SB = Southbound, EB = Eastbound; WB = Westbound

[2] Number of lanes are in the specified direction and is based on existing conditions.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

(Urban Crossroads, 2019d, Table 7-5)

As previously discussed, the Project would contribute to, but would not directly cause, the following LOS deficiencies under Opening Year Cumulative (2020) conditions; thus, Project impacts to the following freeway merge/diverge locations would be cumulatively considerable under Opening Year Cumulative (2023) conditions: (Urban Crossroads, 2019d, p. 177)

- I-215 Freeway Southbound, Off-Ramp at Ethanac Road (Merge/Diverge Location #1)
- I-215 Freeway Southbound, On-Ramp at Ethanac Road (Merge/Diverge Location #2)
- I-215 Freeway Southbound, Off-Ramp at McCall Boulevard (Merge/Diverge Location #3)
- I-215 Freeway Southbound, On-Ramp at McCall Bl. (Merge/Diverge Location #4)

There are no additional freeway ramp junctions anticipated to operate at unacceptable LOS with the addition of Project traffic. Thus, the Project would not result in any direct impacts to freeway merge/diverge analysis locations under Opening Year Cumulative (2023) conditions. Opening Year Cumulative Without and With Project conditions freeway ramp junction operations analysis worksheets are provided in Appendix 7.9 and Appendix 7.10, respectively, of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 177)

E. Opening Year Cumulative (2025) Traffic Conditions

This subsection discusses the methods used to develop Opening Year Cumulative (2025) Without and With Project Buildout (Phase 3) traffic forecasts, and the resulting intersection operations, roadway segment

operations, freeway mainline operations, and traffic signal warrant analyses. (Urban Crossroads, 2019d, p. 191)

The lane configurations and traffic controls assumed to be in place for Opening Year Cumulative (2025) conditions are as follows:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Opening Year Cumulative conditions (e.g., intersection and roadway improvements along the Project and cumulative development's frontage and driveways). Improvements include construction of site adjacent roadways (e.g., Rouse Road, Sherman Road, Chambers Avenue, etc.) and intersections needed for site access. (Urban Crossroads, 2019d, p. 191)

- Driveways and those facilities assumed to be constructed by other development projects to provide site access are also assumed to be in place for Opening Year Cumulative conditions (e.g., intersection and roadway improvements along the cumulative developments' frontages and driveways). (Urban Crossroads, 2019d, p. 191)

The Opening Year Cumulative (2025) Without Project conditions include existing traffic volumes plus an ambient growth factor of 17.17% plus traffic from pending and approved but not yet constructed known development projects in the area. The number of through lanes and intersection controls for Opening Year Cumulative (2025) conditions is shown on Exhibit 8-1 of the Project's TIA (*Technical Appendix K*). The ADT and AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2025) Without Project traffic conditions are shown on Exhibits 8-2 and 8-3, respectively, of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 191)

The Opening Year Cumulative (2025) With Project conditions include existing traffic volumes, an ambient growth factor of 17.17%, traffic from pending and approved but not yet constructed known development projects in the area, and the addition of Project (2025) traffic. The number of through lanes and intersection controls for Opening Year Cumulative (2025) conditions is shown on Exhibit 8-1 of the Project's TIA (*Technical Appendix K*). The ADT and AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2025) With Project Buildout (Phase 3) traffic conditions are shown on Exhibits 8-4 and 8-5, respectively, of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 191)

1. Intersection Operations Analysis – Opening Year Cumulative (2025)

LOS calculations were conducted for the study intersections to evaluate their operations under Opening Year Cumulative (2025) Without Project conditions with roadway and intersection geometrics as described above. The intersection analysis results are summarized in Table 4.14-45, *Intersection Analysis for Opening Year Cumulative (2025) Conditions*. The following intersections would be impacted under Opening Year Cumulative (2025) Without Project conditions; therefore, because the Project would contribute to but would not directly cause the projected deficiencies, Project impacts to the following intersections would be cumulatively considerable under Opening Year Cumulative (2025) conditions: (Urban Crossroads, 2019d, p. 197)

Table 4.14-45 Intersection Analysis for Opening Year Cumulative (2025) Conditions

#	Intersection	Traffic Control[2]	2025 Without Project				2025 With Project			
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Goetz Rd. & Ethanac Rd.	TS	**99.3**	**92.5**	**F**	**F**	**107.2**	**104.5**	**F**	**F**
2	Murrieta Rd. & Ethanac Rd.	TS	**121.2**	**140.1**	**F**	**F**	**124.6**	**150.2**	**F**	**F**
3	Murrieta Rd. & McCall Bl.	TS	28.4	35.7	C	D	30.8	39.0	C	D
4	Sun City Bl. & McCall Bl.	TS	33.6	48.6	C	D	34.8	51.9	C	D
5	Barnett Rd. & Ethanac Rd.	TS	18.6	15.1	B	B	18.6	15.3	B	B
6	Case Rd. & Ethanac Rd.	TS	23.1	28.3	C	C	24.2	28.7	C	C
7	Bradley Rd. & McCall Bl.	TS	**86.7**	**134.6**	**F**	**F**	**104.1**	**166.0**	**F**	**F**
8	Bradley Rd. & Cherry Hills Bl.	AWS	15.4	33.2	C	D	17.0	**45.9**	C	**E**
9	I-215 SB Ramps/SR-74 & Bonnie Dr.	TS	Not an Analysis Location				Not an Analysis Location			
10	I-215 SB Ramps & Ethanac Rd.	TS	**121.7**	**>200.0**	**F**	**F**	**134.2**	**>200.0**	**F**	**F**
11	I-215 SB Ramps & McCall Bl.	TS	44.8	**95.4**	D	**F**	**62.8**	**147.4**	**E**	**F**
12	I-215 NB Ramps & SR-74	TS	Not an Analysis Location				Not an Analysis Location			
13	I-215 NB Ramps & Ethanac Rd.	TS	**194.1**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**
14	I-215 NB Ramps & McCall Bl.	TS	25.2	**62.0**	C	**E**	37.5	**90.3**	D	**F**
15	Encanto Dr. & Ethanac Rd.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**
16	Encanto Dr. & McLaughlin Rd.	CSS	11.8	19.7	B	C	15.8	**62.3**	C	**F**
17	Encanto Dr. & Rouse Rd.	CSS/**TS**	17.3	17.5	C	C	25.2	28.6	C	C
18	Encanto Dr. & Chambers Av.	**TS**	Future Intersection				8.7	12.3	A	B
19	Encanto Dr. & Shadel Rd.	CSS	20.0	15.1	C	C	**46.0**	26.1	**E**	D
20	Encanto Dr. & McCall Bl.	TS	63.2	**93.4**	E	**F**	**114.4**	**189.6**	**F**	**F**
21	Trumble Rd. & SR-74	TS	Not an Analysis Location				Not an Analysis Location			
22	Trumble Rd. & Ethanac Rd.	TS	**159.7**	**>200.0**	**F**	**F**	**160.9**	**>200.0**	**F**	**F**
23	Trumble Rd. & Rouse Rd.	CSS	9.5	9.2	A	A	11.2	10.3	B	B
24	Brady Ln./St. A & Rouse Rd.	CSS	9.1	8.9	A	A	12.8	14.2	B	B
25	St. A & Chambers Av.	**CSS**	Future Intersection				9.6	9.8	A	A
26	Sherman Rd. & SR-74	TS	Not an Analysis Location				Not an Analysis Location			
27	Sherman Rd. & Ethanac Rd.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**
28	Sherman Rd. & McLaughlin Rd.	AWS	7.2	7.2	A	A	7.2	7.2	A	A
29	Sherman Rd. & Rouse Rd.	AWS	7.6	7.9	A	A	8.7	10.0	A	A
30	Sherman Rd. & St. B	**RA**	Future Intersection				4.8	5.1	A	A
31	Sherman Rd. & Chambers Av.	AWS	8.5	7.2	A	A	11.6	19.6	C	C
32	Sherman Rd. & Shadel Rd.	AWS	9.8	7.4	A	A	16.1	10.7	C	B
33	Sherman Rd. & McCall Bl.	TS	**96.7**	**55.4**	**F**	**E**	**152.9**	**88.0**	**F**	**F**
34	Dawson Rd. & Rouse Rd.	UC/**CSS**	0.0	0.0	A	A	13.5	10.3	B	B
35	St. C/Concord Ln. & Chambers Av.	CSS	8.6	8.6	A	A	12.0	11.3	B	B
36	Antelope Rd. & Ethanac Rd.	CSS	**>100.0**	**69.5**	**F**	**F**	**>100.0**	**69.5**	**F**	**F**
37	Antelope Rd. & Rouse Rd. (North)	**CSS**	12.4	15.3	B	B	12.4	15.3	B	C
38	Antelope Rd. & Rouse Rd. (South)	**CSS**	11.1	13.1	B	B	11.1	13.1	B	B
39	Antelope Rd. & Chambers Av.	**CSS**	10.6	11.8	B	B	10.6	11.8	B	B
40	Antelope Rd. & McCall Bl.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**

Table 4.14-45 Intersection Analysis for Opening Year Cumulative (2025) Conditions (Cont'd)

#	Intersection	Traffic Control[2]	2025 Without Project				2025 With Project			
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
41	Palomar Rd. & SR-74	TS	Not an Analysis Location				Not an Analysis Location			
42	Menifee Rd. & SR-74	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**
43	Menifee Rd. & Rouse Rd./Turtle Point Dr.	TS	15.9	13.8	B	B	16.6	14.2	B	B
44	Menifee Rd. & McCall Bl.	TS	**121.4**	**95.5**	**F**	**F**	**133.8**	**107.5**	**F**	**F**
45	Menifee Rd. & Simpson Rd.	TS	29.2	30.9	C	C	32.1	35.2	C	D
46	I-215 SB Ramps & Newport Rd.	TS	14.9	21.2	B	C	15.2	22.0	B	C
47	I-215 NB Ramps & Newport Rd.	TS	17.8	36.4	B	D	17.9	37.2	B	D

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] Per the 2010 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; RA = Roundabout; UC = Uncontrolled; **CSS** = Improvement

(Urban Crossroads, 2019d, Table 8-1)

- Goetz Rd. / Ethanac Rd. (Intersection #1)
- Murrieta Rd. / Ethanac Rd. (Intersection #2)
- Bradley Rd. / McCall Bl. (Intersection #7)
- I-215 SB Ramps / Ethanac Rd. (Intersection #10)
- I-215 NB Ramps / Ethanac Rd. (Intersection #13)
- Encanto Dr. / Ethanac Rd. (Intersection #15)
- Antelope Rd. / McCall Bl. (Intersection #40)
- Menifee Rd. / SR-74 (Intersection #42)
- Menifee Rd. / McCall Bl. (Intersection #44)

Although Table 4.14-45 shows that the following intersections would be impacted under Opening Year Cumulative (2025) conditions, the Project would contribute fewer than 50 peak hour trips to these intersections; thus, Project impacts to the following intersections would be less than significant:

- Trumble Rd. / Ethanac Rd. (Intersection #22)
- Sherman Rd. / Ethanac Rd. (Intersection #27)
- Antelope Rd. / Ethanac Rd. (Intersection #36)

As shown on Table 4.14-45 and illustrated on Exhibit 8-7 of the Project's TIA (*Technical Appendix K*), the addition of Project traffic is anticipated to degrade the projected LOS at the following locations from unacceptable LOS E to unacceptable LOS F under one or more peak hours; thus, Project impacts to the following intersections would represent direct impacts of the proposed project under Opening Year Cumulative (2025) conditions: (Urban Crossroads, 2019d, p. 197)

- Bradley Rd. / Cherry Hills Bl. (Intersection #8) – LOS E PM peak hour only
- I-215 SB Ramps / McCall Bl. (Intersection #11) – LOS E in the AM peak hour and LOS F in the PM peak hour
- I-215 NB Ramps / McCall Bl. (Intersection #14) – LOS F PM peak hour only
- Encanto Dr. / McLaughlin Rd. (Intersection #16) – LOS F PM peak hour only

- Encanto Dr. / Shadel Rd. (Intersection #19) – LOS E AM peak hour only
- Encanto Dr. / McCall Bl. (Intersection #20) – LOS F AM and PM peak hours
- Sherman Rd. / McCall Bl. (Intersection #33) – LOS F in AM and PM peak hours

Exhibit 8-6 of the Project's TIA (*Technical Appendix K*) summarizes the AM and PM peak hour study area intersection LOS under Opening Year Cumulative (2025) Without Project traffic conditions, consistent with the summary provided in Table 4.14-45. The intersection operations analysis worksheets for Opening Year Cumulative (2025) Without Project conditions are included in Appendix 8.1 of the Project's TIA (*Technical Appendix K*). The intersection operations analysis worksheets for Opening Year Cumulative (2025) With Project Buildout (Phase 3) traffic conditions are included in Appendix 8.2 of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 197)

2. Roadway Segment Capacity Analysis – Opening Year Cumulative (2025)

The City of Menifee TIA Guidelines provide roadway volume capacity values. These roadway segment capacities are approximate figures only, and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet traffic demand. Table 4.14-46, *Roadway Segment Capacity Analysis for Opening Year Cumulative (2025) Conditions*, provides a summary of the Opening Year Cumulative (2025) conditions roadway segment capacity analysis based on the City of Menifee Roadway Segment Capacity Thresholds. As shown in Table 4.14-46, the Project would contribute traffic to the following roadway segments that are projected to operate at a deficient LOS without the addition of Project traffic under Opening Year Cumulative (2025) Without Project traffic conditions; thus, because the Project would contribute to but would not directly cause the LOS deficiencies, Project impacts to the following roadway segments would be cumulatively considerable under Opening Year Cumulative (2025) conditions:

- Ethanac Rd., Goetz Rd. to Murrieta Rd. (Roadway Segment #5)
- Ethanac Rd., I-215 Freeway to Encanto Dr. (Roadway Segment #6)
- Ethanac Rd., Encanto Dr. to Trumble Rd. (Roadway Segment #7)
- Ethanac Rd., Trumble Rd. to Sherman Rd. (Roadway Segment #8)
- Ethanac Rd., Sherman Rd. to Antelope Rd. (Roadway Segment #9)
- McCall Bl., Bradley Rd. to the I-215 Freeway (Roadway Segment #21)
- McCall Bl., I-215 Freeway to Encanto Dr. (Roadway Segment #22)
- McCall Bl., Encanto Dr. to Sherman Rd. (Roadway Segment #23)
- McCall Bl., Sherman Rd. to Antelope Rd. (Roadway Segment #24)
- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25)
- Sherman Rd., Ethanac Rd. to McLaughlin Rd. (Roadway Segment #33)
- Menifee Rd., from Biscayne Ave to Rouse Rd. (Roadway Segment #43)

The roadway segment analysis results indicate that the addition of Project (2025) traffic is anticipated to degrade the projected LOS at the following road segments from acceptable LOS D or better or unacceptable LOS E to either LOS E or LOS F; thus, because the addition of Project traffic would cause the identified deficiencies, Project impacts to the following roadway segments would represent direct impacts under Opening Year Cumulative (2025) conditions:

Table 4.14-46 Roadway Segment Capacity Analysis for Opening Year Cumulative (2025) Conditions

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	2025 NP	V/C[2]	LOS[3]	Project Only Buildout	2025 WP	V/C[2]	LOS[3]	General Plan Classification
1	SR-74	Bonnie Dr. to I-215 NB Ramps	3D	Major	25,575	Not an Analysis Location			0	Not an Analysis Location			Major
2	SR-74	I-215 NB Ramps to Trumble Rd.	4D	Major	34,100	Not an Analysis Location			0	Not an Analysis Location			Major
3	Ethanac Rd.	Goetz Rd. to Murrieta Rd.	4D	Arterial	37,000	23,734	0.64	B	520	24,254	0.66	B	Expressway
4	Ethanac Rd.	Murrieta Rd. to Barnett Rd.	4D	Arterial	37,000	29,749	0.80	D	978	30,727	0.83	D	Expressway
5	Ethanac Rd.	Case Rd. to I-215 Freeway	4D	Arterial	37,000	**41,617**	**1.12**	**F**	1,560	**43,177**	**1.17**	**F**	Expressway
6	Ethanac Rd.	I-215 Freeway to Encanto Dr.	2U	Collector	13,000	**35,735**	**2.75**	**F**	4,478	**40,213**	**3.09**	**F**	Expressway
7	Ethanac Rd.	Encanto Dr. to Trumble Rd.	2U	Collector	13,000	**31,327**	**2.41**	**F**	124	**31,451**	**2.42**	**F**	Expressway
8	Ethanac Rd.	Trumble Rd. to Sherman Rd.	2U	Collector	13,000	**27,962**	**2.15**	**F**	124	**28,086**	**2.16**	**F**	Expressway
9	Ethanac Rd.	Sherman Rd. to Antelope Rd.	2U	Collector	13,000	**24,196**	**1.86**	**F**	0	**24,196**	**1.86**	**F**	Expressway
10	SR-74	Antelope Rd. to Palomar Rd.	--	Major	34,100	Not an Analysis Location			0	Not an Analysis Location			Expressway
11	Rouse Rd.	Encanto Dr. to Trumble Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	3,629	0.56	A	2,872	6,501	0.25	A	Secondary
12	Rouse Rd.	Brady Ln. to Sherman Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	2,237	0.34	A	2,352	4,589	0.18	A	Secondary
13	Rouse Rd.	Sherman Rd. to Dawson Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	1,939	0.30	A	1,382	3,321	0.13	A	Secondary
14	Rouse Rd.	Dawson Rd. to Antelope Rd.	**2U**	Secondary	12,950	1,316	0.10	A	0	1,316	0.10	A	Secondary
15	Rouse Rd.	Antelope Rd. (N) to Menifee Rd.	2U	Major	12,950	6,216	0.48	A	0	6,216	0.48	A	Major
16	Chambers Av.	Encanto Dr. to St. A	**4U**	Secondary	25,900	Does Not Exist			4,824	4,824	0.19	A	Secondary
17	Chambers Av.	St. A to Sherman Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	41	0.01	A	2,090	2,131	0.08	A	Secondary
18	Chambers Av.	Sherman Rd. to Concord Ln.	**4U**	Local/**Secondary**	6,500/**25,900**	557	0.09	A	1,560	2,117	0.08	A	Secondary
19	McCall Bl.	Murrieta Rd. to Sun City Bl.	4D	Major	34,100	19,208	0.56	A	1,408	20,616	0.60	A	Major
20	McCall Bl.	Sun City Bl. to Bradley Rd.	4D	Major	34,100	30,523	0.90	D	1,990	**32,513**	**0.95**	**E**	Major
21	McCall Bl.	Bradley Rd. to I-215 Freeway	4D	Major	34,100	**49,466**	**1.45**	**F**	3,154	**52,620**	**1.54**	**F**	Major
22	McCall Bl.	I-215 Freeway to Encanto Dr.	4D	Major	34,100	**54,321**	**1.59**	**F**	6,394	**60,715**	**1.78**	**F**	Urban Arterial
23	McCall Bl.	Encanto Dr. to Sherman Rd.	4D	Major	34,100	**44,253**	**1.30**	**F**	4,134	**48,387**	**1.42**	**F**	Urban Arterial
24	McCall Bl.	Sherman Rd. to Antelope Rd.	4D	Major	34,100	**38,133**	**1.12**	**F**	2,852	**40,985**	**1.20**	**F**	Urban Arterial
25	McCall Bl.	Antelope Rd. to Menifee Rd.	2D	Major	17,050	**34,887**	**2.05**	**F**	2,606	**37,493**	**2.20**	**F**	Urban Arterial
26	Trumble Rd.	North of Ethanac Rd.	2U	Collector	13,000	2,321	0.18	A	0	2,321	0.18	A	Collector
27	Encanto Dr.	Ethanac Rd. to McLaughlin Rd.	2U	Collector	13,000	11,028	0.85	D	4,602	**15,630**	**1.20**	**F**	Major
28	Encanto Dr.	McLaughlin Rd. to Rouse Rd.	2U	Collector	13,000	7,637	0.59	A	4,602	**12,239**	**0.94**	**E**	Major
29	Encanto Dr.	Rouse Rd. to Chambers Av.	**4D**	Collector/**Major**	13,000/**34,100**	8,777	0.68	B	4,518	13,295	0.39	A	Major
30	Encanto Dr.	Chambers Av. to Shadel Rd.	2U	Collector	13,000	9,276	0.71	C	5,224	**14,500**	**1.12**	**F**	Major
31	Encanto Dr.	Shadel Rd. to McCall Bl.	2U	Collector	13,000	10,303	0.79	C	5,162	**15,465**	**1.19**	**F**	Major

Table 4.14-46 Roadway Segment Capacity Analysis for Opening Year Cumulative (2025) Conditions (Cont'd)

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	2025 NP	V/C[2]	LOS[3]	Project Only Buildout	2025 WP	V/C[2]	LOS[3]	General Plan Classification
32	Sherman Rd.	SR-74 to Ethanac Rd.	2U	Local	6,500	**6,435**	**0.99**	**E**	124	**6,559**	**1.01**	**F**	Major
33	Sherman Rd.	Ethanac Rd. to McLaughlin Rd.	2U	Local	6,500	**15,024**	**2.31**	**F**	0	**15,024**	**2.31**	**F**	Major
34	Sherman Rd.	McLaughlin Rd. to Rouse Rd.	2U	Local	6,500	421	0.06	A	62	483	0.07	A	Major
35	Sherman Rd.	Rouse Rd. to St. B	**4D**	Major	34,100	Does Not Exist			1,824	1,824	0.05	A	Major
36	Sherman Rd.	St. B to Chambers Av.	**4D**	Major	34,100	Does Not Exist			3,664	3,664	0.11	A	Major
37	Sherman Rd.	Chambers Av. to Shadel Rd.	4D	Major	34,100	595	0.02	A	5,100	5,695	0.17	A	Major
38	Sherman Rd.	Shadel Rd. to McCall Bl.	3D	Major	25,575	2,912	0.11	A	4,916	7,828	0.31	A	Major
39	Antelope Rd.	Rouse Rd. (N) to Rouse Rd. (S)	**2U**	Major	17,050	5,000	0.29	A	0	5,000	0.29	A	Major
40	Antelope Rd.	Rouse Rd. (S) to Chambers Av.	**2U**	Major	17,050	3,954	0.23	A	0	3,954	0.23	A	Major
41	Antelope Rd.	Chambers Av. to McCall Bl.	**4D**	Major	34,100	5,492	0.16	A	0	5,492	0.16	A	Major
42	Menifee Rd.	SR-74 to Biscayne Av.	4D	Arterial	37,000	25,414	0.69	B	918	26,332	0.71	C	Urban Arterial
43	Menifee Rd.	Biscayne Av. to Rouse Rd.	2U	Collector	13,000	**25,414**	**1.95**	**F**	918	**26,332**	**2.03**	**F**	Urban Arterial
44	Menifee Rd.	Rouse Rd. to McCall Bl.	4D	Major	34,100	28,028	0.82	D	918	28,946	0.85	D	Urban Arterial
45	Menifee Rd.	McCall Bl. to Simpson Rd.	4D	Major	34,100	15,054	0.44	A	614	15,668	0.46	A	Arterial

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

4U = Improvement

[1] These maximum roadway capacities have been extracted from the following source: City of Menifee Traffic Impact Analysis Guidelines and Requirements (Attachment B). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. By using the LOS E capacity for each roadway facility type, volume-to-capacity (v/c) values between 0.00-0.60 will represent LOS A, 0.61-0.70 will represent LOS B, 0.71-0.80 will represent LOS C, 0.81-0.90 will represent LOS D, 0.91-1.00 will represent LOS E, and v/c values greater than 1.00 will represent LOS F operations. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] v/c = Volume to Capacity ratio

[3] LOS = Level of Service

[4] Where the average daily volume (ADT) based roadway segment analysis indicates a deficiency (unacceptable LOS), a review of the more detailed peak hour intersection analysis is undertaken. The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. While this traffic study recognizes LOS D is the City's target LOS for roadway segments, a review of the more detailed peak hour intersection analysis is necessary to determine whether roadway widening along the segment is necessary. For the purposes of this analysis, if the peak hour intersection operations on either side of the roadway segment are anticipated to operate at LOS D or better, then additional roadway segment widening is not recommended. Therefore, for the purposes of this assessment, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes. Furthermore, it is likely that a roadway segment can have a volume-to-capacity ratio of up to 1.10 if the adjacent intersections are anticipated to operate at acceptable LOS, without the need for additional widening. As the LOS threshold for the study area intersections is LOS D, LOS D have also been utilized as the minimum LOS criteria for roadway segments for the purposes of this analysis.

(Urban Crossroads, 2019d, Table 8-2)

- McCall Bl., Sun City Bl. to Bradley Rd. (Roadway Segment #20) – LOS E
- Encanto Dr., Ethanac Rd. to McLaughlin Rd. (Roadway Segment #27) – LOS F
- Encanto Dr., McLaughlin Rd. to Rouse Rd. (Roadway Segment #28) – LOS E
- Encanto Dr., Chambers Dr. to Shadel Rd. (Roadway Segment #30) – LOS F
- Encanto Dr., Shadel Rd. to McCall Blvd. (Roadway Segment #31) – LOS E
- Sherman Rd., SR-74 to Ethanac Rd. (Roadway Segment #32) – LOS F

3. Traffic Signal Warrants Analysis – Opening Year Cumulative (2025)

Traffic signal warrants have been performed on unsignalized intersections that have not warranted a signal under Existing conditions for Opening Year Cumulative Without Project traffic conditions. As shown in Table 4.14-47, *Traffic Signal Warrants Analysis for Opening Year Cumulative (2025) Conditions*, for Opening Year Cumulative (2025) conditions, the following intersection appears to meet the signal warrant; however, the LOS data in Table 4.14-45 demonstrates that the following intersection would operate at an acceptable LOS B during the a.m. peak hour and LOS D during the p.m. peak hour without a traffic signal. Accordingly, impacts due to the signal warrant at the following intersection would be less than significant under Opening Year Cumulative (2025) conditions:

- Encanto Drive at Chambers Avenue (Intersection #18)

As shown in Table 4.14-47, the addition of Project traffic to the following intersection would represent a direct impact of the Project because the addition of Project traffic would directly cause the need for signalization: (Urban Crossroads, 2019d, p. 202)

- Encanto Drive at Shadel Road (Intersection #19): Peak Hour Warrant Met

The following locations were previously shown to meet signal warrants in previous scenarios; thus, Project impacts to the following locations would be cumulatively considerable under Opening Year Cumulative (2025) conditions: (Urban Crossroads, 2019d, p. 202)

- Encanto Drive at Ethanac Road (Intersection #15)
- Encanto Drive at McLaughlin Road (Intersection #16)
- Encanto Drive at Rouse Road (Intersection #17)
- Antelope Road at McCall Boulevard (Intersection #40)

Although Table 4.14-47 indicates the following intersections would operate at a deficient LOS, the Project would contribute fewer than 50 peak hour trips to these locations; therefore, Project impacts to the following intersections would be less than significant:

- Sherman Road at Ethanac Road (Intersection #27)
- Antelope Road at Ethanac Road (Intersection #36)

As noted previously, a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this 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 LOS. (Urban Crossroads, 2019d, p. 203)

Table 4.14-47 Traffic Signal Warrants Analysis for Opening Year Cumulative (2025) Conditions

	INTERSECTION	2025 NP	2025 WP
8	Bradley Rd. & Cherry Hills Bl.		
15	Encanto Dr. & Ethanac Rd.		
16	Encanto Dr. & McLaughlin Rd.		
17	Encanto Dr. & Rouse Rd.		
18	Encanto Dr. & Chambers Av.	DNE	
19	Encanto Dr. & Shadel Rd.		PH
23	Trumble Rd. & Rouse Rd.		
24	Brady Ln./St. A & Rouse Rd.		
25	St. A & Chambers Av.	DNE	
27	Sherman Rd. & Ethanac Rd.		
28	Sherman Rd. & McLaughlin Rd.		
29	Sherman Rd. & Rouse Rd.		
31	Sherman Rd. & Chambers Av.		
32	Sherman Rd. & Shadel Rd.		
34	Dawson Rd. & Rouse Rd.		
35	St. C/Concord Ln. & Chambers Av.		
36	Antelope Rd. & Ethanac Rd.		
37	Antelope Rd. & Rouse Rd. (North)		
38	Antelope Rd. & Rouse Rd. (South)		
39	Antelope Rd. & Chambers Av.		
40	Antelope Rd. & McCall Bl.		

= Warranted under a previous scenario

DNE = Does not Exist

PH = Peak Hour Warrant Met

ADT = Daily Volume Warrant Met

(Urban Crossroads, 2019d, p. 189)

4. Off-Ramp Queuing Analysis – Opening Year Cumulative (2025)

A queuing analysis was performed for the northbound and southbound off-ramps at the I-215 Freeway and Ethanac Road, McCall Boulevard, and Newport Road interchanges to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially "spill back" onto the I-215 Freeway mainline. Queuing analysis findings are presented in Table 4.14-48, *Freeway Off-Ramp Queuing Summary for Opening Year Cumulative (2025) Conditions*, for Opening Year Cumulative (2025) traffic conditions. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. (Urban Crossroads, 2019d, p. 205)

As shown on Table 4.14-48, there are no queuing issues anticipated during the AM or PM peak 95th percentile traffic flows for Opening Year Cumulative (2025) Without Project traffic conditions. The addition of Project traffic is not anticipated to result in any potential queuing issues; thus, Project impacts to off-ramp queuing locations would be less than significant under Opening Year Cumulative (2025) conditions. Worksheets for Opening Year Cumulative (2025) Without Project conditions off-ramp queuing analysis are provided in TIA Appendix 8.5, while worksheets for Opening Year Cumulative (2025) With Project conditions off-ramp queuing analysis are provided in Appendix 8.8 of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 207)

Table 4.14-48 Freeway Off-Ramp Queuing Summary for Opening Year Cumulative (2025) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	Without Project				With Project			
			95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Ramps & Ethanac Rd.	SBL/T	1,450	350 [2]	392 [2]	Yes	Yes	439	574 [2]	Yes	Yes
	SBR	240	224 [2]	404 [2]	Yes	Yes[3]	224 [2]	404 [2]	Yes	Yes[3]
I-215 SB Ramps & McCall Bl.	SBL/T	1,440	459 [2]	754 [2]	Yes	Yes	471 [2]	814 [2]	Yes	Yes
	SBR	450	390 [2]	817 [2]	Yes	Yes[3]	434 [2]	848 [2]	Yes	Yes[3]
I-215 NB Ramps & Ethanac Rd.	NBL/T	1,440	478 [2]	531 [2]	Yes	Yes	848 [2]	531 [2]	Yes	Yes
	NBR	270	305 [2]	337 [2]	Yes[3]	Yes[3]	309 [2]	337 [2]	Yes[3]	Yes[3]
I-215 NB Ramps & McCall Bl.	NBL/T	1,870	286 [2]	581 [2]	Yes	Yes	309 [2]	569 [2]	Yes	Yes
	NBR	240	139	588 [2]	Yes	Yes[3]	287 [2]	825 [2]	Yes[3]	Yes[3]
I-215 SB Ramps & Newport Rd.	SBL	1,660	397	690 [2]	Yes	Yes	414	711 [2]	Yes	Yes
	SBR	1,660	371	410	Yes	Yes	377	416	Yes	Yes
I-215 NB Ramps & Newport Rd.	NBL	1,520	443	767 [2]	Yes	Yes	443	767 [2]	Yes	Yes
	NBR	1,520	390	489	Yes	Yes	390	489	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-215 Freeway mainline.

(Urban Crossroads, 2019d, Table 8-3)

5. Basic Freeway Segment Analysis – Opening Year Cumulative (2025)

Opening Year Cumulative (2025) Without and With Project peak hour mainline directional volumes are provided on Exhibits 8-7 and 8-8, respectively, of the Project's TIA (*Technical Appendix K*). As shown on Table 4.14-49, *Basic Freeway Segment Analysis for Opening Year Cumulative (2025) Conditions*, there are no additional I-215 Freeway segments anticipated to operate at an unacceptable LOS during the peak hours for Opening Year Cumulative (2025) Without Project traffic conditions, in addition to those previously identified under Opening Year Cumulative (2023) Without Project traffic conditions. As previously noted under Opening Year Cumulative (2020) and Opening Year Cumulative (2023) conditions, the Project would contribute traffic to, but would not directly cause, deficient LOS along the following freeway segments; thus, Project impacts to the following freeway segments would be cumulatively considerable under Opening Year Cumulative (2023) conditions: (Urban Crossroads, 2019d, p. 207)

- I-215 Freeway Southbound, Case Rd. to Ethanac Rd. (Freeway Segment #1) – LOS E PM peak hour only
- I-215 Freeway Southbound, Ethanac Rd. to McCall Bl. (Freeway Segment #2) – LOS E PM peak hour only
- I-215 Freeway Southbound, McCall Bl. to Newport Rd. (Freeway Segment #3) – LOS E AM and PM peak hours

Table 4.14-49 Basic Freeway Segment Analysis for Opening Year Cumulative (2025) Conditions

Freeway	Direction[1]	Mainline Segment	Lanes[2]	Without Project				With Project			
				Density[3]		LOS[4]		Density[3]		LOS[4]	
				AM	PM	AM	PM	AM	PM	AM	PM
I-215 Freeway	SB	SR-74 to Ethanac Rd.	3	**40.3**	**61.0**	E	F	**41.4**	**65.8**	E	F
		Ethanac Rd. to McCall Bl.	3	**43.7**	**66.9**	E	F	**43.8**	**67.4**	E	F
		McCall Bl. to Newport Rd.	3	**50.3**	**56.8**	F	F	**52.5**	**58.9**	F	F
	NB	SR-74 to Ethanac Rd.	3	23.1	30.2	C	D	23.9	31.4	C	D
		Ethanac Rd. to McCall Bl.	3	24.6	29.5	C	D	24.7	29.6	C	D
		McCall Bl. to Newport Rd.	3	21.2	33.7	C	D	21.6	34.7	C	D

* **BOLD** = Unacceptable Level of Service

[1] NB = Northbound; SB = Southbound

[2] Number of lanes are in the specified direction and is based on existing conditions.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

(Urban Crossroads, 2019d, Table 8-4)

Table 4.14-49 shows that the addition of Project traffic is not anticipated to result in any additional LOS deficiencies, beyond those identified above. Opening Year Cumulative Without and With Project conditions basic freeway segment analysis worksheets are provided in Appendix 8.7 and Appendix 8.8, respectively, of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 207)

6. Freeway Merge/Diverge Analysis – Opening Year Cumulative (2025)

Ramp merge and diverge operations were also evaluated for Opening Year Cumulative (2025) Without and With Project conditions and the results of this analysis are presented in Table 4.14-50, *Freeway Ramp Junction Merge/Diverge Analysis for Opening Year Cumulative (2025) Conditions*. As previously discussed, the Project would contribute to, but would not directly cause, the following LOS deficiencies under Opening Year Cumulative (2020) and/or Opening Year Cumulative (2023) conditions; thus, Project impacts to the following freeway merge/diverge locations would be cumulatively considerable under Opening Year Cumulative (2025) conditions: (Urban Crossroads, 2019d, p. 207)

- I-215 Freeway Southbound, Off-Ramp at Ethanac Road (Merge/Diverge Location #1)
- I-215 Freeway Southbound, On-Ramp at Ethanac Rd. (Merge/Diverge Location #2)
- I-215 Freeway Southbound, Off-Ramp at McCall Boulevard (Merge/Diverge Location #3)
- I-215 Freeway Southbound, On-Ramp at McCall Bl. (Merge/Diverge Location #4)

Table 4.14-50 Freeway Ramp Junction Merge/Diverge Analysis for Opening Year Cumulative (2025) Conditions

Freeway	Direction[1]	Ramp or Segment	Lanes on Freeway[2]	Without Project				With Project			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[3]	LOS[4]	Density[3]	LOS[4]	Density[3]	LOS[4]	Density[3]	LOS[4]
I-215 Freeway	SB	Off-Ramp at Ethanac Rd.	3	**38.4**	E	**49.1**	F	**39.1**	E	**50.7**	F
		On-Ramp at Ethanac Rd.	3	**37.6**	E	**45.2**	F	**37.6**	E	**45.4**	F
		Off-Ramp at McCall Bl.	3	**40.6**	E	**51.0**	F	**40.7**	E	**51.2**	F
		On-Ramp at McCall Bl.	3	**41.6**	F	**43.3**	F	**42.5**	F	**44.3**	F
	NB	On-Ramp at Ethanac Rd.	3	26.0	C	32.1	D	26.9	C	33.1	D
		Off-Ramp at Ethanac Rd.	3	31.4	D	34.5	D	31.4	D	43.6	D
		On-Ramp at McCall Bl.	3	29.5	D	31.6	D	29.5	D	31.7	D
		Off-Ramp at McCall Bl.	3	28.4	D	**37.1**	E	28.9	D	**38.1**	E

* **BOLD** = Unacceptable Level of Service

[1] NB = Northbound; SB = Southbound, EB = Eastbound; WB = Westbound

[2] Number of lanes are in the specified direction and is based on existing conditions.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

(Urban Crossroads, 2019d, Table 8-5)

As shown in Table 4.14-50, the following I-215 Freeway ramp merge and diverge location is anticipated to operate at unacceptable LOS for Opening Year Cumulative (2025) Without Project traffic conditions in addition to those listed above; thus, because the Project would contribute to but would not cause the freeway ramp merge and diverge to operate at an unacceptable LOS, Project impacts to the following merge/diverge analysis location would be cumulatively considerable: (Urban Crossroads, 2019d, p. 207)

- I-215 Freeway Northbound, Off-Ramp at McCall Bl. (Merge/Diverge Location #8) – LOS E PM peak hour only

There are no additional freeway ramp junctions anticipated to operate at unacceptable LOS with the addition of Project traffic; thus, the Project would not result in any direct impacts to freeway merge/diverge locations under Opening Year Cumulative (2025) conditions. Opening Year Cumulative Without and With Project conditions freeway ramp junction operations analysis worksheets are provided in Appendix 8.9 and Appendix 8.10, respectively, of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 207)

F. Horizon Year (2040) Traffic Conditions

This subsection discusses the methods used to develop Horizon Year (2040) Without and With Project Buildout traffic forecasts, and the resulting intersection operations, roadway segment, freeway mainline operations, and traffic signal warrant analyses. (Urban Crossroads, 2019d, p. 223)

The lane configurations and traffic controls assumed to be in place for Horizon Year (2040) conditions are the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are assumed to be in place for Horizon Year conditions (e.g., intersection and roadway improvements along the Project and cumulative development's frontage and driveways). Improvements include construction of site adjacent roadways (e.g., Rouse Road, Sherman Road, Chambers Avenue, etc.) and intersections needed for site access.

- Driveways and those facilities assumed to be constructed by other development projects to provide site access are also assumed to be in place for Horizon Year conditions (e.g., intersection and roadway improvements along the cumulative developments' frontages and driveways).

- The closure of Encanto Drive at Ethanac Road is assumed with the buildout of the Perris Towne Center project.

The Horizon Year (2040) Without Project Traffic Volume Forecasts scenario includes the refined post-processed volumes obtained from the RivTAM, less Project volumes. The number of through lanes and intersection controls for Horizon Year (2040) conditions is shown on Exhibit 9-1 of the Project's TIA (*Technical Appendix K*). The ADT and AM and PM peak hour volumes which can be expected for Horizon Year Without Project traffic conditions are shown on Exhibits 9-2 and 9-3, respectively, of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 223)

The Horizon Year (2040) With Project Buildout Traffic Volume Forecasts scenario includes the refined post-processed volumes obtained from the RivTAM. The number of through lanes and intersection controls for Horizon Year (2040) conditions is shown on Exhibit 9-1 of the Project's TIA (*Technical Appendix K*). The ADT and AM and PM peak hour volumes which can be expected for Horizon Year With Project Buildout traffic conditions are shown on Exhibits 9-4 and 9-5, respectively, of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 223)

1. Intersection Operations Analysis – Horizon Year (2040)

LOS calculations were conducted for the study intersections to evaluate their operations under Horizon Year (2040) Without and With Project conditions with existing roadway and intersection geometrics consistent with Exhibit 3-1 of the Project's TIA (*Technical Appendix K*) and as described above. The intersection analysis results are summarized in Table 4.14-51, *Intersection Analysis for Horizon Year (2040) Conditions*. As shown in Table 4.14-51, the following intersections would operate at an unacceptable level of service under Horizon Year (2040) conditions without the addition of Project traffic; therefore, because the Project would contribute traffic to, but would not cause, the LOS deficiencies at the following intersections, the Project's impacts to the following intersections would be cumulatively considerable: (Urban Crossroads, 2019d, pp. 229, 232)

Table 4.14-51 Intersection Analysis for Horizon Year (2040) Conditions

#	Intersection	Traffic Control[2]	2040 Without Project				2040 With Project			
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Goetz Rd. & Ethanac Rd.	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**
2	Murrieta Rd. & Ethanac Rd.	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**
3	Murrieta Rd. & McCall Bl.	TS	41.7	**55.2**	D	**E**	43.0	**58.0**	D	**E**
4	Sun City Bl. & McCall Bl.	TS	**63.6**	**194.5**	**E**	**F**	**67.4**	**>200.0**	**E**	**F**
5	Barnett Rd. & Ethanac Rd.	TS	**143.9**	**192.1**	**F**	**F**	**154.9**	**>200.0**	**F**	**F**
6	Case Rd. & Ethanac Rd.	TS	**155.8**	**145.8**	**F**	**F**	**155.9**	**158.0**	**F**	**F**
7	Bradley Rd. & McCall Bl.	TS	**172.6**	**>200.0**	**F**	**F**	**180.0**	**>200.0**	**F**	**F**
8	Bradley Rd. & Cherry Hills Bl.	AWS	27.0	**>100.0**	D	**F**	29.6	**>100.0**	D	**F**
9	I-215 SB Ramps/SR-74 & Bonnie Dr.	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**
10	I-215 SB Ramps & Ethanac Rd.	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**
11	I-215 SB Ramps & McCall Bl.	TS	**160.1**	**>200.0**	**F**	**F**	**164.1**	**>200.0**	**F**	**F**
12	I-215 NB Ramps & SR-74	TS	**157.1**	**183.1**	**F**	**F**	**161.8**	**192.1**	**F**	**F**
13	I-215 NB Ramps & Ethanac Rd.	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**
14	I-215 NB Ramps & McCall Bl.	TS	**85.9**	**>200.0**	**F**	**F**	**92.3**	**>200.0**	**F**	**F**
15	Encanto Dr. & Ethanac Rd.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**
16	Encanto Dr. & McLaughlin Rd.	CSS	16.9	**>100.0**	C	**F**	22.4	**>100.0**	C	**F**
17	Encanto Dr. & Rouse Rd.	CSS/**TS**	32.2	**36.7**	D	**E**	49.1	**61.9**	D	**E**
18	Encanto Dr. & Chambers Av.	**TS**	Future Intersection				9.1	**63.2**	C	**E**
19	Encanto Dr. & Shadel Rd.	CSS	**>100.0**	**73.2**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**
20	Encanto Dr. & McCall Bl.	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**
21	Trumble Rd. & SR-74	TS	**123.1**	**93.8**	**F**	**F**	**126.8**	**109.3**	**F**	**F**
22	Trumble Rd. & Ethanac Rd.	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**
23	Trumble Rd. & Rouse Rd.	CSS	10.9	10.2	B	B	12.3	12.3	B	B
24	Brady Ln./St. A & Rouse Rd.	CSS	10.0	9.2	B	A	14.3	24.1	B	C
25	St. A & Chambers Av.	**CSS**	Future Intersection				11.4	15.5	B	C
26	Sherman Rd. & SR-74	TS	**185.7**	**>200.0**	**F**	**F**	**186.8**	**>200.0**	**F**	**F**
27	Sherman Rd. & Ethanac Rd.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**
28	Sherman Rd. & McLaughlin Rd.	AWS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**
29	Sherman Rd. & Rouse Rd.	AWS	15.9	22.4	C	C	**>100.0**	**>100.0**	**F**	**F**
30	Sherman Rd. & St. B	**RA**	Future Intersection				11.9	17.3	B	C
31	Sherman Rd. & Chambers Av.	AWS	14.9	33.3	B	D	**>100.0**	**>100.0**	**F**	**F**
32	Sherman Rd. & Shadel Rd.	AWS	15.0	8.6	B	A	23.6	10.9	C	B
33	Sherman Rd. & McCall Bl.	TS	**171.2**	**150.1**	**F**	**F**	**191.0**	**>200.0**	**F**	**F**
34	Dawson Rd. & Rouse Rd.	UC/**CSS**	0.0	0.0	A	A	13.8	24.3	B	C
35	St. C/Concord Ln. & Chambers Av.	CSS	25.7	15.2	D	C	15.9	19.6	C	C
36	Antelope Rd. & Ethanac Rd.	CSS	**54.8**	**>100.0**	**F**	**F**	**58.5**	**>100.0**	**F**	**F**
37	Antelope Rd. & Rouse Rd. (North)	**CSS**	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**
38	Antelope Rd. & Rouse Rd. (South)	**CSS**	19.9	**70.7**	C	**F**	28.7	**>100.0**	D	**F**
39	Antelope Rd. & Chambers Av.	**CSS**	19.8	**52.3**	C	**F**	23.5	**88.9**	C	**F**
40	Antelope Rd. & McCall Bl.	CSS	32.8	**>100.0**	D	**F**	35.0	**>100.0**	D	**F**

Table 4.14-51 Intersection Analysis for Horizon Year (2040) Conditions (Cont'd)

#	Intersection	Traffic Control[2]	2040 Without Project				2040 With Project			
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
41	Palomar Rd. & SR-74	TS	**131.1**	**77.0**	**F**	**E**	**137.2**	**82.3**	**F**	**F**
42	Menifee Rd. & SR-74	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**
43	Menifee Rd. & Rouse Rd./Turtle Point Dr.	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**
44	Menifee Rd. & McCall Bl.	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**
45	Menifee Rd. & Simpson Rd.	TS	**59.8**	**>200.0**	**E**	**F**	**61.9**	**>200.0**	**E**	**F**
46	I-215 SB Ramps & Newport Rd.	TS	20.7	**66.8**	C	**E**	21.4	**67.3**	C	**E**
47	I-215 NB Ramps & Newport Rd.	TS	49.8	**112.4**	D	**F**	50.3	**113.2**	D	**F**

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] Per the 2010 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; RA = Roundabout; UC = Uncontrolled;**CSS** = Improvement

[3] Intersection is assumed to be vacated with the buildout of the Perris Towne Center Project.

(Urban Crossroads, 2019d, Table 9-1)

- Goetz Rd. / Ethanac Rd. (Intersection #1)
- Murrieta Rd. / Ethanac Rd. (Intersection #2)
- Murrieta Rd. / McCall Bl. (Intersection #3)
- Sun City Bl. / McCall Bl. (Intersection #4)
- Barnett Rd. / Ethanac Rd. (Intersection #5)
- Case Rd. / Ethanac Rd. (Intersection #6)
- Bradley Rd. / McCall Bl. (Intersection #7)
- I-215 SB Ramps / Bonnie Dr. (Intersection #9)
- I-215 SB Ramps / Ethanac Rd. (Intersection #10)
- I-215 SB Ramps / McCall Bl. (Intersection #11)
- I-215 NB Ramps / SR-74 (Intersection #12)
- I-215 NB Ramps / Ethanac Rd. (Intersection #13)
- I-215 NB Ramps / McCall Bl. (Intersection #14)
- Encanto Dr. / Ethanac Rd. (Intersection #15)
- Encanto Dr. / McLaughlin Rd. (Intersection #16)
- Encanto Dr. / Rouse Rd. (Intersection #17)
- Encanto Dr. / Shadel Rd. (Intersection #19)
- Encanto Dr. / McCall Bl. (Intersection #20)
- Trumble Rd. / SR-74 (Intersection #21)
- Trumble Rd. / Ethanac Rd. (Intersection #22)
- Sherman Rd. / SR-74 (Intersection #26)
- Sherman Rd. / Ethanac Rd. (Intersection #27)
- Sherman Rd. / McLaughlin Rd. (Intersection #28)
- Sherman Rd. / McCall Bl. (Intersection #33)
- Antelope Rd. / Ethanac Rd. (Intersection #36)
- Antelope Rd. / Rouse Rd. (North) (Intersection #37)
- Antelope Rd. / Rouse Rd. (South) (Intersection #38)
- Antelope Rd. / Chambers Av. (Intersection #39)

- Antelope Rd. / McCall Bl. (Intersection #40)
- Menifee Rd. / SR-74 (Intersection #42)
- Menifee Rd. / Rouse Rd./Turtle Point Dr. (Intersection #43)
- Menifee Rd. / McCall Bl. (Intersection #44)

As shown Table 4.14-51, the following intersections would operate at an unacceptable level of service under Horizon Year (2040) conditions. However, these intersections were previously shown to operate at an acceptable LOS under Opening Year Cumulative (2025) conditions with the addition of Project traffic. Therefore, because the Project would contribute to but would not directly cause the projected LOS deficiency, Project impacts to the following intersection would be cumulatively considerable under Horizon Year (2040) conditions:

- Encanto Dr. / Chambers Av. (Intersection #18) – LOS F PM peak hour only
- Sherman Rd. / Rouse Rd. (Intersection #29) – LOS F AM and PM peak hours
- Sherman Rd. / Chambers Av. (Intersection #31) – LOS F AM and PM peak hours

Under Horizon Year (2040) conditions, the Project would contribute fewer than 50 peak hour trips to the following intersections that are shown as operating at a deficient LOS in Table 4.14-51; accordingly, Project impacts to the following intersections would be less than significant.

- Bradley Rd. / Cherry Hills Bl. (Intersection #8)
- Menifee Rd. / Simpson Rd. (Intersection #45)
- I-215 SB Ramps / Newport Rd. (Intersection #46)
- I-215 NB Ramps / Newport Rd. (Intersection #47)

As shown on Table 4.14-51, the addition of Project traffic is anticipated to cause the following additional study area intersections to operate at unacceptable LOS (i.e., LOS E or worse) in addition to those described above: (Urban Crossroads, 2019d, pp. 229, 232)

- Palomar Rd. / SR-74 (Intersection #41) – LOS F AM and PM peak hours

The intersection operations analysis worksheets for Horizon Year Without Project conditions are included in Appendix 9.1 of the Project's TIA, while the intersection operations analysis worksheets for Horizon Year With Project conditions are included in Appendix 9.2 of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 232)

2. Roadway Segment Capacity Analysis – Horizon Year (2040)

The City of Menifee TIA Guidelines provide roadway volume capacity values. These roadway segment capacities are approximate figures only, and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet traffic demand. Table 4.14-52, *Roadway Segment Capacity Analysis for Horizon Year (2040) Conditions*, provides a summary of the Horizon Year (2040) conditions roadway segment capacity analysis based on the City of Menifee Roadway Segment Capacity Thresholds. As shown in Table 4.14-52, the following roadway segments would operate at a deficient LOS with or without the addition of Project traffic; therefore, the Project's impacts to the following roadway segments would be cumulatively considerable (Urban Crossroads, 2019d, p. 232):

Table 4.14-52 Roadway Segment Capacity Analysis for Horizon Year (2040) Conditions

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	2040 NP	V/C[2]	LOS[3]	Project Only 2040	2040 WP	V/C[2]	LOS[3]	General Plan Classification
1	SR-74	Bonnie Dr. to I-215 NB Ramps	3D	Major	25,575	**30,470**	**1.19**	**F**	690	**31,160**	**1.22**	**F**	Major
2	SR-74	I-215 NB Ramps to Trumble Rd.	4D	Major	34,100	**52,294**	**1.53**	**F**	922	**53,216**	**1.56**	**F**	Major
3	Ethanac Rd.	Goetz Rd. to Murrieta Rd.	4D	Arterial	37,000	**50,544**	**1.37**	**F**	768	**51,312**	**1.39**	**F**	Expressway
4	Ethanac Rd.	Murrieta Rd. to Barnett Rd.	4D	Arterial	37,000	**57,358**	**1.55**	**F**	1,076	**58,434**	**1.58**	**F**	Expressway
5	Ethanac Rd.	Case Rd. to I-215 Freeway	4D	Arterial	37,000	**52,168**	**1.41**	**F**	1,690	**53,858**	**1.46**	**F**	Expressway
6	Ethanac Rd.	I-215 Freeway to Encanto Dr.	2U	Collector	13,000	**63,472**	**4.88**	**F**	3,686	**67,158**	**5.17**	**F**	Expressway
7	Ethanac Rd.	Encanto Dr. to Trumble Rd.	2U	Collector	13,000	**60,204**	**4.63**	**F**	1,996	**62,200**	**4.78**	**F**	Expressway
8	Ethanac Rd.	Trumble Rd. to Sherman Rd.	2U	Collector	13,000	**60,724**	**4.67**	**F**	2,304	**63,028**	**4.85**	**F**	Expressway
9	Ethanac Rd.	Sherman Rd. to Antelope Rd.	2U	Collector	13,000	**57,412**	**4.42**	**F**	922	**58,334**	**4.49**	**F**	Expressway
10	SR-74	Antelope Rd. to Palomar Rd.	4D	Major	34,100	**70,661**	**2.07**	**F**	922	**71,583**	**2.10**	**F**	Expressway
11	Rouse Rd.	Encanto Dr. to Trumble Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	3,825	0.59	A	3,226	7,051	0.27	A	Secondary
12	Rouse Rd.	Brady Ln. to Sherman Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	2,888	0.44	A	3,076	5,964	0.23	A	Secondary
13	Rouse Rd.	Sherman Rd. to Dawson Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	3,052	0.47	A	2,150	5,202	0.20	A	Secondary
14	Rouse Rd.	Dawson Rd. to Antelope Rd.	**2U**	Secondary	12,950	1,448	0.11	A	1,690	3,138	0.24	A	Secondary
15	Rouse Rd.	Antelope Rd. (N) to Menifee Rd.	2U	Major	12,950	**16,561**	**1.28**	**F**	922	**17,483**	**1.35**	**F**	Major
16	Chambers Av.	Encanto Dr. to St. A	**4U**	Secondary	25,900	1,890	0.07	A	4,738	6,628	0.26	A	Secondary
17	Chambers Av.	St. A to Sherman Rd.	**4U**	Local/**Secondary**	6,500/**25,900**	1,890	0.29	A	2,610	4,500	0.17	A	Secondary
18	Chambers Av.	Sherman Rd. to Concord Ln.	**4U**	Local/**Secondary**	6,500/**25,900**	2,964	0.46	A	1,536	4,500	0.17	A	Secondary
19	McCall Bl.	Murrieta Rd. to Sun City Bl.	4D	Major	34,100	23,202	0.68	B	616	23,818	0.70	B	Major
20	McCall Bl.	Sun City Bl. to Bradley Rd.	4D	Major	34,100	**41,130**	**1.21**	**F**	922	**42,052**	**1.23**	**F**	Major
21	McCall Bl.	Bradley Rd. to I-215 Freeway	4D	Major	34,100	**69,292**	**2.03**	**F**	1,382	**70,674**	**2.07**	**F**	Major
22	McCall Bl.	I-215 Freeway to Encanto Dr.	4D	Major	34,100	**61,113**	**1.79**	**F**	4,300	**65,413**	**1.92**	**F**	Urban Arterial
23	McCall Bl.	Encanto Dr. to Sherman Rd.	4D	Major	34,100	**51,070**	**1.50**	**F**	2,150	**53,220**	**1.56**	**F**	Urban Arterial
24	McCall Bl.	Sherman Rd. to Antelope Rd.	4D	Major	34,100	**42,529**	**1.25**	**F**	460	**42,989**	**1.26**	**F**	Urban Arterial
25	McCall Bl.	Antelope Rd. to Menifee Rd.	2D	Major	17,050	**36,842**	**2.16**	**F**	1,536	**38,378**	**2.25**	**F**	Urban Arterial
26	Trumble Rd.	North of Ethanac Rd.	2U	Collector	13,000	4,416	0.34	A	308	4,724	0.36	A	Collector
27	Encanto Dr.	Ethanac Rd. to McLaughlin Rd.	2U	Collector	13,000	**13,964**	**1.07**	**F**	3,226	**17,190**	**1.32**	**F**	Major
28	Encanto Dr.	McLaughlin Rd. to Rouse Rd.	2U	Collector	13,000	10,032	0.77	C	3,226	**13,258**	**1.02**	**F**	Major
29	Encanto Dr.	Rouse Rd. to Chambers Av.	**4D**	Collector/**Major**	13,000/**34,100**	**12,272**	**0.94**	**E**	4,608	16,880	0.50	A	Major
30	Encanto Dr.	Chambers Av. to Shadel Rd.	2U	Collector	13,000	**12,978**	**1.00**	**F**	2,304	**15,282**	**1.18**	**F**	Major
31	Encanto Dr.	Shadel Rd. to McCall Bl.	2U	Collector	13,000	**14,904**	**1.15**	**F**	2,150	**17,054**	**1.31**	**F**	Major

Table 4.14-52 Roadway Segment Capacity Analysis for Horizon Year (2040) Conditions (Cont'd)

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	2040 NP	V/C[2]	LOS[3]	Project Only 2040	2040 WP	V/C[2]	LOS[3]	General Plan Classification
32	Sherman Rd.	SR-74 to Ethanac Rd.	2U	Local	6,500	**16,561**	**2.55**	**F**	1,690	**18,251**	**2.81**	**F**	Major
33	Sherman Rd.	Ethanac Rd. to McLaughlin Rd.	2U	Local	6,500	**17,665**	**2.72**	**F**	3,840	**21,505**	**3.31**	**F**	Major
34	Sherman Rd.	McLaughlin Rd. to Rouse Rd.	2U	Local	6,500	**14,353**	**2.21**	**F**	3,840	**18,193**	**2.80**	**F**	Major
35	Sherman Rd.	Rouse Rd. to St. B	**4D**	Major	34,100	9,664	0.28	A	5,072	14,736	0.43	A	Major
36	Sherman Rd.	St. B to Chambers Av.	**4D**	Major	34,100	10,628	0.31	A	3,226	13,854	0.41	A	Major
37	Sherman Rd.	Chambers Av. to Shadel Rd.	4D	Major	34,100	6,782	0.20	A	3,072	9,854	0.29	A	Major
38	Sherman Rd.	Shadel Rd. to McCall Bl.	3D	Major	25,575	10,024	0.39	A	2,918	12,942	0.51	A	Major
39	Antelope Rd.	Rouse Rd. (N) to Rouse Rd. (S)	**2U**	Major	17,050	5,520	0.32	A	1,230	6,750	0.40	A	Major
40	Antelope Rd.	Rouse Rd. (S) to Chambers Av.	**2U**	Major	17,050	4,416	0.26	A	1,076	5,492	0.32	A	Major
41	Antelope Rd.	Chambers Av. to McCall Bl.	**4D**	Major	34,100	6,624	0.19	A	1,076	7,700	0.23	A	Major
42	Menifee Rd.	SR-74 to Biscayne Av.	4D	Arterial	37,000	**39,642**	**1.07**	**F**	614	**40,256**	**1.09**	**F**	Urban Arterial
43	Menifee Rd.	Biscayne Av. to Rouse Rd.	2U	Collector	13,000	**39,642**	**3.05**	**F**	0	**39,642**	**3.05**	**F**	Urban Arterial
44	Menifee Rd.	Rouse Rd. to McCall Bl.	4D	Major	34,100	**48,580**	**1.42**	**F**	0	**48,580**	**1.42**	**F**	Urban Arterial
45	Menifee Rd.	McCall Bl. to Simpson Rd.	4D	Major	34,100	27,537	0.81	D	308	27,845	0.82	D	Arterial

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

4U = Improvement

[1] These maximum roadway capacities have been extracted from the following source: City of Menifee Traffic Impact Analysis Guidelines and Requirements (Attachment B). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. By using the LOS E capacity for each roadway facility type, volume-to-capacity (v/c) values between 0.00-0.60 will represent LOS A, 0.61-0.70 will represent LOS B, 0.71-0.80 will represent LOS C, 0.81-0.90 will represent LOS D, 0.91-1.00 will represent LOS E, and v/c values greater than 1.00 will represent LOS F operations. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] v/c = Volume to Capacity ratio

[3] LOS = Level of Service

[4] Where the average daily volume (ADT) based roadway segment analysis indicates a deficiency (unacceptable LOS), a review of the more detailed peak hour intersection analysis is undertaken. The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. While this traffic study recognizes LOS D is the City's target LOS for roadway segments, a review of the more detailed peak hour intersection analysis is necessary to determine whether roadway widening along the segment is necessary. For the purposes of this analysis, if the peak hour intersection operations on either side of the roadway segment are anticipated to operate at LOS D or better, then additional roadway segment widening is not recommended. Therefore, for the purposes of this assessment, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes. Furthermore, it is likely that a roadway segment can have a volume-to-capacity ratio of up to 1.10 if the adjacent intersections are anticipated to operate at acceptable LOS, without the need for additional widening. As the LOS threshold for the study area intersections is LOS D, LOS D have also been utilized as the minimum LOS criteria for roadway segments for the purposes of this analysis.

(Urban Crossroads, 2019d, Table 9-2)

- SR-74, Bonnie Dr. to I-215 NB Ramps (Roadway Segment #1)
- SR-74, I-215 NB Ramps to Trumble Rd. (Roadway Segment #2)
- Ethanac Rd., Goetz Rd. to Murrieta Rd. (Roadway Segment #3)
- Ethanac Rd., Goetz Rd. to Murrieta Rd. (Roadway Segment #5)
- Ethanac Rd., I-215 Freeway to Encanto Dr. (Roadway Segment #6)
- Ethanac Rd., Encanto Dr. to Trumble Rd. (Roadway Segment #7)
- Ethanac Rd., Trumble Rd. to Sherman Rd. (Roadway Segment #8)
- Ethanac Rd., Sherman Rd. to Antelope Rd. (Roadway Segment #9)
- SR-74, Antelope Rd. to Palomar Rd. (Roadway Segment #10)
- Rouse Rd., Antelope Rd. (N) to Menifee Rd. (Roadway Segment #15)
- McCall Bl., Sun City Bl. to Bradley Rd. (Roadway Segment #20)
- McCall Bl., Bradley Rd. to the I-215 Freeway (Roadway Segment #21)
- McCall Bl., I-215 Freeway to Encanto Dr. (Roadway Segment #22)
- McCall Bl., Encanto Dr. to Sherman Rd. (Roadway Segment #23)
- McCall Bl., Sherman Rd. to Antelope Rd. (Roadway Segment #24)
- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25)
- Encanto Dr., Ethanac Rd. to McLaughlin Rd. (Roadway Segment #27)
- Encanto Dr., Rouse Rd. to Chambers Av. (Roadway Segment #29)
- Encanto Dr., Chambers Dr. to Shadel Rd. (Roadway Segment #30)
- Encanto Dr., Shadel Rd. to McCall Bl. (Roadway Segment #31)
- Sherman Rd., SR-74 to Ethanac Rd. (Roadway Segment #32)
- Sherman Rd., Ethanac Rd. to McLaughlin Rd. (Roadway Segment #33)
- Sherman Rd., McLaughlin Rd. to Rouse Rd. (Roadway Segment #34)
- Menifee Rd., SR-74 to Biscayne Av. (Roadway Segment #42)
- Menifee Rd., Biscayne Av. to Rouse Rd. (Roadway Segment #43)
- Menifee Rd., Rouse Rd. to McCall Bl. (Roadway Segment #44)

As shown Table 4.14-52, the following roadway segment would operate at an unacceptable level of service under Horizon Year (2040) conditions. However, this segment was previously shown to operate at an acceptable LOS under Opening Year Cumulative (2025) conditions with the addition of Project traffic. Therefore, because the Project would contribute to but would not directly cause the projected LOS deficiency, Project impacts to the following roadway segment would be cumulatively considerable under Horizon Year (2040) conditions:

- Ethanac Rd., Murrieta Rd. to Barnett Rd. (Roadway Segment #4)

As shown in Table 4.14-52, the roadway segment analysis results indicate that the addition of Project (2040) traffic is anticipated to result in the following additional roadway segment deficiency, in addition to those described above:

- Encanto Dr., McLaughlin Rd. to Rouse Rd. (Roadway Segment #28)

3. Traffic Signal Warrants Analysis – Horizon Year (2040)

Traffic signal warrant analysis has been performed for Horizon Year Without Project conditions. As shown in Table 4.14-53, *Traffic Signal Warrants Analysis for Horizon Year (2040) Conditions*, the following intersections would meet the warrants for traffic signals under Horizon Year (2040) Without Project conditions; therefore, because the Project would contribute to but would not directly cause the projected LOS deficiencies, Project impacts to the following intersections would be cumulatively considerable under Horizon Year (2040) conditions: (Urban Crossroads, 2019d, p. 237)

- Encanto Dr. & Ethanac Rd. (Intersection #15)
- Encanto Dr. & McLaughlin Rd. (Intersection #16)
- Encanto Dr. & Rouse Rd. (Intersection #17)
- Encanto Dr. & Chambers Av. (Intersection #18)
- Encanto Dr. & Shadel Rd. (Intersection #19)
- Sherman Rd. & Ethanac Rd. (Intersection #27)
- Sherman Rd. & McLaughlin Rd. (Intersection #28)
- Sherman Rd. & Rouse Rd. (Intersection #29)
- Sherman Rd. & Chambers Av. (Intersection #31)
- Antelope Rd. & Ethanac Rd. (Intersection #36)
- Antelope Rd. & Rouse Rd. (North) (Intersection #37)
- Antelope Rd. & Rouse Rd. (South) (Intersection #38)
- Antelope Rd. & McCall Bl. (Intersection #40)

Although Table 4.14-51 indicates the following intersection would operate at a deficient LOS, the Project would contribute fewer than 50 peak hour trips to this location; therefore, Project impacts to the following intersection would be less than significant:

- Bradley Rd. & Cherry Hills Bl. (Intersection #8)

Although Table 4.14-51 indicates that the following intersection would operate at a deficient LOS, recommended improvements to achieve an acceptable LOS do not require the installation of a traffic signal. Accordingly, impacts due to signal warrants at the following intersection would be less than significant under Horizon Year (2040) conditions: (Urban Crossroads, 2019d, p. 237)

- Antelope Rd. & Rouse Rd. (South) (Intersection #38)

For Horizon Year With Project conditions, and as shown in Table 4.14-53, signalization of the intersection of Antelope Road at Chambers Avenue (Intersection #39) appears to be warranted in addition to those intersections warranted under Horizon Year Without Project traffic conditions (as described above). However, the recommended improvements for this intersection to achieve an acceptable LOS do not include installation of a traffic signal. Therefore, Project impacts due to the signal warrants analysis at the intersection of Antelope Road at Chambers Avenue would be less than significant under Horizon Year (2040) conditions. (Urban Crossroads, 2019d, p. 237)

Traffic signal warrant worksheets for Horizon Year Without and With Project conditions are included in Appendix 9.3 and 9.4, respectively, of the Project's TIA (*Technical Appendix K*)

Table 4.14-53 Traffic Signal Warrants Analysis for Horizon Year (2040) Conditions

	INTERSECTION	2040 NP	2040 WP
8	Bradley Rd. & Cherry Hills Bl.	PH	
15	Encanto Dr. & Ethanac Rd.		
16	Encanto Dr. & McLaughlin Rd.		
17	Encanto Dr. & Rouse Rd.		
18	Encanto Dr. & Chambers Av.		
19	Encanto Dr. & Shadel Rd.		
23	Trumble Rd. & Rouse Rd.		
24	Brady Ln./St. A & Rouse Rd.		
25	St. A & Chambers Av.	DNE	
27	Sherman Rd. & Ethanac Rd.		
28	Sherman Rd. & McLaughlin Rd.	PH	
29	Sherman Rd. & Rouse Rd.	PH	
31	Sherman Rd. & Chambers Av.	PH	
32	Sherman Rd. & Shadel Rd.		
34	Dawson Rd. & Rouse Rd.		
35	St. C/Concord Ln. & Chambers Av.		
36	Antelope Rd. & Ethanac Rd.		
37	Antelope Rd. & Rouse Rd. (North)	PH	
38	Antelope Rd. & Rouse Rd. (South)	PH	
39	Antelope Rd. & Chambers Av.		PH
40	Antelope Rd. & McCall Bl.		

= Warranted under a previous scenario

DNE = Does not Exist

PH = Peak Hour Warrant Met

ADT = Daily Volume Warrant Met

(Urban Crossroads, 2019d, p. 218)

4. Off-Ramp Queuing Analysis – Horizon Year (2040)

A queuing analysis was performed for the southbound and northbound off-ramps at the I-215 Freeway and Ethanac Road and McCall Boulevard interchanges to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially "spill back" onto the I-215 Freeway mainline. Queuing analysis findings are presented in Table 4.14-54, *Freeway Off-Ramp Queuing Summary for Horizon Year (2040) Conditions*. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. (Urban Crossroads, 2019d, p. 237)

As shown Table 4.14-54, for Horizon Year Without Project traffic conditions there are no queuing issues anticipated during the AM and PM peak 95th percentile traffic flows. The addition of Project traffic is not anticipated to result in any potential queuing issues. Accordingly, Project impacts to off-ramp queuing locations would be less than significant under Horizon Year (2040) conditions. Worksheets for Horizon Year Without Project and With Project conditions off-ramp queuing analysis are provided in Appendices 9.5 and 9.6, respectively, of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 239)

Table 4.14-54 Freeway Off-Ramp Queuing Summary for Horizon Year (2040) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	Without Project				With Project			
			95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Ramps/SR-74 & Bonnie Dr.	SBT	2,275	1,866 [2]	2,088 [2]	Yes	Yes	1,882 [2]	2,118 [2]	Yes	Yes
	SBR	215	19	30	Yes	Yes	19	30	Yes	Yes
I-215 SB Ramps & Ethanac Rd.	SBL/T	1,450	396 [2]	550 [2]	Yes	Yes	457 [2]	677 [2]	Yes	Yes
	SBR	240	270 [2]	417 [2]	Yes[3]	Yes[3]	270 [2]	417 [2]	Yes[3]	Yes[3]
I-215 SB Ramps & McCall Bl.	SBL/T	1,440	548 [2]	877 [2]	Yes	Yes	548 [2]	912 [2]	Yes	Yes
	SBR	450	549 [2]	730 [2]	Yes[3]	Yes[3]	549 [2]	761 [2]	Yes[3]	Yes[3]
I-215 NB Ramps & SR-74	SBL/R	1,510	463 [2]	517 [2]	Yes	Yes	463 [2]	517 [2]	Yes	Yes
I-215 NB Ramps & Ethanac Rd.	NBL/T	1,440	708 [2]	548 [2]	Yes	Yes	708 [2]	548 [2]	Yes	Yes
	NBR	270	199 [2]	709 [2]	Yes	Yes[3]	199 [2]	709 [2]	Yes	Yes[3]
I-215 NB Ramps & McCall Bl.	NBL/T	1,870	348 [2]	664 [2]	Yes	Yes	371 [2]	652 [2]	Yes	Yes
	NBR	240	440 [2]	690 [2]	Yes[3]	Yes[3]	573 [2]	936 [2]	Yes[3]	Yes[3]
I-215 SB Ramps & Newport Rd.	SBL	1,660	629 [2]	933 [2]	Yes	Yes	653 [2]	956 [2]	Yes	Yes
	SBR	1,660	579 [2]	467	Yes	Yes	585 [2]	471	Yes	Yes
I-215 NB Ramps & Newport Rd.	NBL	1,520	876 [2]	1,574 [2]	Yes	Yes[3]	876 [2]	1,574 [2]	Yes	Yes[3]
	NBR	1,520	692 [2]	962 [2]	Yes	Yes	692 [2]	962 [2]	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.
[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.
[3] Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-215 Freeway mainline.

(Urban Crossroads, 2019d, Table 9-3)

5. Basic Freeway Segment Analysis – Horizon Year (2040)

Horizon Year without and with Project peak hour mainline directional volumes are provided on Exhibits 9-8 and 9-9, respectively, of the Project's TIA (*Technical Appendix K*). Based on information obtained from Caltrans District 8 Transportation Concept Report (TCR), the I-215 has planned improvements for the addition of a northbound and southbound mixed-flow lane (for a total of 4 mixed-use lanes) and is assumed to be in place for Horizon Year (2040) traffic conditions. (Urban Crossroads, 2019d, p. 239)

As shown on Table 4.14-55, *Basic Freeway Segment Analysis for Horizon Year (2040) Conditions*, the following freeway segment would operate at a deficient LOS either with or without the addition of Project traffic; therefore, the Project's impacts to the following freeway segment would be cumulatively considerable: (Urban Crossroads, 2019d, p. 239)

- I-215 Freeway Southbound, Ethanac Rd. to McCall Bl. (Freeway Segment #2) – LOS E PM peak hour only

Table 4.14-55 Basic Freeway Segment Analysis for Horizon Year (2040) Conditions

Freeway	Direction[1]	Mainline Segment	Lanes[2]	Without Project				With Project			
				Density[3]		LOS[4]		Density[3]		LOS[4]	
				AM	PM	AM	PM	AM	PM	AM	PM
I-215 Freeway	SB	SR-74 to Ethanac Rd.	4[5]	23.6	34.0	C	D	23.8	34.9	C	D
		Ethanac Rd. to McCall Bl.	4[5]	25.3	**35.1**	C	**E**	25.3	**36.0**	C	**E**
		McCall Bl. to Newport Rd.	4[5]	26.7	34.1	D	D	29.9	**35.6**	D	**E**
	NB	SR-74 to Ethanac Rd.	4[5]	31.5	27.4	D	D	32.1	27.9	D	D
		Ethanac Rd. to McCall Bl.	4[5]	34.5	28.8	D	D	34.2	28.8	D	D
		McCall Bl. to Newport Rd.	4[5]	30.3	30.9	D	D	30.8	32.0	D	D

* **BOLD** = Unacceptable Level of Service

[1] NB = Northbound; SB = Southbound

[2] Number of lanes are in the specified direction and is based on an additional mixed-flow lane in each direction on the I-215 Freeway.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

[5] A 4th mixed-flow lane has been assumed in the northbound and southbound directions for Horizon Year (2040) traffic conditions only (consisten with Caltrans District 8 Transportation Concept Report for the I-215 Freeway).

(Urban Crossroads, 2019d, Table 9-4)

As also shown on Table 4.14-55, the addition of Project traffic to the following freeway segment would degrade the LOS to an unacceptable LOS; therefore, the Project's impacts to the following freeway segment would represent a direct impact of the Project: (Urban Crossroads, 2019d, p. 239)

- I-215 Freeway Southbound, McCall Bl. to Newport Rd. (Freeway Segment #3) – LOS E PM peak hour only

Horizon Year (2040) Without and With Project conditions basic freeway segment analysis worksheets are provided in Appendix 9.7 and Appendix 9.8, respectively, of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 239)

6. Freeway Merge/Diverge Analysis

Ramp merge and diverge operations were also evaluated for Horizon Year Without and With Project conditions and the results of this analysis are presented in Table 4.14-56, *Freeway Ramp Junction Merge/Diverge Analysis for Horizon Year (2040) Conditions*.

Table 4.14-56 Freeway Ramp Junction Merge/Diverge Analysis for Horizon Year (2040) Conditions

Freeway	Direction[1]	Ramp or Segment	Lanes on Freeway[2]	Without Project				With Project			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[3]	LOS[4]	Density[3]	LOS[4]	Density[3]	LOS[4]	Density[3]	LOS[4]
I-215 Freeway	SB	Off-Ramp at Ethanac Rd.	4[5]	30.9	D	**38.9**	E	31.3	D	**39.4**	E
		On-Ramp at Ethanac Rd.	4[5]	28.4	D	33.5	D	28.3	D	33.8	D
		Off-Ramp at McCall Bl.	4[5]	32.7	D	**41.6**	E	32.7	D	**42.1**	E
		On-Ramp at McCall Bl.	4[5]	30.8	D	**35.0**	E	31.9	D	**36.2**	E
	NB	On-Ramp at Ethanac Rd.	4[5]	29.6	D	29.6	D	30.4	D	30.2	D
		Off-Ramp at Ethanac Rd.	4[5]	**39.3**	E	**37.6**	E	**39.1**	E	**37.6**	E
		On-Ramp at McCall Bl.	4[5]	34.9	D	30.5	D	34.9	D	30.5	D
		Off-Ramp at McCall Bl.	4[5]	**35.3**	E	**38.5**	E	**35.9**	E	**40.1**	E

* **BOLD** = Unacceptable Level of Service

[1] NB = Northbound; SB = Southbound, EB = Eastbound; WB = Westbound

[2] Number of lanes are in the specified direction and is based on an additional mixed-flow lane in each direction on the I-215 Freeway.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

[5] A 4th mixed-flow lane has been assumed in the northbound and southbound directions for Horizon Year (2040) traffic conditions only (consistent with Caltrans District 8 Transportation Concept Report for the I-215 Freeway).

(Urban Crossroads, 2019d, Table 9-5)

As shown in Table 4.14-56, the following I-215 Freeway ramp merge and diverge areas are anticipated to operate at an unacceptable LOS (LOS E or worse) under Horizon Year Without Project traffic conditions; therefore, the contribution of Project traffic to the following freeway merge/diverge locations represents cumulatively-considerable impacts of the Project: (Urban Crossroads, 2019d, p. 239)

- I-215 Freeway Southbound, Off-Ramp at Ethanac Road (Merge/Diverge Location #1)
- I-215 Freeway Southbound, Off-Ramp at McCall Boulevard (Merge/Diverge Location #3)
- I-215 Freeway Southbound, On-Ramp at McCall Bl. (Merge/Diverge Location #4)
- I-215 Freeway Northbound, Off-Ramp at Ethanac Rd. (Merge/Diverge Location #6)
- I-215 Freeway Northbound, Off-Ramp at McCall Bl. (Merge/Diverge Location #8)

No additional I-215 Freeway ramp merge and diverge areas operate at an unacceptable LOS (LOS E or worse) with the addition of Project traffic. Thus, the Project would result in in less-than-significant direct impacts to freeway merge/diverge locations under Horizon Year (2040) Conditions. Horizon Year Without and With Project conditions freeway ramp junction operations analysis worksheets, with I-215 corridor improvements in place, are provided in Appendix 9.9 and Appendix 9.10 of the Project's TIA (*Technical Appendix K*). (Urban Crossroads, 2019d, p. 219)

G. *Supplemental Traffic Assessment*

Urban Crossroads prepared a Supplemental Traffic Assessment (STA), dated May 22, 2019, in response to Caltrans' comments on the Project. The STA revised the Project's trip distribution to allocate 40% of Project traffic heading northbound on the I-215 Freeway and 33% of Project traffic heading southbound on the I-215 Freeway for a total of 73% on the I-215 Freeway mainline via the McCall Boulevard interchange. This analysis was conducted at the request of Caltrans and is provided for informational purposes only, as this scenario would not occur with implementation of the Project. The trip distribution assumed in the STA is not realistic as it assumes 73% of the Project's traffic would utilize the I-215 Freeway and only 27% of the Project's traffic would utilize the local roadway network. If the analysis of the Project's impacts to traffic were to rely upon the trip distribution evaluated by the STA, the Project's impacts to the I-215 interchange at McCall Boulevard would increase, but the Project's impacts to the local roadway network within the City of Menifee and adjacent jurisdictions (i.e., Hemet, Perris, Murrieta) would substantially decrease. Due to the substantial decrease in the amount of Project traffic along the local roadway network, the Project's mitigation obligations for the local roadway network also would substantially decrease, while no mitigation is available for impacts to the I-215 interchange at McCall Boulevard (beyond payment of TUMF fees, which already is a requirement of the proposed Project). Accordingly, the Project's impacts to transportation are based on the Project's TIA (*Technical Appendix K*), and not on the analysis contained within the STA. The Project's TIA utilizes industry-accepted practices for trip distribution methodology and routes a majority of Project traffic (approximately 65%) along the local roadway network within the City of Menifee and nearby jurisdictions, and identifies feasible improvements to address deficiencies on the local roadway network. On August 22, 2019, Caltrans accepted the Project's informational STA and did not recommend that any of the impact conclusions or mitigation recommendations be applied to the Project (Caltrans, 2019). Thus, the impact conclusions and mitigation recommendations for the STA scenario included below are for informational purposes only and would not be applied to the Project.

Future forecasts were evaluated for all of the Project scenarios evaluated above: E+P Phase 1, E+P Phase 2, E+P Project Buildout, Opening Year Cumulative (2020) With Project, Opening Year Cumulative (2023) With Project, Opening Year Cumulative (2025) With Project, and Horizon Year (2040) With Project. (Urban Crossroads, 2019d, Appendix 1.2)

1. *Intersection Analysis*

As shown in Table 1 of the STA, the I-215 Southbound and Northbound Ramps at McCall Boulevard ramps are anticipated to operate at acceptable LOS until E+P (Project Buildout) traffic conditions. The I-215 Southbound Ramps on McCall Boulevard are anticipated to operate at a deficient LOS starting under E+P (Project Buildout) conditions and for the remaining analysis scenarios. The I-215 Northbound Ramps on McCall Boulevard are anticipated to operate at a deficient LOS for Opening Year Cumulative (2025) With Project and Horizon Year (2040) traffic conditions only. However, as noted above, the analysis in the STA is unrealistic and is provided for informational purposes only, as the Project's impacts to transportation are instead based on the Project's TIA (*Technical Appendix K*). Analysis worksheets are included in Attachment B of the STA for all analysis scenarios. (Urban Crossroads, 2019d, Appendix 1.2)

2. *Basic Freeway Segment Analysis*

Basic freeway segment operations analysis results are summarized on Table 2 of the STA for all analysis scenarios. Deficiencies are anticipated on the I-215 Freeway starting with E+P (Phase 2) traffic conditions. The analysis was conducted assuming the existing lanes on the I-215 Freeway (3 mixed-flow lanes in each direction of travel). Based on information obtained from Caltrans District 8 Transportation Concept Report

(TCR), the I-215 has planned improvements for the addition of a northbound and southbound mixed-flow lane (for a total of 4 mixed-use lanes) and is assumed to be in place for Horizon Year (2040) traffic conditions. However, as noted above, the analysis in the STA is unrealistic and is provided for informational purposes only, as the Project's impacts to transportation are instead based on the Project's TIA (*Technical Appendix K*). Basic freeway segment analysis worksheets are provided in Attachment C of the STA for all analysis scenarios. (Urban Crossroads, 2019d, Appendix 1.2)

3. Freeway Merge/Diverge Analysis

Ramp merge and diverge operations analysis results are summarized on Table 3 of the STA for all analysis scenarios. Deficiencies are shown at the ramp junctions starting with E+P (Phase 1) for the southbound off-ramp at McCall Boulevard. Note that the deficiency at the southbound off-ramp and McCall Boulevard is consistent with Existing traffic conditions from the Project's TIA (*Technical Appendix K*). The analysis was conducted assuming the existing lanes and ramp configuration at the I-215 Freeway and McCall Boulevard interchange. Based on information obtained from Caltrans District 8 TCR, the I-215 has planned improvements for the addition of a northbound and southbound mixed-flow lane (for a total of 4 mixed-use lanes) and is assumed to be in place for Horizon Year (2040) traffic conditions. However, as noted above, the analysis in the STA is unrealistic and is provided for informational purposes only, as the Project's impacts to transportation are instead based on the Project's TIA (*Technical Appendix K*). Freeway merge/diverge ramp junction operations analysis worksheets are provided in Attachment D of the STA for all analysis scenarios. (Urban Crossroads, 2019d, Appendix 1.2)

4. Recommended Improvements (For Informational Purposes Only)

The STA includes recommended improvements to address the impacts to intersections, basic freeway segments, and freeway merge/diverge locations. The recommended improvements are discussed below; however, as previously noted, the STA and recommended improvements were analyzed for informational purposes only, as the STA relies upon an unrealistic trip distribution that would substantially understate the Project's impacts to the local roadway network. Moreover, Caltrans did not recommend that any of the STA's impact conclusions or mitigation recommendations be utilized for purposes of the CEQA analysis (Caltrans, 2019). Thus, the below listed recommended improvements would not be applied to the Project as mitigation measures and are disclosed below for informational purposes, only.

Improvement strategies have been recommended at intersections that have been identified as significantly impacted in an effort to reduce each location's peak hour delay and improve the associated LOS grade to an acceptable LOS (LOS D or better). The effectiveness of the recommended improvement strategies to address traffic impacts are presented in Table 4 of the STA. Worksheets for intersection operations analyses, with improvements, are provided in Attachment E. (Urban Crossroads, 2019d, Appendix 1.2)

As shown in Tables 5 and 6 of the STA, the improvements needed at the I-215 Freeway ramps and McCall Boulevard are included in the WRCOG TUMF program. Project improvements may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair share contribution toward future improvements or a combination of these approaches. When off-site improvements are identified with a minor share of responsibility assigned to proposed development, the approving jurisdiction may elect to collect a fair share contribution or require the development to construct improvements. Detailed fair share calculations for each peak hour have been provided on Table 7 of the STA for both study area intersections. (Urban Crossroads, 2019d, Appendix 1.2)

Although the STA identifies the above-listed recommended improvements, as previously noted, the unrealistic trip distribution pattern evaluated in the STA was included at the request of Caltrans; thus, the analysis and recommended improvements in the STA are provided for informational purposes only. The Project already would be required to contribute TUMF fees, a portion of which would be utilized for needed improvements to the I-215 interchange at McCall Boulevard. Additional improvements beyond what is already funded by TUMF are not feasible for the Project due to the regional nature of the facility and because Caltrans has no fee programs or other improvement programs in place to address impacts to the SHS caused by development projects in the City of Menifee (or other neighboring jurisdictions). As such, consistent with the Project's TIA (*Technical Appendix K*), the STA does not recommend any improvements in addition to those contemplated for the I-215 Freeway under Horizon Year (2040) traffic conditions to address impacts on the SHS. Additionally, on August 22, 2019, Caltrans accepted the Project's informational STA and did not request that any of the mitigation recommendations be applied to the Project as part of the Project's EIR. (Caltrans, 2019).

As discussed above, the Project's impacts to transportation and associated mitigation are based on the Project's TIA (*Technical Appendix K*), and not on the analysis contained within the STA. The Project's TIA utilizes industry-accepted practices for trip distribution methodology and routes a majority of Project traffic (approximately 65%) along the local roadway network within the City of Menifee and nearby jurisdictions, and identifies feasible improvements to address deficiencies on the local roadway network. As such, the Project's mitigation obligations are based on the Project's TIA, and not on the improvement recommendations identified by the STA. For a discussion of the Project's impacts and recommended improvements applicable to the Project for SHS facilities, please refer to the discussion and analysis in Subsection 4.14.10. (Urban Crossroads, 2019d, Appendix 1.2)

H. Alternative Transportation

Adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities include the City of Menifee General Plan and the City of Menifee Trails, Parks, Open Space, and Recreation Master Plan. The Project's consistency with both documents is provided below.

1. City of Menifee General Plan Goals and Policies

The City of Menifee General Plan contains goals and policies related to alternative transportation. Provided below is a discussion of the Project's consistency with General Plan goals and policies related to alternative transportation.

Policy LU-1.1: Concentrate growth in strategic locations to help preserve rural areas, create place and identity, provide infrastructure efficiently, and foster the use of transit options.

Project Consistency: The Project site is located in an area that is largely developed and/or is planned for development with a variety of residential, commercial, public facility (i.e., school), recreation, and open space land uses. The Project proposes to develop the Project site with up to 1,061 dwelling units, 225,000 s.f. of commercial retail, recreation, and open space land uses. The planned density of residential uses (4.9 dwelling units per acre), and the concentration of commercial retail uses along Encanto Drive, would facilitate the provision of transit options within the Project area. Although the Riverside Transit Agency (RTA) does not currently have service along any existing roadways abutting the Project site, the Project would provide new north-south connections between McCall Boulevard and Ethanac Road via planned improvements to Sherman Road and Antelope Road, which could in the future be utilized for new bus routes by the RTA.

The Legado Specific Plan also accommodates proposed bus stop locations at the intersection of Chambers Avenue and Sherman Road and the intersection of Chambers Avenue and Encanto Drive. Additionally, the right-of-way along Sherman Road has enough room to provide a bus turn-out if transit is ever provided by the RTA along this roadway (WHA, 2019, p. 3-17). All of the proposed bus stop location identified in the Specific Plan are subject to change based upon RTA final plans. Thus, because the Project would facilitate transit options in the area, the Project would be consistent with General Plan Policy LU-1.1.

Policy LU-1.5: Support development and land use patterns, where appropriate, that reduce reliance on the automobile and capitalize on multimodal transportation opportunities.

Project Consistency: The Project proposes to accommodate trails, linear parks/pocket/mini parks, Class II bike lanes, Neighborhood Electric Vehicle (NEV) lanes, and sidewalks along major backbone roadways within the proposed community. These planned amenities would provide access within the community and between planned residential and commercial uses on-site. The Project would not construct the Class I NEV/bike lane over-crossing of the I-215 at Rouse Road identified by the General Plan located adjacent to the Project site; however, the Project would accommodate a landing site along Rouse Road at the Project's northwestern boundary. Although the over-crossing is not proposed as part of this Project, none of the Project elements would preclude construction of the over-crossing in the future. Additionally, the Fleming Ranch Specific Plan provides a land use plan that would establish land use patterns that promote alternative forms of transportation by collocating commercial land uses in close proximity to residential uses. Furthermore, future transit service in the area is accommodated along Sherman Road, should the RTA establish a transit route along Sherman Road between McCall Boulevard and Ethanac Road (WHA, 2019, p. 3-17). The Legado Specific Plan accommodates proposed bus stop locations at the intersection of Chambers Avenue and Sherman Road and the intersection of Chambers Avenue and Encanto Drive. All of the proposed bus stop location identified in the Specific Plan are subject to change based upon RTA final plans. Accordingly, the Project would be consistent with Policy LU-1.5.

Goal C-2: A bikeway and community pedestrian network that facilitates and encourages nonmotorized travel throughout the City of Menifee.

Policy C-2.2: Provide off-street multipurpose trails and on-street bike lanes as our primary paths of citywide travel, and explore the shared use of low speed roadways for connectivity wherever it is safe to do so.

Project Consistency: The Project proposes to accommodate trails, linear parks/pocket/mini parks, Class II bike lanes, and sidewalks along major backbone roadways within the proposed community. These planned amenities would provide access within the community and between planned residential and commercial uses on-site. Accordingly, the Project would be consistent with Goal C-2 and Policy C-2.2.

Policy C-2.3: Require walkways that promote safe and convenient travel between residential areas, businesses, schools, parks, recreation areas, transit facilities, and other key destination points.

Project Consistency: The Project proposes to accommodate trails, linear parks/pocket/mini parks, and sidewalks along major backbone roadways within the proposed community. These facilities have been designed to accommodate safe and convenient access between planned residential and commercial uses on-site, and to provide safe and convenient connections between proposed residential uses on-site and the Hans Christenson Middles School, located immediately south of the Project site. Accordingly, the Project would be consistent with Policy C-2.3.

Policy C-2.4: Explore opportunities to expand the pedestrian and bicycle networks; this includes consideration of utility easements, drainage corridors, road rights-of-way, and other potential options.

Project Consistency: General Plan Policy C-2-4 provides direction to City staff and decision-makers to identify potential pedestrian and bicycle corridors within portions of the City that already have been developed. The Project proposes to establish a mixed-use community that provides for adequate pedestrian and bicycle connections both on and off site. Because adequate pedestrian and bicycle facilities are planned by the Project, Policy C-2.4 is not applicable to the Project, although the Project would not inhibit the City's ability to implement Policy C-2.4. Accordingly, the Project would not conflict with Policy C-2.4.

Policy C-2.5: Work with the Western Riverside Council of Governments to implement the Non-Motorized Transportation Plan for Western Riverside County.

Project Consistency: General Plan Policy C-2.5 provides direction to City staff to coordinate with the Western Riverside Council of Governments (WRCOG) to implement the Non-Motorized Transportation Plan for Western Riverside County. There are no components of the Project that would inhibit the ability of City staff and decision makers to implement Policy C-2.5. Accordingly, the Project would not conflict with Policy C-2.5.

Goal C-3: A public transit system that is a viable alternative to automobile travel and meets basic transportation needs of the transit dependent.

Policy C-3.1: Maintain a proactive working partnership with transit providers to ensure that adequate public transit service is available.

Policy C-3.2: Require new development to provide transit facilities, such as bus shelters, transit bays, and turnouts, as necessary.

Project Consistency: As noted above, the right-of-way along Sherman Road has been designed to provide enough room to provide a bus turn-out if transit is ever provided by the RTA along this roadway (WHA, 2019, p. 3-17). The Legado Specific Plan accommodates proposed bus stop locations at the intersection of Chambers Avenue and Sherman Road and the intersection of Chambers Avenue and Encanto Drive. However, because no bus routes are currently planned by the RTA through the Project area, and because it is not known whether future transit service would be provided along Sherman Road, bus shelters and other amenities are not proposed by the Project. Nonetheless, the Project accommodates sufficient room along Sherman Road for bus turnouts and bus shelters,

which in turn would allow City staff to coordinate with the RTA to provide public transit service through the Project area. All of the proposed bus stop location identified in the Specific Plan are subject to change based upon RTA final plans. Therefore, the Project would not conflict with Goal C-3 or Policies C-3.1 and C-3.2.

Policy C-3.3: Provide additional development-related incentives to projects that promote transit use.

Policy C-3.4: Advocate expansion of Metrolink service to the area.

Policy C-3.5: Work with regional transit agencies to secure convenient feeder service from the Metrolink station to employment districts and transit nodes in Menifee.

Project Consistency: Policies C-3.3, C-3.4, and C.3-5 provide direction to City staff and decision-makers to develop policies for incentivizing the provision of transit amenities, advocate for the expansion of Metrolink in the area, and work with regional transit agencies to secure Metrolink feeder service. There are no components of the Project that would inhibit the City's ability to implement Policies C-3.3 through C-3.5. Therefore, the Project would not conflict with Policies, C-3.3, C-3.4, or C.3-5.

Policy C-3.6: Require future community-wide facilities, such as libraries, schools, parks, and community centers, to be sited in transit-ready areas (can be served and made accessible by public transit). Conversely, plan (and coordinate with other transit agencies to plan) future transit routes to serve existing community facilities.

Project Consistency: The Project accommodates a planned 11.23-acre sports park within Planning Area 18, which is located within walking distance of Sherman Road. Although the RTA has no planned transit connections through the Project area, the right-of-way along Sherman Road has been designed to accommodate transit service (WHA, 2019, p. 3-17). The Legado Specific Plan also accommodates proposed bus stop locations at the intersection of Chambers Avenue and Sherman Road and the intersection of Chambers Avenue and Encanto Drive. Additionally, bus service is currently provided along McCall Boulevard west of Encanto Drive, which also would provide transit connectivity to the proposed community park. All of the proposed bus stop location identified in the Specific Plan are subject to change based upon RTA final plans. Thus, the Project would be consistent with Policy C-3.6.

Goal C-4: Diversified local transportation options that include neighborhood electric vehicles and golf carts.

Policy C-4.1: Encourage the use of neighborhood electric vehicles and golf carts instead of automobiles for local trips.

Project Consistency: As indicated on Figure 3.16, *NEV and Bikeway Network Diagram*, of the Fleming Ranch Specific Plan (EIR Figure 3-6), Neighborhood Electric Vehicle (NEV) lanes would be accommodated along Rouse Road, Sherman Road, and Antelope Road. The Project would not construct the Class I NEV/bike lane over-crossing of the I-215 at Rouse Road identified by the General Plan located adjacent to the Project site; however, the Project would accommodate a landing site along Rouse Road at the Project's northwestern boundary. Although the over-crossing is not proposed as part

of this Project, none of the Project elements would preclude construction of the over-crossing in the future. The provision of NEV lanes, in conjunction with proposed linear parks/pocket/mini parks, bike lanes, and sidewalks, would meet the General Plan objective to provide for a diversified local transportation network through the Project site. Accordingly, the Project would be consistent with General Plan Goal C-4 and Policy C-4.1.

Policy C-6.4: Incorporate riding, hiking, and bicycle trails and other compatible public recreational facilities within scenic corridors.

Project Consistency: As indicated on General Plan Exhibit C-8, *Scenic Highways*, the I-215 freeway south of McCall Boulevard; McCall Boulevard between I-215 and Menifee Road; and Menifee Road north of McCall Boulevard are classified as "Eligible County Scenic Highways." SR-74 is classified as an "Eligible State Scenic Highway." The Project site does not occur along any of these eligible scenic facilities. Accordingly, the Project would not conflict with Policy C-6.4.

Goal OSC-2: A comprehensive network of hiking, biking, and equestrian recreation trails that do not negatively impact the natural environment or cultural resources.

Project Consistency: EIR Figure 3-6 depicts the NEV and bikeways planned throughout the Project area by the Fleming Ranch Specific Plan, while EIR Figure 3-7 depicts the planned pedestrian network. Figures 3-6 and 3-7 show that the planned NEV, bikeway, and pedestrian facilities would occur along the Project's primary roadways, including Encanto Drive, Chambers Avenue, Antelope Road, Rouse Road, Sherman Road, and Streets A, B, C, and D. Impacts associated with the provision of these facilities are inherent to the Project's construction phase, and impacts associated with these facilities have been evaluated throughout this EIR under the appropriate subject headings. All impacts to the environment associated with the Project's construction phase, including potential impacts to cultural resources, have been determined by this EIR to be less than significant, or would be reduced to less-than-significant levels with the application of mitigation measures. Accordingly, the Project would not conflict with General Plan Goal OSC-2.

Policy OSC-2.1: Develop recreational trails for hiking, biking, and equestrian use throughout the city, making them, to the extent feasible, accessible to people of different neighborhoods, ages, and abilities.

Project Consistency: EIR Figure 3-6 depicts the NEV and bikeways planned throughout the Project area by the Fleming Ranch Specific Plan, while EIR Figure 3-7 depicts the planned pedestrian network. Figures 3-6 and 3-7 show that the planned NEV, bikeway, and pedestrian facilities would occur along the Project's primary roadways, including Encanto Drive, Chambers Avenue, Antelope Road, Rouse Road, Sherman Road, and Streets A, B, C, and D. These planned facilities would allow for hiking and biking use throughout the Project area, and would be accessible to people of different neighborhoods, ages, and abilities. The Project would not construct the Class I NEV/bike lane over-crossing of the I-215 at Rouse Road identified by the General Plan located adjacent to the Project site; however, the Project would accommodate a landing site along Rouse Road at the

Project's northwestern boundary. Although the over-crossing is not proposed as part of this Project, none of the Project elements would preclude construction of the over-crossing in the future. Accordingly, the Project would be consistent with Policy OSC-2.1.

Policy OSC-2.6: Protect existing equestrian trails, including those in the city's rural neighborhoods, and encourage connections to new trails in other parts of the city.

Project Consistency: Exhibit OCS-1 of the General Plan depicts proposed recreational trails throughout the City. As shown, there are no Regional Trails or Community Trails planned in the Project area. Additionally, the Project area is surrounded by a variety of commercial and residential uses, and there are no existing equestrian trails within the Project area. Additionally, the neighborhoods surrounding the Project site are developed at a density that would not be considered "rural." Accordingly, the Project would not conflict with Policy OSC-2.6.

Policy OCS-2.7: Coordinate with adjacent jurisdictions to establish recreational trails that connect to other trail systems and major destinations found outside of the city, such as Lake Elsinore, Kabian Park, and Diamond Valley Lake.

Project Consistency: Policy OCS-2.7 provides direction to City staff and decision-makers to coordinate with adjacent jurisdictions regarding trail system connections to areas outside of the City. The Project site is not located at a boundary with an adjacent jurisdiction, and would have no potential to conflict with Policy OCS-2.7.

Policy CD-4.2: Design new and, when necessary, retrofit existing streets to improve walkability, bicycling, and transit integration; strengthen connectivity; and enhance community identity through improvements to the public right-of-way such as sidewalks, street trees, parkways, curbs, street lighting, and street furniture.

Project Consistency: EIR Figure 3-6 depicts the NEV and bikeways planned throughout the Project area by the Fleming Ranch Specific Plan, while EIR Figure 3-7 depicts the planned pedestrian network. As shown, the Project has been designed to integrate pathways for pedestrians and bicycles. The Project would not construct the Class I NEV/bike lane over-crossing of the I-215 at Rouse Road identified by the General Plan located adjacent to the Project site; however, the Project would accommodate a landing site along Rouse Road at the Project's northwestern boundary. Although the over-crossing is not proposed as part of this Project, none of the Project elements would preclude construction of the over-crossing in the future. Additionally, Sherman Road has been designed to accommodate future bus facilities, should the RTA propose any such transit routes along Sherman Road in the future (WHA, 2019, p. 3-17). The Legado Specific Plan also accommodates proposed bus stop locations at the intersection of Chambers Avenue and Sherman Road and the intersection of Chambers Avenue and Encanto Drive. All planned pedestrian and bicycle facilities would connect to existing, off-site facilities, thereby improving connectivity within the area. The Project also accommodates sidewalks, street trees, parkways, curbs, and street lighting, with street furniture planned in some locations. All of the proposed bus stop location identified in the Specific Plan are subject to change based upon RTA final plans. Accordingly, the Project would not conflict with Policy CD-4.2.

Policy CD-5.1: Provide comfortable pedestrian amenities-quality sitting areas, wide paths and shade-along with specialized and engaging design features, such as interesting fountains or public art, which draw and maintain people's attention, as appropriate based on the preferred mix of land uses for each EDC subarea.

Project Consistency: Subsection 5.5.2.F of the proposed Fleming Ranch Specific Plan encourages the provision of public art that enhances the character of the community, and indicates that such art could "…include historical plaques and/or sculptures as part of the design of the Community park sitting areas and walk areas." Figure 5.1 of the proposed Fleming Ranch Specific Plan also identifies typical sitting areas and tot lots along the linear parks provided along proposed Streets "B" and "C." Village Entry Streets also are proposed to include linear parks/pocket/mini parks that include sitting areas shaded by large trees. (WHA, 2019, p. 5-10) Accordingly, the Project would be consistent with Policy CD-5.1.

Policy CD-5.4: Locate building access points along sidewalks, pedestrian areas, and bicycle routes, and include amenities that encourage pedestrian activity in the EDC areas where appropriate.

Project Consistency: Refer to the above discussion of Project consistency with Policy CD-5.1. Additionally, Subsection 5.6.B of the proposed Fleming Ranch Specific Plan encourages the following: orientation of buildings to establish positive relationships with adjacent streets; location of buildings to frame and enclose interesting outdoor gathering spaces; and the provision of well-defined pedestrian connections from the parking areas to the building entrances. Additionally, Subsection 5.6.C of the proposed Fleming Ranch Specific Plan encourages the following: arrangement of buildings to create and enclose a variety of outdoor people gathering places; design of people gathering places large enough to be usable, however not so large as to appear empty or barren; provision of people gathering places with appropriate site amenities such as benches, low walls, shade trees, shade structures, water elements, and bollards to facilitate pedestrian uses; accommodation of solar orientation for people gathering places to allow sunny outdoor spaces in winter and shade in the summer; and activation of the pedestrian environment by interactive architecture and landscape including architecturally vibrant storefronts, benches and planter walls for seating opportunities, enhanced paving materials, fountains, murals, or public art, and accent or festive lighting to enhance nighttime ambiance. (WHA, 2019, pp. 5-48 to 5-49) Accordingly, the Project would be consistent with Policy CD-5.4.

Based on the foregoing, the Project would be consistent with, or otherwise would not conflict with, applicable General Plan goals and policies related to public transit, bicycle, and pedestrian facilities, and there are no components of the Project that would otherwise decrease the performance or safety of such facilities.

2. City of Menifee Trails, Parks, Open Space, & Recreation Master Plan

Figure 5.5-1 of the City of Menifee Trails, Parks, Open Space, & Recreation Master Plan ("Recreation Master Plan") depicts the proposed trail recommendations throughout the City, which is shown on EIR Figure 4.14-16, *Menifee Parks, Trails, Open Space, & Recreation Master Plan Trail Recommendations*. As shown, the City's Recreation Master Plan designates a "Community Bike Lane – Class II" along Encanto Drive and Chambers Avenue (west of Sherman Road); and a "Community Trail - Hiking, Biking & Equestrian" trail along Sherman Road, the portion of Chambers Avenue east of Sherman Road, Antelope Road, and Rouse

Road. As shown on EIR Figure 3-6, Class II bike lanes are proposed along Encanto Drive and the segment of Chambers Avenue located west of Sherman Road. As shown on Figure 3-7, the Project also would accommodate "Community Trails (meandering walk 8' wide)" along Rouse Road, Sherman Road, Antelope Road, and the segment of Chambers Avenue between Sherman Road and Antelope Road. As such, planned bicycle and trail facilities would be consistent with the Recreation Master Plan. Accordingly, the Project would be consistent with, or otherwise would not conflict with, applicable Recreation Master Plan goals and policies related to public transit, bicycle, and pedestrian facilities, and there are no components of the Project that would otherwise decrease the performance or safety of such facilities.

3. Conclusion

As indicated in the preceding analysis, the Project is designed to encourage pedestrian movement and enhance connectivity within the Project site through the incorporation of pedestrian and bicycle facilities that include the construction of pedestrian trails, bike lanes, and sidewalks throughout the Project site. The Project would construct an interconnected, trail system and bike lanes within the roadway rights-of-way. Furthermore, the City of Menifee Planning Division conducted a review of the Project, and determined that the Project would comply with, or otherwise would not conflict with, policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities. Additionally, the Project has no potential to otherwise decrease the performance or safety of public transit, bikeways, or pedestrian facilities. As such, no impact would occur, and no mitigation is required.

Threshold b: ***Would the Project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?***

CEQA Guidelines § 15064.3(b) includes specific considerations for evaluating a project's transportation impacts using a "vehicle miles traveled" (VMTs) measure, instead of evaluating impacts based on LOS criteria, as required by California Senate Bill (SB) 743. LOS has been used as the basis for determining the significance of traffic impacts as standard practice in CEQA documents for decades. In 2013, SB 743 was passed, which is intended to balance the need for LOS for traffic planning with the need to build infill housing and mixed-use commercial developments within walking distance of mass transit facilities, downtowns, and town centers and to provide greater flexibility to local governments to balance these sometimes-competing needs. At full implementation of SB 743, the California Governor's Office of Planning and Research (OPR) is expected to replace LOS as the metric against which traffic impacts are evaluated, with a metric based on VMTs.

CEQA Guidelines § 15064.3(c) provides that a lead agency "may elect to be governed by the provisions" of the section immediately; otherwise, the section's provisions do not apply to local lead agencies until July 1, 2020. At the time the EIR was released for public review (January 2020), the City of Menifee had not elected to implement § 15064.3 of the CEQA Guidelines, but will be required to do so for projects anticipated to be approved subsequent to July 1, 2020. Accordingly, an analysis of VMTs is not required at this time under CEQA to determine whether the Project would have a significant transportation impact. Refer instead to the discussion and analysis of Threshold a., above. Although the analysis of VMTs is not required, it should be noted that the Project's proposed residential and commercial mixed-use component; proximity to existing and planned transit facilities; proximity to major thoroughfares (i.e., I-215); and proposed pedestrian, bicycle, and NEV facilities that include the construction of pedestrian trails, bicycle lanes, NEV lanes, and sidewalks throughout the Project site would help reduce VMT-related impacts.

Although the City does not currently have an approved methodology for evaluating impacts due to VMTs, WRCOG indicates that VMT impacts would be less than significant if a project's daily VMT per capita is 15%

below the daily VMT average per capita for the project's jurisdiction (i.e., the City of Menifee) (WRCOG, 2020). According to the City of Menifee General Plan EIR, people who live or work within the City of Menifee travel, on average, 57 miles per day (e.g., average commute trip length is greater than 28 miles one-way) (Menifee, 2013b, p. 5.7-30). Thus, in order to achieve a 15% reduction in VMT below the City's average, development projects in the City would need to achieve VMTs that are 48.45 miles per day per capita or less (0.85 x 57 average miles per day = 48.45 miles per day). It is estimated that the Project would generate approximately 17,330 annual VMT per capita or 47.45 daily VMT per capita (based on mitigated VMT), based on the California Emissions Estimator Model (CalEEMod) v2016.3.2 (Urban Crossroads, 2019b, Appendix 3.2). Thus, the Project's daily VMT per capita (47.45 VMT) would be below the WRCOG VMT per capita threshold (48.45 VMT) for the City of Menifee.

Additionally, although the Project's Initial Study/Notice of Preparation (IS/NOP) indicated that an analysis would be conducted of Project impacts to Congestion Management Program (CMP) facilities, an analysis of the Project's impacts to CMP facilities are instead provided under the analysis of Threshold a. (refer to Table 4.14-57 through Table 4.14-62, which indicate which study area facilities are CMP facilities and whether the Project would result in direct or cumulatively-considerable impacts to CMP facilities). Accordingly, because the provisions of CEQA Guidelines § 15064.3 are not applicable to the Project, the Project would result in no impact due to a conflict with CEQA Guidelines § 15064.3.

Threshold c: ***Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?***

All roadway improvements planned as part of the Project have been designed to City of Menifee standards, and there are no sharp curves, dangerous intersections, or other potential safety hazards that would result from roadway improvements planned by the Project. Additionally, the Project site occurs in an area that has largely been developed with residential and commercial land uses, and there are no disparate uses, such as agricultural uses, that could potentially create safety hazards due to incompatible uses. Accordingly, Project impacts due to hazards from design features or incompatible uses would be less than significant.

Threshold d: ***Would the Project result in inadequate emergency access?***

The Project proposes a network of internal roadways that would be constructed within the Project site. During the City of Menifee's review of the Project's proposed Specific Plan related applications, the City reviewed the proposed design plans to ensure that adequate emergency access would be available at the site. Accordingly, the Project would not result in inadequate emergency access during long-term operation of the Project. Impacts associated with this issue would be less than significant.

Due to temporary lane closures that may occur during the Project's construction phase, including along Encanto Drive, Project-related construction activities may conflict with emergency access routes and access to nearby uses during frontage improvements or during construction of the new roadway intersections. Project-related construction traffic would be required to comply with a temporary traffic control plan that meets the applicable requirements of the California Manual on Uniform Traffic Control Devices. Although it is anticipated a less-than-significant impact would occur with the requirement to implement a temporary traffic control plan, out of an abundance of caution, a significant impact is identified. Accordingly, impacts would be significant prior to mitigation.

4.14.7 CUMULATIVE IMPACT ANALYSIS

A. *Threshold a.*

The analysis of Threshold a within Subsection 4.14.6 provides a detailed discussion of the Project's potential impacts to transportation. Provided below is a summary of the Project's cumulatively-considerable impacts to transportation for each study area scenario.

E+P Conditions

As indicated in Subsection 4.14.6, the Project would result in the following cumulatively-considerable impacts to roadway segments for all phases of the Project under E+P conditions:

- Ethanac Rd., I-215 Freeway to Encanto Dr. (Roadway Segment #6)
- Ethanac Rd., Encanto Dr. to Trumble Rd. (Roadway Segment #7)
- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25)

The Project would not result in cumulatively-considerable impacts due to traffic signal warrants under any of the E+P scenarios.

In addition, the Project would result in cumulatively-considerable impacts to the following freeway merge/diverge analysis locations under all E+P conditions scenarios:

- I-215 Freeway – Southbound, Off-Ramp at Ethanac Road (Merge/Diverge Location #1)
- I-215 Freeway – Southbound, Off-Ramp at McCall Boulevard (Merge/Diverge Location #3)

Opening Year Cumulative (2020) Conditions

As indicated in Subsection 4.14.6, the Project would result in the following cumulatively-considerable impacts to intersections under Opening Year Cumulative (2020) conditions:

- Bradley Rd. / McCall Bl. (Intersection #7)
- I-215 SB Ramps / McCall Bl. (Intersection #11)
- Encanto Dr. / Ethanac Rd. (Intersection #15)
- Sherman Rd. / McCall Bl. (Intersection #33)
- Antelope Rd. / McCall Bl. (Intersection #40)
- Menifee Rd. / McCall Bl. (Intersection #44)

Additionally, under Opening Year Cumulative (2020) conditions, the Project would result in cumulatively-considerable impacts to the following road segments:

- Ethanac Rd., I-215 Freeway to Encanto Dr. (Roadway Segment #6)
- Ethanac Rd., Encanto Dr. to Trumble Rd. (Roadway Segment #7)
- Ethanac Rd., Trumble Rd. to Sherman Rd. (Roadway Segment #8)
- Ethanac Rd., Sherman Rd. to Antelope Rd. (Roadway Segment #9)
- McCall Bl., Bradley Rd. to the I-215 Freeway (Roadway Segment #21)
- McCall Bl., I-215 Freeway to Encanto Dr. ((Roadway Segment #22)
- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25)

- Sherman Rd., Ethanac Rd. to McLaughlin Rd. (Roadway Segment #33)
- Menifee Rd., from Biscayne Ave to Rouse Rd. (Roadway Segment #43)

The Project also would result in cumulatively-considerable impacts to the following intersections that meet signal warrants under Opening Year Cumulative (2020) conditions:

- Encanto Drive at Ethanac Road (Intersection #15)
- Antelope Road at McCall Boulevard (Intersection #40)

In addition, the Project would result in cumulatively-considerable impacts to the following freeway segments under Opening Year Cumulative (2020) conditions:

- I-215 Freeway Southbound, Case Rd. to Ethanac Rd. (Freeway Segment #1)
- I-215 Freeway Southbound, Ethanac Rd. to McCall Bl. (Freeway Segment #2)
- I-215 Freeway Southbound, McCall Bl. to Newport Rd. (Freeway Segment #3)

Additionally, the Project would result in the following cumulatively-considerable impacts to freeway merge/diverge analysis locations under Opening Year Cumulative (2020) conditions:

- I-215 Freeway Southbound, Off-Ramp at Ethanac Road (Merge/Diverge Location #1)
- I-215 Freeway Southbound, On-Ramp at Ethanac Road (Merge/Diverge Location #2)
- I-215 Freeway Southbound, Off-Ramp at McCall Boulevard (Merge/Diverge Location #3)
- I-215 Freeway Southbound, On-Ramp at McCall Bl. (Merge/Diverge Location #4)

Opening Year Cumulative (2023) Conditions

As indicated in Subsection 4.14.6, the Project would result in the following cumulatively-considerable impacts to intersections under Opening Year Cumulative (2023) conditions:

- Murrieta Rd. / Ethanac Rd. (Intersection #2)
- Bradley Rd. / McCall Bl. (Intersection #7)
- I-215 SB Ramps / Ethanac Rd. (Intersection #10)
- I-215 NB Ramps / Ethanac Rd. (Intersection #13)
- Encanto Dr. / Ethanac Rd. (Intersection #15)
- Sherman Rd. / McCall Bl. (Intersection #33)
- Antelope Rd. / McCall Bl. (Intersection #40)
- Menifee Rd. / SR-74 (Intersection #42)
- Menifee Rd. / McCall Bl. (Intersection #44)

The Project also would result in cumulatively-considerable impacts to the following roadway segments under Opening Year Cumulative (2023) conditions:

- Ethanac Rd., Goetz Rd. to Murrieta Rd. (Roadway Segment #5)
- Ethanac Rd., I-215 Freeway to Encanto Dr. (Roadway Segment #6)
- Ethanac Rd., Encanto Dr. to Trumble Rd. (Roadway Segment #7)
- Ethanac Rd., Trumble Rd. to Sherman Rd. (Roadway Segment #8)
- Ethanac Rd., Sherman Rd. to Antelope Rd. (Roadway Segment #9)

- McCall Bl., Bradley Rd. to the I-215 Freeway (Roadway Segment #21)
- McCall Bl., I-215 Freeway to Encanto Dr. (Roadway Segment #22)
- McCall Bl., Encanto Dr. to Sherman Rd. (Roadway Segment #23)
- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25)
- Sherman Rd., Ethanac Rd. to McLaughlin Rd. (Roadway Segment #33)
- Menifee Rd., from Biscayne Ave to Rouse Rd. (Roadway Segment #43)

The Project also would result in cumulatively-considerable impacts to the following intersections that meet signal warrants under Opening Year Cumulative (2023) conditions:

- Encanto Drive at Ethanac Road (Intersection #15)
- Antelope Road at McCall Boulevard (Intersection #40)

In addition, the Project would result in cumulatively-considerable impacts to the following freeway segments under Opening Year Cumulative (2023) conditions:

- I-215 Freeway Southbound, Case Rd. to Ethanac Rd. (Freeway Segment #1) – LOS E PM peak hour only
- I-215 Freeway Southbound, Ethanac Rd. to McCall Bl. (Freeway Segment #2) – LOS E PM peak hour only
- I-215 Freeway Southbound, McCall Bl. to Newport Rd. (Freeway Segment #3) – LOS E AM and PM peak hours

Additionally, the Project would result in the following cumulatively-considerable impacts to freeway merge/diverge analysis locations under Opening Year Cumulative (2023) conditions:

- I-215 Freeway Southbound, Off-Ramp at Ethanac Road (Merge/Diverge Location #1)
- I-215 Freeway Southbound, On-Ramp at Ethanac Rd. (Merge/Diverge Location #2)
- I-215 Freeway Southbound, Off-Ramp at McCall Boulevard (Merge/Diverge Location #3)
- I-215 Freeway Southbound, On-Ramp at McCall Bl. (Merge/Diverge Location #4)

Opening Year Cumulative (2025) Conditions

As indicated in Subsection 4.14.6, the Project would result in the following cumulatively-considerable impacts to intersections under Opening Year Cumulative (2025) conditions:

- Goetz Rd. / Ethanac Rd. (Intersection #1)
- Murrieta Rd. / Ethanac Rd. (Intersection #2)
- Bradley Rd. / McCall Bl. (Intersection #7)
- I-215 SB Ramps / Ethanac Rd. (Intersection #10)
- I-215 NB Ramps / Ethanac Rd. (Intersection #13)
- Encanto Dr. / Ethanac Rd. (Intersection #15)
- Antelope Rd. / McCall Bl. (Intersection #40)
- Menifee Rd. / SR-74 (Intersection #42)
- Menifee Rd. / McCall Bl. (Intersection #44)

The Project also would result in cumulatively-considerable impacts to the following roadway segments under Opening Year Cumulative (2025) conditions:

- Ethanac Rd., Case Rd. to I-215 Freeway (Roadway Segment #5)
- Ethanac Rd., I-215 Freeway to Encanto Dr. (Roadway Segment #6)
- Ethanac Rd., Encanto Dr. to Trumble Rd. (Roadway Segment #7)
- Ethanac Rd., Trumble Rd. to Sherman Rd. (Roadway Segment #8)
- Ethanac Rd., Sherman Rd. to Antelope Rd. (Roadway Segment #9)
- McCall Bl., Bradley Rd. to the I-215 Freeway (Roadway Segment #21)
- McCall Bl., I-215 Freeway to Encanto Dr. (Roadway Segment #22)
- McCall Bl., Encanto Dr. to Sherman Rd. (Roadway Segment #23)
- McCall Bl., Sherman Rd. to Antelope Rd. (Roadway Segment #24)
- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25)
- Sherman Rd., Ethanac Rd. to McLaughlin Rd. (Roadway Segment #33)
- Menifee Rd., from Biscayne Ave to Rouse Rd. (Roadway Segment #43)

The Project also would result in cumulatively-considerable impacts to the following intersections that meet signal warrants under Opening Year Cumulative (2025) conditions:

- Encanto Drive at Ethanac Road (Intersection #15)
- Encanto Drive at McLaughlin Road (Intersection #16)
- Encanto Drive at Rouse Road (Intersection #17)
- Antelope Road at McCall Boulevard (Intersection #40)

In addition, the Project would result in cumulatively-considerable impacts to the following freeway segments under Opening Year Cumulative (2025) conditions:

- I-215 Freeway Southbound, Case Rd. to Ethanac Rd. (Freeway Segment #1)
- I-215 Freeway Southbound, Ethanac Rd. to McCall Bl. (Freeway Segment #2)
- I-215 Freeway Southbound, McCall Bl. to Newport Rd. (Freeway Segment #3)

Additionally, the Project would result in the following cumulatively-considerable impacts to freeway merge/diverge analysis locations under Opening Year Cumulative (2025) conditions:

- I-215 Freeway Southbound, Off-Ramp at Ethanac Road (Merge/Diverge Location #1)
- I-215 Freeway Southbound, On-Ramp at Ethanac Rd. (Merge/Diverge Location #2)
- I-215 Freeway Southbound, Off-Ramp at McCall Boulevard (Merge/Diverge Location #3)
- I-215 Freeway Southbound, On-Ramp at McCall Bl. (Merge/Diverge Location #4)
- I-215 Freeway Northbound, Off-Ramp at McCall Bl. (Merge/Diverge Location #8)

Horizon Year (2040) Conditions

As indicated in Subsection 4.14.6, the Project would result in the following cumulatively-considerable impacts to intersections under Horizon Year (2040) conditions:

- Goetz Rd. / Ethanac Rd. (Intersection #1)
- Murrieta Rd. / Ethanac Rd. (Intersection #2)
- Murrieta Rd. / McCall Bl. (Intersection #3)
- Sun City Bl. / McCall Bl. (Intersection #4)

- Barnett Rd. / Ethanac Rd. (Intersection #5)
- Case Rd. / Ethanac Rd. (Intersection #6)
- Bradley Rd. / McCall Bl. (Intersection #7)
- I-215 SB Ramps / Bonnie Dr. (Intersection #9)
- I-215 SB Ramps / Ethanac Rd. (Intersection #10)
- I-215 SB Ramps / McCall Bl. (Intersection #11)
- I-215 NB Ramps / SR-74 (Intersection #12)
- I-215 NB Ramps / Ethanac Rd. (Intersection #13)
- I-215 NB Ramps / McCall Bl. (Intersection #14)
- Encanto Drive at Ethanac Road (Intersection #15)
- Encanto Dr. / McLaughlin Rd. (Intersection #16)
- Encanto Drive at Rouse Road (Intersection #17)
- Encanto Dr. / Shadel Rd. (Intersection #19)
- Encanto Dr. / McCall Bl. (Intersection #20)
- Trumble Rd. / SR-74 (Intersection #21)
- Trumble Rd. / Ethanac Rd. (Intersection #22)
- Sherman Rd. / SR-74 (Intersection #26)
- Sherman Rd. / Ethanac Rd. (Intersection #27)
- Sherman Rd. / McLaughlin Rd. (Intersection #28)
- Sherman Rd. / Rouse Rd. (Intersection #29)
- Sherman Rd. / Chambers Av. (Intersection #31)
- Sherman Rd. / McCall Bl. (Intersection #33)
- Antelope Rd. / Ethanac Rd. (Intersection #36)
- Antelope Rd. / Rouse Rd. (North) (Intersection #37)
- Antelope Rd. / Rouse Rd. (South) (Intersection #38)
- Antelope Rd. / Chambers Av. (Intersection #39)
- Antelope Rd. / McCall Bl. (Intersection #40)
- Menifee Rd. / SR-74 (Intersection #42)
- Menifee Rd. / Rouse Rd./Turtle Point Dr. (Intersection #43)
- Menifee Rd. / McCall Bl. (Intersection #44)

The Project also would result in cumulatively-considerable impacts to the following roadway segments under Horizon Year (2040) conditions:

- SR-74, Bonnie Dr. to I-215 NB Ramps (Roadway Segment #1)
- SR-74, I-215 NB Ramps to Trumble Rd. (Roadway Segment #2)
- Ethanac Rd., Goetz Rd. to Murrieta Rd. (Roadway Segment #3)
- Ethanac Rd., Murrieta Rd. to Barnett Rd. (Roadway Segment #4)
- Ethanac Rd., Goetz Rd. to Murrieta Rd. (Roadway Segment #5)
- Ethanac Rd., I-215 Freeway to Encanto Dr. (Roadway Segment #6)
- Ethanac Rd., Encanto Dr. to Trumble Rd. (Roadway Segment #7)
- Ethanac Rd., Trumble Rd. to Sherman Rd. (Roadway Segment #8)
- Ethanac Rd., Sherman Rd. to Antelope Rd. (Roadway Segment #9)
- SR-74, Antelope Rd. to Palomar Rd. (Roadway Segment #10)
- Rouse Rd., Antelope Rd. (N) to Menifee Rd. (Roadway Segment #15)

- McCall Bl., Sun City Bl. to Bradley Rd. (Roadway Segment #20)
- McCall Bl., Bradley Rd. to the I-215 Freeway (Roadway Segment #21)
- McCall Bl., I-215 Freeway to Encanto Dr. (Roadway Segment #22)
- McCall Bl., Encanto Dr. to Sherman Rd. (Roadway Segment #23)
- McCall Bl., Sherman Rd. to Antelope Rd. (Roadway Segment #24)
- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25)
- Encanto Dr., Ethanac Rd. to McLaughlin Rd. (Roadway Segment #27)
- Encanto Dr., Rouse Rd. to Chambers Av. (Roadway Segment #29)
- Encanto Dr., Chambers Dr. to Shadel Rd. (Roadway Segment #30)
- Encanto Dr., Shadel Rd. to McCall Bl. (Roadway Segment #31)
- Sherman Rd., SR-74 to Ethanac Rd. (Roadway Segment #32)
- Sherman Rd., Ethanac Rd. to McLaughlin Rd. (Roadway Segment #33)
- Sherman Rd., McLaughlin Rd. to Rouse Rd. (Roadway Segment #34)
- Menifee Rd., SR-74 to Biscayne Av. (Roadway Segment #42)
- Menifee Rd., Biscayne Ave. to Rouse Rd. (Roadway Segment #43)
- Menifee Rd., Rouse Rd. to McCall Bl. (Roadway Segment #44)

The Project also would result in cumulatively-considerable impacts to the following intersections that meet signal warrants under Horizon Year (2040) conditions:

- Encanto Dr. & Ethanac Rd. (Intersection #15)
- Encanto Dr. & McLaughlin Rd. (Intersection #16)
- Encanto Dr. & Rouse Rd. (Intersection #17)
- Encanto Dr. & Chambers Av. (Intersection #18)
- Encanto Dr. & Shadel Rd. (Intersection #19)
- Sherman Rd. & Ethanac Rd. (Intersection #27)
- Sherman Rd. & McLaughlin Rd. (Intersection #28)
- Sherman Rd. & Rouse Rd. (Intersection #29)
- Sherman Rd. & Chambers Av. (Intersection #31)
- Antelope Rd. & Ethanac Rd. (Intersection #36)
- Antelope Rd. & Rouse Rd. (North) (Intersection #37)
- Antelope Rd. & Rouse Rd. (South) (Intersection #38)
- Antelope Rd. & McCall Bl. (Intersection #40)

In addition, the Project would result in cumulatively-considerable impact to the following freeway segment under Horizon Year (2040) conditions:

- I-215 Freeway Southbound, Ethanac Rd. to McCall Bl. (Freeway Segment #2)

Additionally, the Project would result in the following cumulatively-considerable impacts to freeway merge/diverge analysis locations under Horizon Year (2040) conditions:

- I-215 Freeway Southbound, Off-Ramp at Ethanac Road (Merge/Diverge Location #1)
- I-215 Freeway Southbound, Off-Ramp at McCall Boulevard (Merge/Diverge Location #3)
- I-215 Freeway Southbound, On-Ramp at McCall Bl. (Merge/Diverge Location #4)
- I-215 Freeway Northbound, Off-Ramp at Ethanac Rd. (Merge/Diverge Location #6)

- I-215 Freeway Northbound, Off-Ramp at McCall Bl. (Merge/Diverge Location #8)

B. *Threshold b.*

As noted under the discussion of Threshold b., CEQA Guidelines § 15064.3(b) includes specific considerations for evaluating a project's transportation impacts using a "vehicle miles traveled" measure. CEQA Guidelines § 15064.3(c) provides that a lead agency "may elect to be governed by the provisions" of the section immediately; otherwise, the section's provisions do not apply to local lead agencies until July 1, 2020. At the time the EIR was released for public review (January 2020), the City of Menifee had not elected to implement § 15064.3 of the CEQA Guidelines, but will be required to do so for projects anticipated to be approved subsequent to July 1, 2020. Accordingly, an analysis of vehicle miles traveled is not required at this time under CEQA to determine whether the Project would have a significant transportation impact. Therefore, the Project would not result in cumulatively-considerable impacts due to a conflict or inconsistency with CEQA Guidelines § 15064.3.

C. *Threshold c.*

As indicated under the analysis of Threshold c in Subsection 4.14.6, all roadway improvements planned as part of the Project have been designed to City of Menifee standards, and there are no sharp curves, dangerous intersections, or other potential safety hazards that would result from roadway improvements planned by the Project. Additionally, the Project site occurs in an area that has largely been developed with residential and commercial land uses, and there are no disparate uses, such as agricultural uses, that could potentially create safety hazards. There are no components of the Project that could result in cumulatively-considerable impacts from hazards due to design features or incompatible uses; accordingly, impacts would be less than significant.

D. *Threshold d.*

As indicated under the analysis of Threshold d in Subsection 4.14.6, the Project would be required to comply with a temporary traffic control plan that meets the applicable requirements of the California Manual on Uniform Traffic Control Devices, which would preclude cumulatively-considerable impacts during Project construction (refer to Mitigation Measure MM 4.14-1). Other construction projects occurring at the same time as Project construction would similarly be required to prepare and implement a temporary traffic control plan. Accordingly, impacts due to inadequate emergency access during construction activities would be less-than-cumulatively considerable.

Under long-term operating conditions, the Project would maintain public access within and through the Project site via planned improvements to roadways on and adjacent to the Project site. There are no components of the Project that would result in impacts due to inadequate emergency access under long-term operating conditions; accordingly, cumulatively-considerable impacts would be less than significant.

4.14.8 Significance of Impacts Before Mitigation

Threshold a.: Significant Direct and Cumulatively-Considerable Impact. The proposed Project would result in direct and cumulatively-considerable impacts to study area facilities under each phase of the proposed Project. Table 4.14-57, *Summary of Project Intersection Impacts by Study Scenario*, provides a summary of the Project's direct and cumulatively-considerable impacts to study area intersections under each study scenario. Table 4.14-58, *Project Impacts to Roadway Segments by Study Scenario*, provides a summary of the Project's direct and cumulatively-considerable impacts to study area roadway segments under each study scenario. Table 4.14-59, *Project Impacts due to Signal Warrants by Study Scenario*, shows the Project's

impacts due to traffic signal warrants for each study scenario. Table 4.14-60, *Project Impacts to Off-Ramp Queuing Locations by Study Scenario*, summarizes the Project's impacts to off-ramp queuing locations under each scenario. Table 4.14-61, *Project Impacts to Freeway Segments by Study Scenario*, shows the Project's impacts to freeway segments under each study scenario, while Table 4.14-62, *Project Impacts to Freeway Junction Merge/Diverge Locations by Study Scenario*, shows the Project's impacts to freeway junction merge/diverge locations for each study scenario.

Threshold b: No Impact. CEQA Guidelines § 15064.3(b) includes specific considerations for evaluating a project's transportation impacts using a "vehicle miles traveled" measure. CEQA Guidelines § 15064.3(c) provides that a lead agency "may elect to be governed by the provisions" of the section immediately; otherwise, the section's provisions do not apply to local lead agencies until July 1, 2020. At the time the EIR was released for public review (January 2020), the City of Menifee had not elected to implement § 15064.3 of the CEQA Guidelines, but will be required to do so for projects anticipated to be approved subsequent to July 1, 2020. Accordingly, an analysis of vehicle miles traveled is not required at this time under CEQA to determine whether the Project would have a significant transportation impact. Therefore, no impact would occur due to a conflict or inconsistency with CEQA Guidelines § 15064.3(b).

Threshold c: Less-than-Significant Impact. All roadway improvements planned as part of the Project have been designed to City of Menifee standards, and there are no sharp curves, dangerous intersections, or other potential safety hazards that would result from roadway improvements planned by the Project. Additionally, the Project site occurs in an area that has largely been developed with residential and commercial land uses, and there are no disparate uses, such as agricultural uses, that could potentially create safety hazards. Accordingly, Project impacts due to hazards from design features or incompatible uses would be less than significant.

Threshold d: Significant Direct Impact. The Project would not result in inadequate emergency access during long-term operation of the Project. Impacts associated with this issue would be less than significant. However, during construction of the Project, the Project Applicant would be required to comply with a temporary traffic control plan that meets the applicable requirements of the California Manual on Uniform Traffic Control Devices. Although it is anticipated a less-than-significant impact would occur with the requirement to implement a temporary traffic control plan, out of an abundance of caution, a significant impact is identified. Accordingly, impacts would be significant prior to mitigation.

Table 4.14-57 Summary of Project Intersection Impacts by Study Scenario

#	Facility	CMP Facility?	Existing plus Project (E+P)	Opening Year Cumulative (2020)	Opening Year Cumulative (2023)	Opening Year Cumulative (2025)	Horizon Year (2040)
1	Goetz Rd. / Ethanac Rd.	No	--	--	--	C*	C*
2	Murrieta Rd. / Ethanac Rd.	No	--	--	C*	C*	C*
3	Murrieta Rd. / McCall Bl.	No	--	--	--	--	C*
4	Sun City Bl. / McCall Bl.	No	--	--	--	--	C*
5	Barnett Rd. / Ethanac Rd.	No	--	--	--	--	C*
6	Case Rd. / Ethanac Rd.	No	--	--	--	--	C*
7	Bradley Rd. / McCall Bl.	No	--	C	C	C	C*
8	Bradley Rd. / Cherry Hills Bl.	No	--	--	--	D	--
9	I-215 SB Ramps / Bonnie Dr.	Yes	--	--	--	--	C*
10	I-215 SB Ramps / Ethanac Rd.	Yes	--	D*	C*	C*	C*
11	I-215 SB Ramps / McCall Bl.	Yes	--	C*	D*	D*	C*
12	I-215 NB Ramps / SR-74	Yes	--	--	--	--	C*
13	I-215 NB Ramps / Ethanac Rd.	Yes	--	D*	C*	C*	C*
14	I-215 NB Ramps / McCall Bl.	Yes	--	--	--	D	C*
15	Encanto Dr. / Ethanac Rd.	No	D	C*	C*	C*	C*
16	Encanto Dr. / McLaughlin Rd.	No	--	--	--	D	C*
17	Encanto Dr. / Rouse Rd.	No	--	--	--	--	C*
18	Encanto Dr. / Chambers Av. – Future Intersection	No	--	--	--	--	C*
19	Encanto Dr. / Shadel Rd.	No	--	--	--	D	C*
20	Encanto Dr. / McCall Bl.	No	--	--	D	D	C*
21	Trumble Rd. / SR-74	No	--	--	--	--	C*
22	Trumble Rd. / Ethanac Rd.	No	--	--	--	--	--
23	Trumble Rd. / Rouse Rd.	No	--	--	--	--	--
24	Brady Ln. / Rouse Rd.	No	--	--	--	--	--
25	Street A / Chambers Av. – Future Intersection	No	--	--	--	--	--

Table 4.14-57 Summary of Project Intersection Impacts by Study Scenario (Cont'd)

#	Facility	CMP Facility?	Existing plus Project (E+P)	Opening Year Cumulative (2020)	Opening Year Cumulative (2023)	Opening Year Cumulative (2025)	Horizon Year (2040)
26	Sherman Rd. / SR-74	No	--	--	--	--	C*
27	Sherman Rd. / Ethanac Rd.	No	--	--	--	--	C*
28	Sherman Rd. / McLaughlin Rd.	No	--	--	--	--	C*
29	Sherman Rd. / Rouse Rd.	No	--	--	--	--	C*
30	Sherman Rd. / St. B	No	--	--	--	--	--
31	Sherman Rd. / Chambers Av.	No	--	--	--	--	C*
32	Sherman Rd. / Shadel Rd.	No	--	--	--	--	--
33	Sherman Rd. / McCall Bl.	No	--	C*	C*	D	C*
34	Dawson Rd./Street C & Rouse Rd.	No	--	--	--	--	--
35	Street C/Concord Ln. & Chambers Av.	No	--	--	--	--	--
36	Antelope Rd. / Ethanac Rd.	No	--	--	--	--	C*
37	Antelope Rd. / Rouse Rd. (North)	No	--	--	--	--	C*
38	Antelope Rd. / Rouse Rd. (South)	No	--	--	--	--	C*
39	Antelope Rd. / Chambers Av.	No	--	--	--	--	C*
40	Antelope Rd. / McCall Bl.	No	--	C*	C*	C*	C*
41	Palomar Rd. / SR-74	No	--	--	--	--	D*
42	Menifee Rd. / SR-74	Yes	C*	--	C*	C*	C*
43	Menifee Rd. / Rouse Rd./Turtle Point Dr.	No	--	--	--	--	C*
44	Menifee Rd. / McCall Bl.	No	--	C*	C*	C*	C*
45	Menifee Rd. / Simpson Rd.	No	--	--	--	--	--
46	I-215 SB Ramps / Newport Rd	Yes	--	--	--	--	--
47	I-215 NB Ramps / Newport Rd.	Yes	--	--	--	--	--

Notes: "D" = Direct Impact; "C" = Cumulatively-Considerable Impact; "--" = No Impact/Less-than-Significant Impact.

* = Although mitigation is proposed in the form of fair-share contributions or fee payments to TUMF or DIF, the timing of required improvements is unknown; thus, it cannot be assured that the required improvements would be in place prior to the development phase shown above, and impacts would therefore be significant and unavoidable.

Table 4.14-58 Project Impacts to Roadway Segments by Study Scenario

#	Facility	CMP Facility?	Existing plus Project (E+P)	Opening Year Cumulative (2020)	Opening Year Cumulative (2023)	Opening Year Cumulative (2025)	Horizon Year (2040)
1	SR-74, Bonnie Dr. to I-215 NB Ramps	Yes	--	--	--	--	C*
2	SR-74, I-215 NB Ramps to Trumble Rd.	Yes	--	--	--	--	C*
3	Ethanac Rd., Goetz Rd. to Murrieta Rd.	No	--	--	--	--	C*
4	Ethanac Rd., Murrieta Rd. to Barnett Rd.	No	--	--	--	--	C*
5	Ethanac Rd., Case Rd. to I-215 Freeway	No	--	--	C*	C*	C*
6	Ethanac Rd., I-215 Freeway to Encanto Dr.	No	C*	C*	C*	C*	C*
7	Ethanac Rd., Encanto Dr. to Trumble Rd.	No	C*	C*	C*	C*	C*
8	Ethanac Rd., Trumble Rd. to Sherman Rd.	No	--	C*	C*	C*	C*
9	Ethanac Rd., Sherman Rd. to Antelope Rd.	No	--	C*	C*	C*	C*
10	SR-74, Antelope Rd. to Palomar Rd.	Yes	--	--	--	--	C*
11	Rouse Rd., Encanto Dr. to Trumble Rd.	No	--	--	--	--	--
12	Rouse Rd., Brady Ln. to Sherman Rd.	No	--	--	--	--	--
13	Rouse Rd., Sherman Rd. to Dawson Rd.	No	--	--	--	--	--
14	Rouse Rd., Dawson Rd. to Antelope Rd.	No	--	--	--	--	--
15	Rouse Rd., Antelope Rd. (N) to Menifee Rd.	No	--	--	--	--	C*
16	Chambers Av., Encanto Dr. to St. A	No	--	--	--	--	--
17	Chambers Av., St. A to Sherman Rd.	No	--	--	--	--	--
18	Chambers Av., Sherman Rd. to Concord Ln.	No	--	--	--	--	--
19	McCall Bl., Murrieta Rd. to Sun City Bl.	No	--	--	--	--	--
20	McCall Bl., Sun City Bl. to Bradley Rd.	No	--	--	--	D*	C*
21	McCall Bl., Bradley Rd. to the I-215 Freeway	No	D*	C*	C*	C*	C*
22	McCall Bl., I-215 Freeway to Encanto Dr.	No	D*	C*	C*	C*	C*
23	McCall Bl., Encanto Dr. to Sherman Rd.	No	--	D*	C*	C*	C*
24	McCall Bl., Sherman Rd. to Antelope Rd.	No	--	--	D*	C*	C*
25	McCall Bl., Antelope Rd. to Menifee Rd.	No	C*	C*	C*	C*	C*

Table 4.14-58 Project Impacts to Roadway Segments by Study Scenario (Cont'd)

#	Facility	CMP Facility?	Existing plus Project (E+P)	Opening Year Cumulative (2020)	Opening Year Cumulative (2023)	Opening Year Cumulative (2025)	Horizon Year (2040)
26	Trumble Rd., North of Ethanac Rd.	No	--	--	--	--	--
27	Encanto Dr., Ethanac Rd. to McLaughlin Rd.	No	--	--	--	D*	C*
28	Encanto Dr., McLaughlin Rd. to Rouse Rd.	No	--	--	--	D*	D*
29	Encanto Dr., Rouse Rd. to Chambers Av.	No	--	--	--	--	C*
30	Encanto Dr., Chambers Dr. to Shadel Rd.	No	--	--	--	D*	C*
31	Encanto Dr., Shadel Rd. to McCall Bl.	No	--	--	--	D	C*
32	Sherman Rd., SR-74 to Ethanac Rd.	No	--	--	--	D*	C*
33	Sherman Rd., Ethanac Rd. to McLaughlin Rd.	No	--	C*	C*	C*	C*
34	Sherman Rd., McLaughlin Rd. to Rouse Rd.	No	--	--	--	--	C*
35	Sherman Rd. Rouse Rd. to St. B	No	--	--	--	--	--
36	Sherman Rd. St. B to Chambers Av.	No	--	--	--	--	--
37	Sherman Rd. Chambers Av. to Shadel Rd.	No	--	--	--	--	--
38	Sherman Rd. Shadel Rd. to McCall Bl.	No	--	--	--	--	--
39	Antelope Rd. Rouse Rd. (N) to Rouse Rd. (S)	No	--	--	--	--	--
40	Antelope Rd. Rouse Rd. (S) to Chambers Av.	No	--	--	--	--	--
41	Antelope Rd. Chambers Av. to McCall Bl.	No	--	--	--	--	--
42	Menifee Rd., SR-74 to Biscayne Av.	No	--	--	--	--	C*
43	Menifee Rd., Biscayne Av. To Rouse Rd.	No	D*	C*	C*	C*	C*
44	Menifee Rd., Rouse Rd. to McCall Bl.	No	--	--	--	--	C*
45	Menifee Rd., McCall Bl. To Simpson Rd.	No	--	--	--	--	--

Notes: "D" = Direct Impact; "C" = Cumulatively-Considerable Impact; "--" = No Impact/Less-than-Significant Impact

* = Although mitigation is proposed in the form of fair-share contributions or fee payments to TUMF or DIF, the timing of required improvements is unknown; thus, it cannot be assured that the required improvements would be in place prior to the development phase shown above, and impacts would therefore be significant and unavoidable.

Table 4.14-59 Project Impacts due to Signal Warrants by Study Scenario

#	Facility	CMP Facility?	Existing plus Project (E+P)	Opening Year Cumulative (2020)	Opening Year Cumulative (2023)	Opening Year Cumulative (2025)	Horizon Year (2040)
1	Goetz Rd. / Ethanac Rd.	No	--	--	--	--	--
2	Murrieta Rd. / Ethanac Rd.	No	--	--	--	--	--
3	Murrieta Rd. / McCall Bl.	No	--	--	--	--	--
4	Sun City Bl. / McCall Bl.	No	--	--	--	--	--
5	Barnett Rd. / Ethanac Rd.	No	--	--	--	--	--
6	Case Rd. / Ethanac Rd.	No	--	--	--	--	--
7	Bradley Rd. / McCall Bl.	No	--	--	--	--	--
8	Bradley Rd. / Cherry Hills Bl.	No	--	--	--	D	--
9	I-215 SB Ramps / Bonnie Dr.	Yes	--	--	--	--	--
10	I-215 SB Ramps / Ethanac Rd.	Yes	--	--	--	--	--
11	I-215 SB Ramps / McCall Bl.	Yes	--	--	--	--	--
12	I-215 NB Ramps / SR-74	Yes	--	--	--	--	--
13	I-215 NB Ramps / Ethanac Rd.	Yes	--	--	--	--	--
14	I-215 NB Ramps / McCall Bl.	Yes	--	--	--	--	--
15	Encanto Dr. / Ethanac Rd.	No	D	C	C	C	C
16	Encanto Dr. / McLaughlin Rd.	No	--	--	--	C	C
17	Encanto Dr. / Rouse Rd.	No	--	--	--	C	C
18	Encanto Dr. / Chambers Av. – Future Intersection	No	--	--	--	--	C
19	Encanto Dr. / Shadel Rd.	No	--	--	--	D	C
20	Encanto Dr. / McCall Bl.	No	--	--	--	--	--
21	Trumble Rd. / SR-74	No	--	--	--	--	--
22	Trumble Rd. / Ethanac Rd.	No	--	--	--	--	--
23	Trumble Rd. / Rouse Rd.	No	--	--	--	--	--
24	Brady Ln. / Rouse Rd.	No	--	--	--	--	--
25	Street A / Chambers Av. – Future Intersection	No	--	--	--	--	--

Table 4.14-59 Project Impacts due to Signal Warrants by Study Scenario (Cont'd)

#	Facility	CMP Facility?	Existing plus Project (E+P)	Opening Year Cumulative (2020)	Opening Year Cumulative (2023)	Opening Year Cumulative (2025)	Horizon Year (2040)
26	Sherman Rd. / SR-74	No	--	--	--	--	--
27	Sherman Rd. / Ethanac Rd.	No	--	--	--	--	C*
28	Sherman Rd. / McLaughlin Rd.	No	--	--	--	--	C*
29	Sherman Rd. / Rouse Rd.	No	--	--	--	--	C*
30	Sherman Rd. / St. B	No	--	--	--	--	--
31	Sherman Rd. / Chambers Av.	No	--	--	--	--	C
32	Sherman Rd. / Shadel Rd.	No	--	--	--	--	--
33	Sherman Rd. / McCall Bl.	No	--	--	--	--	--
34	Dawson Rd./Street C & Rouse Rd.	No	--	--	--	--	--
35	Street C/Concord Ln. & Chambers Av.	No	--	--	--	--	--
36	Antelope Rd. / Ethanac Rd.	No	--	--	--	--	C*
37	Antelope Rd. / Rouse Rd. (North)	No	--	--	--	--	C*
38	Antelope Rd. / Rouse Rd. (South)	No	--	--	--	--	C*
39	Antelope Rd. / Chambers Av.	No	--	--			--
40	Antelope Rd. / McCall Bl.	No	--	C*	C*	C*	C*
41	Palomar Rd. / SR-74	No	--	--	--	--	--
42	Menifee Rd. / SR-74	Yes	--	--	--	--	--
43	Menifee Rd. / Rouse Rd./Turtle Point Dr.	No	--	--	--	--	--
44	Menifee Rd. / McCall Bl.	No	--	--	--	--	--
45	Menifee Rd. / Simpson Rd.	No	--	--	--	--	--
46	I-215 SB Ramps / Newport Rd	No	--	--	--	--	--
47	I-215 NB Ramps / Newport Rd.	No	--	--	--	--	--

Notes: "D" = Direct Impact; "C" = Cumulatively-Considerable Impact; "--" = No Impact/Less-than-Significant Impact

* = Although mitigation is proposed in the form of fair-share contributions or fee payments to TUMF or DIF, the timing of required improvements is unknown; thus, it cannot be assured that the required improvements would be in place prior to the development phase shown above, and impacts would therefore be significant and unavoidable.

Table 4.14-60 Project Impacts to Off-Ramp Queuing Locations by Study Scenario

#	Facility	CMP Facility?	Existing plus Project (E+P)	Opening Year Cumulative (2020)	Opening Year Cumulative (2023)	Opening Year Cumulative (2025)	Horizon Year (2040)
1	I-215 Freeway Southbound, Off-Ramp at Ethanac Road	Yes	--	--	--	--	--
2	I-215 Freeway Southbound, Off-Ramp at McCall Boulevard	Yes	--	--	--	--	--
3	I-215 Freeway Northbound, Off-Ramp at Ethanac Rd.	Yes	--	--	--	--	--
4	I-215 Freeway Northbound, Off-Ramp at McCall Bl.	Yes	--	--	--	--	--

Notes: "D" = Direct Impact; "C" = Cumulatively-Considerable Impact; "--" = No Impact/Less-than-Significant Impact

Table 4.14-61 Project Impacts to Freeway Segments by Study Scenario

#	Facility	CMP Facility?	Existing plus Project (E+P)	Opening Year Cumulative (2020)	Opening Year Cumulative (2023)	Opening Year Cumulative (2025)	Horizon Year (2040)
1	I-215 Freeway Southbound, Case Rd. to Ethanac Rd.	Yes	--	C*	C*	C*	
2	I-215 Freeway Southbound, Ethanac Rd. to McCall Bl.	Yes	--	C*	C*	C*	C*
3	I-215 Freeway Southbound, McCall Bl. to Newport Rd.	Yes	--	C*	C*	C*	D*
4	I-215 Freeway Northbound – SR-74 to Ethanac Road	Yes	--	--	--	--	--
5	I-215 Freeway Northbound – Ethanac Road to McCall Boulevard	Yes	--	--	--	--	--
6	I-215 Freeway Northbound – McCall Boulevard to Newport Road	Yes	--	--	--	--	--

Notes: "D" = Direct Impact; "C" = Cumulatively-Considerable Impact; "--" = No Impact/Less-than-Significant Impact

* = At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the City of Menifee (or other neighboring jurisdictions) on the SHS roadway segments and impacts would therefore be significant and unavoidable.

Table 4.14-62 Project Impacts to Freeway Junction Merge/Diverge Locations by Study Scenario

#	Facility	CMP Facility?	Existing plus Project (E+P)	Opening Year Cumulative (2020)	Opening Year Cumulative (2023)	Opening Year Cumulative (2025)	Horizon Year (2040)
1	I-215 Freeway Southbound, Off-Ramp at Ethanac Road	Yes	C*	C*	C*	C*	C*
2	I-215 Freeway Southbound, On-Ramp at Ethanac Rd.	Yes	--	C*	C*	C*	
3	I-215 Freeway Southbound, Off-Ramp at McCall Boulevard	Yes	C*	C*	C*	C*	C*
4	I-215 Freeway Southbound, On-Ramp at McCall Bl.	Yes	--	C*	C*	C*	C*
5	I-215 Freeway – Northbound, On-Ramp at Ethanac Road	Yes	--	--	--	--	--
6	I-215 Freeway Northbound, Off-Ramp at Ethanac Rd.	Yes	--	--	--	--	C*
7	I-215 Freeway – Northbound, On-Ramp at McCall Boulevard	Yes	--	--	--	--	
8	I-215 Freeway Northbound, Off-Ramp at McCall Bl.	Yes	--	--	--	C*	C*

Notes: "D" = Direct Impact; "C" = Cumulatively-Considerable Impact; "--" = No Impact/Less-than-Significant Impact
* = At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the City of Menifee (or other neighboring jurisdictions) on the SHS roadway segments and impacts would therefore be significant and unavoidable.

4.14.9 City Regulations, Design Requirements, and Mitigation

Applicable City Regulations and Design Requirements

The following are applicable regulations and design requirements within the City of Menifee. Although these requirements technically do not meet CEQA's definition for mitigation, they are identified herein to ensure Project compliance with applicable City regulations and design requirements. Project improvements listed below that are funded by DIF shall be paid with appropriate DIF fee credits. The following measures are included in the Project's conditions of approval:

CRDR 4.14-1 Prior to issuance of each occupancy permit, appropriate Transportation Uniform Mitigation Fee (TUMF) fees shall be paid by the property owner/developer in amounts determined by the City Council Resolution in effect at the time of issuance of the building permit. Payment of TUMF fees would ensure that funds are available for roadway improvements at facilities identified in the TUMF Facilities List.

CRDR 4.14-2 Prior to the issuance of occupancy permits for residential uses and prior to issuance of permits for commercial uses, appropriate Development Impact Fees (DIF) shall be paid by the property owner/developer pursuant to City of Menifee Ordinance No. 2017-232 (Municipal Code Chapter 8.02). Payment of DIF fees would ensure that funds are available for roadway improvements at facilities identified in the DIF Facilities List.

CRDR 4.14-3 The Project would be subject to constructing frontage improvements to the roadways immediately surrounding the Project site, per the requirements of Specific Plan No. 2017-187 (SP 2017-187), detailed in EIR Subsection 3.2.1.C, *Vehicular Circulation,* or as warranted by the Project's Traffic Impact Analysis. Frontage improvements to the following roadways would occur in conjunction with, and during the same Phase as development of the Planning Area located immediately adjacent to the roadway:

- Sherman Road;
- Antelope Road;
- Rouse Road;
- Chambers Avenue; and
- Encanto Drive.

CRDR 4.14-4 The Project Applicant shall provide for the following intersection and roadway segment configurations, which shall be constructed prior to occupancy of Phase 1 of the Project, with appropriate DIF fee credits:

- Encanto Drive at Rouse Road (Intersection #17)
  - Install a traffic signal;
  - Northbound Approach: One shared through-right turn lane.
  - Southbound Approach: One left turn lane with a minimum of 150-feet of storage and one through lane.
  - Eastbound Approach: Not Applicable (N/A)
  - Westbound Approach: One shared left-right turn lane and one right turn lane.

- Trumble Road at Rouse Road (Intersection #23)

- Northbound Approach: N/A
- Southbound Approach: One shared left-right turn lane
- Eastbound Approach: One left turn lane and one through lane.
- Westbound Approach: One through lane and one right turn lane.

- Brady Lane/Street A at Rouse Road (Intersection #24)
  - Install a stop control on Street A;
  - Northbound Approach: One shared left-through-right turn lane.
  - Southbound Approach: One shared left-through-right turn lane.
  - Eastbound Approach: One left turn lane with a minimum of 100-feet of storage, one through lane, and one shared through-right turn lane.
  - Westbound Approach: One left turn lane with a minimum of 100-feet of storage, one through lane, and one shared through-right turn lane.

- Sherman Road at Rouse Road (Intersection #29)
  - Northbound Approach: One left turn lane with a minimum of 150-feet of storage, one through lane, and one shared through-right turn lane.
  - Southbound Approach: One left turn lane with a minimum of 100-feet of storage, one through lane, and one shared through-right turn lane.
  - Eastbound Approach: One left turn lane with a minimum of 100-feet of storage, one through lane, and one shared through-right turn lane.
  - Westbound Approach: One left turn lane with a minimum of 150-feet of storage, one through lane, and one shared through-right turn lane.

- Sherman Road at Street B (Intersection #30)
  - Install a roundabout;
  - Northbound Approach: One shared left-through-right turn lane.
  - Southbound Approach: One shared left-through-right turn lane.
  - Eastbound Approach: One shared left-through-right turn lane.
  - Westbound Approach: One shared left-through-right turn lane.

- Sherman Road at Chambers Avenue (Intersection #31)
  - Northbound Approach: One left turn lane with a minimum of 150-feet of storage, one through lane, and one shared through-right turn lane.
  - Southbound Approach: One left turn lane with a minimum of 250-feet of storage, one through lane, and one shared through-right turn lane.
  - Eastbound Approach: One shared through-left turn lane, and one right turn lane.
  - Westbound Approach: One shared left-through-right turn lane.

- Dawson Road/Street C at Rouse Road (Intersection #34)
  - Install stop control on Street C;
  - Northbound Approach: One shared left-through-right turn lane.
  - Southbound Approach: One shared left-through-right turn lane.
  - Eastbound Approach: One left turn lane with a minimum of 100-feet of storage, one through lane, and one shared through-right turn lane.
  - Westbound Approach: One left turn lane with a minimum of 100-feet of storage, one through lane, and one shared through-right turn lane.

- Rouse Road – Encanto Drive to Eastern Boundary of Legado Specific Plan Planning Area 9 (Roadway Segments #11 through #13 and a portion of #14): Construct Rouse Road between Encanto Drive and the eastern boundary of Legado Specific Plan Planning Area 9 to its ultimate half-section width as a secondary roadway (100- to 111-foot right-of-way).

- Sherman Road – Rouse Road to Chambers Avenue (Roadway Segments #35 and #36): Construct Sherman Road between Rouse Road and Chambers Avenue to its ultimate full-section width as a major roadway with a 12- to 44-foot raised median (122-foot right-of-way).

CRDR 4.14-5 The Project Applicant shall provide for the following intersection and roadway segment improvements, which shall be constructed prior to occupancy of Phase 2 of the Project, with appropriate DIF fee credits:

- Encanto Road at Chambers Avenue (Intersection #18)
  - Install a traffic signal;
  - Northbound Approach: One shared through-right turn lane.
  - Southbound Approach: One left turn lane with a minimum of 250-feet of storage and one through lane.
  - Eastbound Approach: Not Applicable (N/A)
  - Westbound Approach: One shared left-right turn lane.

- Street A at Chambers Avenue (Intersection #25)
  - Install stop control on Street A;
  - Northbound Approach: N/A
  - Southbound Approach: One shared left-right lane.
  - Eastbound Approach: One left turn lane with a minimum of 100-feet of storage and one through lane.
  - Westbound Approach: One through lane and one shared through-right lane.

- Sherman Road at Chambers Avenue (Intersection #31)
  - Northbound Approach: One left turn lane with a minimum of 150-feet of storage, one through lane, and one shared through-right turn lane.
  - Southbound Approach: One left turn lane with a minimum of 250-feet of storage, one through lane, and one shared through-right turn lane.
  - Eastbound Approach: One left turn lane, one through lane, and one right turn lane.
  - Westbound Approach: One left turn lane, one through lane, and one shared through-right turn lane.

- Street C/Concord Lane at Chambers Avenue (Intersection #35)
  - Install stop control on Street C;
  - Northbound Approach: One shared left-through-right turn lane.
  - Southbound Approach: One shared left-through-right turn lane.
  - Eastbound Approach: One left turn lane with a minimum of 100-feet of storage, one through lane, and one shared through-right turn lane.
  - Westbound Approach: One shared left-through-right turn lane.

- Antelope Road at Rouse Road (South) (Intersection #38)
  - Install stop control on Rouse Road (eastbound approach);
  - Northbound Approach: One northbound left turn lane and one through lane.
  - Southbound Approach: One southbound shared through-right turn lane.
  - Eastbound Approach: One left turn lane and one right turn lane.
  - Westbound Approach: N/A

- Rouse Road – Eastern Boundary of Legado Specific Plan Planning Area 9 to Antelope Road (Portion of Roadway Segment #14): Construct Rouse Road between the eastern boundary of Legado Specific Plan Planning Area 9 and Antelope Road to its ultimate half-section width as a secondary roadway (107-foot right-of-way).

- Chambers Avenue – Encanto Drive to eastern boundary of the Sports Park in Planning Area 18 of the Legado Specific Plan (Roadway Segment #16 and a portion of #17): Construct Chambers Avenue between Encanto Drive and the eastern boundary of Planning Area 18 of the Legado Specific Plan to its ultimate full-section width as a secondary roadway with painted median (98- to 106-foot right-of-way).

- Chambers Avenue – Eastern boundary of the Sports Park in Legado Ranch Specific Plan Planning Area 18 to Street C (Roadway Segment #18 and a portion of #17): Construct Chambers Avenue between the eastern boundary of Planning Area 18 of the Legado Specific Plan and Street C to its ultimate half-section width as a secondary roadway with painted median (98- to 106-foot right-of-way).

- Antelope Road – Rouse Road to Northern Boundary of Legado Specific Plan Planning Area 13 (Portion of Roadway Segment 40): Construct Antelope Road between Rouse Road and the northern boundary of Legado Specific Plan Planning Area 13 its ultimate half-section width as a major roadway (118- 128-foot right-of-way).

CRDR 4.14-6 The following intersection and roadway segment improvements shall be constructed prior to occupancy of Phase 3 of the Project, with appropriate DIF fee credits:

- Antelope Road at Chambers Road (Intersection #39)
  - Install a stop control on Chambers Road;
  - Northbound Approach: One left turn lane with a minimum of 200-feet of storage and one through lane.
  - Southbound Approach: One shared through-right turn lane.
  - Eastbound Approach: One shared left-right turn lane.
  - Westbound Approach: N/A
  - Sight distance at each project access point should be reviewed with respect to standard Caltrans and City of Menifee sight distance standards.

- Encanto Drive – Rouse Road to Chambers Avenue (Roadway Segment #29): Improve Encanto Drive between Rouse Road and Chambers Avenue to its ultimate full-section width as a major highway (93-foot right-of-way)

- Chambers Avenue – Street C to Antelope Road (Roadway Segment A): Improve Chambers Avenue between Street C (Concord Lane) and Antelope Road to its ultimate half-section width as a secondary roadway with painted median (104-foot right-of-way)

- Antelope Road – Northern Boundary of Legado Specific Plan Planning Area 13 and Chambers Avenue (Portion of Roadway Segment 40): Improve Antelope Road between the northern boundary of Legado Specific Plan Planning Area 13 and Chambers Avenue to its ultimate half-section width as a major roadway (118- to 128-foot right-of-way).

Mitigation for Construction-Related Impacts

MM 4.14-1 Prior to the issuance of grading permits or improvement plans affecting Encanto Drive, Rouse Road, Chambers Avenue, Sherman Road, or Antelope Road, the Project Applicant shall prepare and the City of Menifee shall approve a temporary traffic control plan. The temporary traffic control plan shall comply with the applicable requirements of the California Manual on Uniform Traffic Control Devices. A requirement to comply with the temporary traffic control plan shall be noted on all grading and improvement plans affecting Encanto Drive, Rouse Road, Chambers Avenue, Sherman Road, or Antelope Road and also shall be specified in bid documents issued to prospective construction contractors.

Mitigation for Phase 1 Direct Traffic Impacts

MM 4.14-2 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall construct a traffic signal and an eastbound right turn lane at the intersection of Encanto Drive and Ethanac Road (Intersection #15).

Mitigation for Phase 1 Cumulatively-Considerable Traffic Impacts

MM 4.14-3 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the intersection of Murrieta Road at Ethanac Road (Intersection #2):

- Construct a northbound left turn lane.

The City of Menifee shall establish a fair-share funding program for this improvement and shall only use the funds paid by the Project Applicant for the purpose of implementing this improvement. The Project's fair share of the above-listed improvement for Phase 1 of the Project is 6.8%.

MM 4.14-4 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements at the intersection of Bradley Road at McCall Boulevard (Intersection #7):

- Construct a second westbound left turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 1 of the Project is 20.2%.

MM 4.14-5 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Encanto Drive and Ethanac Road (Intersection #15):

- Construct a northbound left turn lane; and
- Modify the traffic signal to implement overlap phasing on the eastbound right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 1 of the Project is 13.5%.

MM 4.14-6 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Sherman Road at McCall Boulevard (Intersection #33):

- Construct a third westbound through lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 1 of the Project is 19.7%.

MM 4.14-7 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Antelope Road at McCall Boulevard (Intersection #40):

- Construct an eastbound left turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 1 of the Project is 11.0%.

MM 4.14-8 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Menifee Road at Pinacate Road (SR-74) (Intersection #42):

- Construct a northbound left turn lane;
- Construct a southbound left turn lane; and
- Modify the traffic signal to protect the northbound and southbound left turn movements.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 2 of the Project is 3.1%.

MM 4.14-9 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Menifee Road at McCall Boulevard (Intersection #44):

- Construct a second northbound left turn lane (the de facto northbound right turn lane shall be eliminated in order to accommodate the second northbound left turn lane);
- Construct an eastbound right turn lane; and
- Modify the traffic signal to implement overlap phasing on the eastbound right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 1 of the Project is 7.3%.

MM 4.14-10 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of McCall Boulevard from Bradley Road to I-215 Freeway (Roadway Segment #21):

- Widen the roadway to six lanes.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 1 of the Project is 17.0%.

MM 4.14-11 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of McCall Boulevard from I-215 Freeway to Encanto Drive (Roadway Segment #22):

- Widen the roadway to six lanes.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 1 of the Project is 18.1%.

MM 4.14-12 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of McCall Boulevard from Encanto Drive to Sherman Road (Roadway Segment #23):

- Widen the roadway to six lanes.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these

improvements. The Project's fair share of the above-listed improvements for Phase 1 of the Project is 15.7%.

MM 4.14-13 Prior to issuance of occupancy permits for Phase 1 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of Menifee Road from Biscayne Avenue to Rouse Road (Roadway Segment #43):

- Widen the roadway to four lanes.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 1 of the Project is 11.0%.

Mitigation for Phase 2 Direct Traffic Impacts

MM 4.14-14 Prior to issuance of occupancy permits for Phase 2 of the Project, the Project Applicant shall construct the following improvements to the intersection of Encanto Drive at McCall Boulevard (Intersection #20):

- Construct an eastbound right turn lane;
- Construct a southbound right turn lane; and
- Modify the traffic signal to implement overlap phasing on the southbound right turn lane.

MM 4.14-15 The following improvements shall only be required if the improvements have not been constructed by others prior to issuance of occupancy permits for Phase 2 of the Project. Prior to issuance of occupancy permits for Phase 2 of the Project, the Project Applicant shall implement the following improvements to the intersection of Antelope Road at Rouse Road (South) (Intersection #38):

- Construct a northbound left turn lane;
- Construct a northbound through lane; and
- Construct a southbound shared through-right turn lane.

In the event the improvements listed below have been constructed by others, this Mitigation Measure shall no longer apply.

Mitigation for Phase 2 Cumulatively-Considerable Traffic Impacts

MM 4.14-16 Prior to issuance of occupancy permits for Phase 2 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the intersection of Murrieta Road at Ethanac Road (Intersection #2):

- Construct a northbound right turn lane.

The City of Menifee shall establish a fair-share funding program for this improvement and shall only use the funds paid by the Project Applicant for the purpose of implementing this

improvement. The Project's fair share of the above-listed improvement for Phase 2 of the Project is 6.8%.

MM 4.14-17 Prior to issuance of occupancy permits for Phase 2 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Menifee Road at Pinacate Road (SR-74) (Intersection #42):

- Modify the traffic signal to accommodate overlap phasing for the northbound right turn lane; and
- Construct an eastbound right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 2 of the Project is 3.2%.

MM 4.14-18 Prior to issuance of occupancy permits for Phase 2 of the Project, the Project Applicant shall use reasonable efforts to make a monetary contribution to the City of Perris, to be held in trust, for the following improvement to the roadway segment of Ethanac Road from Case Road to I-215 Freeway (Roadway Segment #5):

- Widen the roadway to six lanes.

The City of Perris shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 2 of the Project is 9.0%.

MM 4.14-19 Prior to issuance of occupancy permits for Phase 2 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of McCall Boulevard from Sherman Road to Antelope Road (Roadway Segment #24):

- Widen the roadway to six lanes.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 2 of the Project is 9.3%.

MM 4.14-20 Prior to issuance of occupancy permits for Phase 2 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of McCall Boulevard from Antelope Road to Menifee Road (Roadway Segment #25):

- Widen the roadway to six lanes.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 2 of the Project is 9.5%.

Mitigation for Project Buildout Direct Traffic Impacts

MM 4.14-21 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall construct a traffic signal at the intersection of Bradley Road at Cherry Hills Boulevard (Intersection #8), with potential appropriate fee credits.

MM 4.14-22 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall construct a traffic signal and a southbound left turn lane at the intersection of Encanto Drive and McLaughlin Road (Intersection #16).

MM 4.14-23 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall construct the following improvements at the intersection of Encanto Drive at Shadel Road (Intersection #19):

- Install a traffic signal; and
- Construct a southbound left turn lane.

MM 4.14-24 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall construct the following improvements at the intersection of Encanto Drive at McCall Boulevard (Intersection #20):

- Construct a second eastbound left turn lane; and
- Construct a westbound right turn lane.

MM 4.14-25 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall construct a third eastbound through lane at the intersection of Sherman Road at McCall Boulevard (Intersection #33).

Mitigation for Project Buildout Cumulatively-Considerable Traffic Impacts

MM 4.14-26 Prior to issuance of occupancy permits for Phase 3 of the Project (Project buildout), the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, to be held in trust by the City of Menifee, for the following improvements to the intersection of Goetz Road at Ethanac Road (Intersection #1):

- Construct a second southbound left turn lane; and
- Modify the traffic signal to accommodate overlap phasing for the northbound and westbound right turn lanes.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 4.0%.

MM 4.14-27 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Murrieta Road at Ethanac Road (Intersection #2):

- Construct an eastbound right turn lane; and
- Restripe to provide a southbound left and southbound through/right turn lanes.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 7.1%.

MM 4.14-28 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Menifee Road at Pinacate Road (SR-74) (Intersection #42):

- Construct a second westbound left turn lane; and
- Construct a southbound right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 3.6%.

MM 4.14-29 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the intersection of Menifee Road at McCall Boulevard (Intersection #44):

- Construct a southbound right turn lane.

The City of Menifee shall establish a fair-share funding program for this improvement and shall only use the funds paid by the Project Applicant for the purpose of implementing this improvement. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 8.8%.

MM 4.14-30 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of Encanto Drive from Ethanac Road to McLaughlin Road (Roadway Segment #27):

- Widen the roadway to four lanes.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 51.1%.

Mitigation for Horizon Year (2040) Cumulatively-Considerable Traffic Impacts

MM 4.14-31 Prior to issuance of occupancy permits for Phase 3 of the Project (Project buildout), the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Goetz Road at Ethanac Road (Intersection #1):

- Construct a second northbound left turn lane;
- Construct a third eastbound through lane;
- Construct a third westbound through lane; and
- Modify the traffic signal to accommodate overlap phasing for the southbound right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 1.6%.

MM 4.14-32 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Murrieta Road at Ethanac Road (Intersection #2):

- Construct a second eastbound left turn lane;
- Construct a third eastbound through lane;
- Construct a second westbound left turn lane; and
- Construct a third westbound through lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 2.8%.

MM 4.14-33 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the intersection of Murrieta Road at McCall Boulevard (Intersection #3):

- Modify the traffic signal to protect the eastbound and westbound left turn lanes.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 4.0%.

MM 4.14-34 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Sun City Boulevard at McCall Boulevard (Intersection #4):

- Construct a northbound left turn lane;

- Construct first and second southbound left turn lanes;
- Construct a second westbound left turn lane; and
- Construct a westbound right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 3.6%.

MM 4.14-35 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the intersection of Barnett Road at Ethanac Road (Intersection #5):

- Construct a third westbound through lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvement for Phase 3 of the Project is 2.9%.

MM 4.14-36 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall use reasonable efforts to make a fair-share monetary contribution to the City of Perris, to be held in trust, for the following improvements to the intersection of Case Road at Ethanac Road (Intersection #6):

- Modify the traffic signal to accommodate overlap phasing for the southbound and westbound right turn lanes;
- Construct a second eastbound left turn lane; and
- Construct a third eastbound through lane.

The City of Perris shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 3.3%.

MM 4.14-37 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Bradley Road at McCall Boulevard (Intersection #7):

- Construct a second northbound right turn lane;
- Construct an eastbound right turn lane; and
- Modify the traffic signal to accommodate overlap phasing for the eastbound right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 4.3%.

MM 4.14-38 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall use reasonable efforts to make a fair-share monetary contribution to the City of Perris, to be held in trust, for the following improvement to the intersection of I-215 Southbound Ramps at Bonnie Drive (Intersection #9):

- Construct a second northbound left turn lane.

The City of Perris shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 2.5%.

MM 4.14-39 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Encanto Drive and Ethanac Road (Intersection #15):

- Construct a second northbound left turn lane;
- Modify the traffic signal to implement overlap phasing on the northbound right turn lane;
- Construct a third eastbound through lane; and
- Construct a third westbound through lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 7.5%.

MM 4.14-40 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Encanto Drive and McLaughlin Road (Intersection #16):

- Construct a second southbound through lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 23.4%.

MM 4.14-41 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Encanto Drive at McCall Boulevard (Intersection #20):

- Restripe the southbound left as a southbound shared left-through lane; and
- Modify the traffic signal to accommodate overlap phasing on the southbound and eastbound right turn lanes; and split phasing on the northbound and southbound approaches.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these

improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 10.3%.

MM 4.14-42 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Trumble Road at SR-74 (Intersection #21):

- Construct a second eastbound left turn lane; and
- Modify the traffic signal to implement overlap phasing on the southbound right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 5.4%.

MM 4.14-43 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Trumble Road at Ethanac Road (Intersection #22):

- Construct a northbound left turn lane;
- Restripe southbound approach with left turn lane and shared through-right turn lane
- Construct an eastbound shared through-right turn lane; and
- Construct a westbound shared through-right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 6.3%.

MM 4.14-44 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Sherman Road at SR-74 (Intersection #26):

- Construct a southbound left turn lane;
- Construct a third eastbound through lane;
- Construct an eastbound right turn lane;
- Construct a second westbound left turn lane;
- Construct a third westbound through lane; and
- Modify the traffic signal to implement overlap phasing on the northbound right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 3.5%.

MM 4.14-45 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Sherman Road at Ethanac Road (Intersection #27):

- Construct a northbound left turn lane;
- Construct a second northbound left turn lane;
- Construct a northbound right turn lane;
- Construct a southbound left turn lane;
- Construct a southbound right turn lane;
- Construct two eastbound left turn lanes;
- Construct a third eastbound through lane;
- Construct an eastbound right turn lane;
- Construct a westbound left turn lane;
- Construct a third westbound through lane;
- Modify the traffic signal to accommodate overlap phasing for the southbound right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 8.6%.

MM 4.14-46 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Sherman Road at McLaughlin Road (Intersection #28):

- Construct a northbound left turn lane;
- Construct a southbound left turn lane;
- Construct an eastbound left turn lane; and
- Construct a westbound left turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 19.5%.

MM 4.14-47 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements at the intersection of Sherman Road at Rouse Road (Intersection #29).

- Construct a second southbound through lane; and
- Construct an eastbound right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 35.3%.

MM 4.14-48 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Sherman Road at McCall Boulevard (Intersection #33):

- Construct a second eastbound left turn lane;
- Construct a westbound right turn lane; and
- Modify the traffic signal to accommodate overlap phasing for the southbound right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 8.9%.

MM 4.14-49 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Antelope Road at Ethanac Road (Intersection #36):

- Install a traffic signal;
- Construct a northbound left turn lane;
- Restripe northbound shared left-through-right turn lane as a through lane;
- Construct two southbound left turn lanes;
- Construct second southbound through lane;
- Construct southbound right turn lane;
- Construct two eastbound left turn lanes;
- Restripe eastbound right turn as a shared through-right turn lane;
- Construct two westbound left turn lanes;
- Construct a third westbound through lane;
- Construct a westbound right turn lane; and
- Modify the traffic signal to accommodate overlap phasing for the westbound right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 2.2%.

MM 4.14-50 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Antelope Road at Rouse Road (North) (Intersection #37):

- Construct a northbound left turn lane;
- Construct a southbound left turn lane;
- Construct a second eastbound through lane; and
- Construct a second westbound through lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these

improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 5.2%.

MM 4.14-51 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the intersection of Antelope Road at Rouse Road (South) (Intersection #38):

- Construct a southbound right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvement for Phase 3 of the Project is 12.7%.

MM 4.14-52 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Antelope Road at McCall Boulevard (Intersection #40):

- Construct a southbound left turn lane; and
- Construct a southbound right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 4.9%.

MM 4.14-53 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Palomar Road at SR-74 (Intersection #41):

- Construct a second northbound through lane; and
- Modify the traffic signal to accommodate overlap phasing for the northbound right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 2.8%.

MM 4.14-54 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Menifee Road at Pinacate Road (SR-74) (Intersection #42):

- Construct a second northbound left turn lane;
- Construct a third northbound through lane;
- Construct a second southbound left turn lane;
- Construct a third southbound through lane;
- Construct a second eastbound left turn lane; and

- Modify the traffic signal to accommodate overlap phasing for the eastbound right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 1.7%.

MM 4.14-55 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Menifee Road/Rouse Road/Turtle Point Drive (Intersection #43):

- Construct a second northbound left turn lane;
- Construct a third northbound through lane;
- Construct a third southbound through lane;
- Construct an eastbound left turn lane;
- Construct an eastbound right turn lane; and
- Modify the traffic signal to accommodate overlap phasing for the eastbound right turn lane.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 2.5%.

MM 4.14-56 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvements to the intersection of Menifee Road at McCall Boulevard (Intersection #44):

- Construct a northbound right turn lane;
- Construct a second southbound left turn lane;
- Construct a third southbound through lane;
- Construct a third westbound through lane;
- Construct a second westbound right turn lane; and
- Modify the traffic signal to accommodate overlap phasing for the northbound, southbound, and westbound right turn lanes.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 3.0%.

MM 4.14-57 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of Ethanac Road from Goetz Road to Murrieta Road (Roadway Segment #3):

- Widen the roadway to six lanes.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 2.0%.

MM 4.14-58 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of Ethanac Road Murrieta Road to Barnett Road (Roadway Segment #4):

- Widen the roadway to six lanes.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 2.5%.

MM 4.14-59 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall use reasonable efforts to make a monetary contribution to the City of Perris, to be held in trust, for the following improvement to the roadway segment of Ethanac Road from I-215 Freeway to Encanto Drive (Roadway Segment #6):

- Widen the roadway to six lanes.

The City of Perris shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 6.9%.

MM 4.14-60 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall use reasonable efforts to make a monetary contribution to the City of Perris, to be held in trust, for the following improvement to the roadway segment of Ethanac Road from Encanto Drive to Trumble Road (Roadway Segment #7):

- Widen the roadway to six lanes.

The City of Perris shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 4.1%.

MM 4.14-61 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of Ethanac Road from Trumble Road to Sherman Road (Roadway Segment #8):

- Widen the roadway to six lanes.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 4.4%.

MM 4.14-62 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of Ethanac Road from Sherman Road to Antelope Road (Roadway Segment #9):

- Widen the roadway to six lanes.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 2.0%.

MM 4.14-63 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of Rouse Road from Antelope Road (North) to Menifee Road (Roadway Segment #15):

- Widen the roadway to four lanes.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 5.3%.

MM 4.14-64 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of Menifee Road from SR-74 to Biscayne Avenue (Roadway Segment #42):

- Widen the roadway to six lanes.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 3.6%.

MM 4.14-65 Prior to issuance of occupancy permits for Phase 3 of the Project, the Project Applicant shall make a monetary contribution to the City of Menifee, to be held in trust, for the following improvement to the roadway segment of Menifee Road from Biscayne Avenue to Rouse Road (Roadway Segment #43):

- Widen the roadway to six lanes.

The City of Menifee shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. The Project's fair share of the above-listed improvements for Phase 3 of the Project is 2.3%.

4.14.10 Significance of Impacts After Mitigation

A summary of the Project's mitigation improvements and method of mitigation (i.e., TUMF, DIF, fair share, or construct) are included in Tables 10-1 and 10-2 of the Project's TIA *(Technical Appendix K)* for intersection improvements and Tables 10-3 and 10-4 of the Project's TIA for roadway segment improvements. The significance of impacts after mitigation is discussed below.

❑ Threshold a: Impacts Reduced to Less-than-Significant After Mitigation

Provided below is a summary of the Project impacts that would be reduced to less-than-significant levels with implementation of mitigation measures. A list of the Project's significant and unavoidable impacts is provided after the discussion of impacts that would be reduced to less-than-significant levels.

A. E+P Conditions

1. Intersections

As indicated in Table 4.14-63, *Intersection Capacity Analysis for E+P (Project Buildout) Conditions With Improvements*, implementation of Mitigation Measure MM 4.14-2 would improve the LOS at the intersection of Encanto Drive and Ethanac Road (Intersection #15) to an acceptable LOS B in the AM peak hour and an acceptable LOS B in the PM peak hour. Because the Project Applicant would be required to construct the improvements required by Mitigation Measure MM 4.14-2 prior to occupancy of Phase 1 of the Project, Project impacts to the intersection of Encanto Drive and Ethanac Road (Intersection #15) would be reduced to less-than-significant levels under E+P conditions.

Table 4.14-63 Intersection Capacity Analysis for E+P (Project Buildout) Conditions With Improvements

#	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
15	Encanto Dr. & Ethanac Rd.																	
	Existing:																	
	- Without Improvements	CSS	0	1	0	0	0	0	0	1	0	1	1	0	**69.4**	**40.4**	**F**	**E**
	E+P Phase 1:																	
	- Without Improvements	CSS	0	1	0	0	0	0	0	1	0	1	1	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	**TS**	0	1	0	0	0	0	0	1	**1**	1	1	0	11.6	10.2	B	B
	E+P Phase 2:																	
	- Without Improvements	CSS	0	1	0	0	0	0	0	1	0	1	1	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	**TS**	0	1	0	0	0	0	0	1	**1**	1	1	0	12.7	10.8	B	B
	E+P Project Buildout:																	
	- Without Improvements	CSS	0	1	0	0	0	0	0	1	0	1	1	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	**TS**	0	1	0	0	0	0	0	1	**1**	1	1	0	15.5	13.8	B	B
42	Menifee Rd. & SR-74																	
	Existing:																	
	- Without Improvements	TS	0	1	1	0	1	0	1	2	0	1	2	0	**55.6**	**58.6**	**E**	**E**
	E+P Phase 1:																	
	- Without Improvements	TS	0	1	1	0	1	0	1	2	0	1	2	0	**56.8**	**61.6**	**E**	**E**
	- With Improvements[4]		Not Applicable												--	--	--	--
	E+P Phase 2:																	
	- Without Improvements	TS	0	1	1	0	1	0	1	2	0	1	2	0	**57.8**	**63.5**	**E**	**E**
	- With Improvements[5]	TS	**1**	1	1	**1**	1	0	1	2	0	1	2	0	43.8	31.8	D	C
	E+P Project Buildout:																	
	- Without Improvements	TS	0	1	1	0	1	0	1	2	0	1	2	0	**59.3**	**65.0**	**E**	**E**
	- With Improvements[5]	TS	**1**	1	1	**1**	1	0	1	2	0	1	2	0	45.1	32.3	D	C

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[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 = Defacto Right Turn Lane; **1** = Improvement

[2] Per the 2010 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; TS = Traffic Signal; **TS** = Improvement

[4] Project contributes less than 50 peak hour trips

[5] Improvement includes implementing protected left turn phasing on the northbound and southbound approaches.

(Urban Crossroads, 2019d, Table 5-16)

2. Traffic Signal Warrants

As indicated Table 4.14-63, implementation of Mitigation Measure MM 4.14-2, which includes the installation of a traffic signal, would improve the LOS at the intersection of Encanto Drive and Ethanac Road (Intersection #15) to an acceptable LOS B in the AM peak hour and an acceptable LOS B in the PM peak hour. Because the Project Applicant would be required to construct the improvements required by Mitigation Measure MM 4.14-2 prior to occupancy of Phase 1 of the Project, Project impacts to the intersection of Encanto Drive and Ethanac Road (Intersection #15) would be reduced to less-than-significant levels under E+P conditions.

B. Opening Year Cumulative (2020) Conditions

1. Intersections

As indicated in Table 4.14-64, *Intersection Analysis for Opening Year Cumulative (2020) Conditions With Improvements*, implementation of Mitigation Measure MM 4.14-2 would improve the LOS at the intersection of Encanto Drive and Ethanac Road (Intersection #15) to an acceptable LOS B in the AM peak hour and an acceptable LOS B in the PM peak hour. Because the Project Applicant would be required to construct the improvements required by Mitigation Measure MM 4.14-2 prior to occupancy of Phase 1 of the Project, Project impacts to the intersection of Encanto Drive and Ethanac Road (Intersection #15) would be reduced to less-than-significant levels under Opening Year (2020) conditions.

Table 4.14-64 Intersection Analysis for Opening Year Cumulative (2020) Conditions With Improvements

#	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
2	Murrieta Rd. & Ethanac Rd.																	
	- Without Improvements	TS	0	1	0	0	1	1	1	2	0	1	2	0	51.9	**68.4**	D	**E**
	- With Improvements	TS	**1**	1	0	0	1	1	1	2	0	1	2	0	38.8	45.9	D	D
7	Bradley Rd. & McCall Bl.																	
	- Without Improvements	TS	1	1	1>	1	1	0	1	2	d	1	2	0	61.9	**95.4**	E	**F**
	- With Improvements	TS	1	1	1>	1	1	0	1	2	d	**2**	2	0	36.6	37.5	D	D
10	I-215 SB Ramps & Ethanac Rd.																	
	- Without Improvements	TS	0	0	0	0	1	1	0	1	1	1	2	0	50.2	**81.8**	D	**F**
	- With Improvements	TS	0	0	0	0	1	1	0	**2**	1	1	2	0	22.7	52.5	C	D
11	I-215 SB Ramps & McCall Bl.																	
	- Without Improvements	TS	0	0	0	0	1	1	0	2	1	1	2	0	28.8	**59.0**	C	**E**
	- With Improvements	TS	0	0	0	0	1	1	0	2	1	**2**	2	0	23.9	31.8	C	C
13	I-215 NB Ramps & Ethanac Rd.																	
	- Without Improvements	TS	0	1	1	0	0	0	1	1	0	0	1	0	**98.2**	**>200.0**	**F**	**F**
	- With Improvements	TS	0	1	1	0	0	0	**2**	1	0	0	1	0	31.8	32.6	C	C
15	Encanto Dr. & Ethanac Rd.																	
	- Without Improvements	CSS	0	1	0	0	0	0	0	1	0	1	1	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	**TS**	**1**	**0**	**1**	0	0	0	0	1	**1>**	1	1	0	18.5	24.7	B	C
33	Sherman Rd. & McCall Bl.																	
	- Without Improvements	TS	1	1	d	1	1	1	1	2	0	1	2	0	**111.0**	**54.0**	**F**	D
	- With Improvements	TS	1	1	d	1	1	1	1	2	0	1	**3**	0	34.9	42.3	C	D
40	Antelope Rd. & McCall Bl.																	
	- Without Improvements	CSS	1	**1**	**0**	0	**1**	0	0	2	d	1	2	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	**TS**	1	**1**	**0**	0	**1**	0	**1**	2	d	0	2	0	32.3	24.3	C	C
44	Menifee Rd. & McCall Bl.																	
	- Without Improvements	TS	1	3	d	1	2	0	2	2	0	2	2	1	**66.4**	**47.2**	**E**	D
	- With Improvements[5]	TS	**2**	3	**0**	1	2	0	2	2	**1>**	2	2	1	42.6	33.7	D	C

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

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 = Defacto Right Turn Lane; **1** = Improvement

2 Per the 2010 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; TS = Traffic Signal; **TS** = Improvement

4 Improvement includes implementing protected left turn phasing on the northbound and southbound approaches.

5 Defacto right turn lane will be eliminated in order to accommodate the recommended 2nd northbound left turn lane.

(Urban Crossroads, 2019d, Table 6-6)

2. Traffic Signal Warrants

As required by Mitigation Measure MM 4.14-2, the Project Applicant would be required to construct a traffic signal at the following locations as part of Phase 1 of Project development; therefore, the Project's impacts at the following location due to meeting the traffic signal warrants would be reduced to less-than-significant levels:

- Encanto Dr. & Ethanac Rd. (Intersection #15)

C. Opening Year Cumulative (2023) Conditions

1. Intersections

As indicated in Table 4.14-65, *Intersection Analysis for Opening Year Cumulative (2023) Conditions With Improvements*, implementation of Mitigation Measure MM 4.14-14 would improve the LOS at the intersection of Encanto Drive at McCall Boulevard (Intersection #20) to an acceptable LOS D during both peak hours. Because the Project Applicant would be required to construct the required improvements prior to occupancy of Phase 2 of the Project, impacts to the intersection of Encanto Drive at McCall Boulevard would be reduced to less-than-significant levels for Opening Year Cumulative (2023) conditions.

Improvements are identified in Mitigation Measure MM 4.14-15 that would improve the LOS at the intersection of Antelope Road at Rouse Road (South) (Intersection #38) to an acceptable LOS during both peak hours. The improvements are identified in Mitigation Measure MM 4.14-15 are planned to be constructed by the Underwood project, located northeast of the Project site. In the event the Underwood project does not construct the required improvements, the Project Applicant would be required to construct the improvements prior to occupancy Phase 2 of the Project. If the improvements are required to be constructed by the Project Applicant, impacts to the intersection of Antelope Road at Rouse Road (South) would be reduced to less-than-significant levels for Opening Year Cumulative (2023) conditions. Impacts would also be less than significant if the improvements are constructed as planned by the Underwood project.

Table 4.14-65 Intersection Analysis for Opening Year Cumulative (2023) Conditions With Improvements

#	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
2	Murrieta Rd. & Ethanac Rd.																	
	- Without Improvements	TS	0	1	0	0	1	1	1	2	0	1	2	0	**77.6**	**>100.0**	**E**	**F**
	- With Improvements	TS	**1**	1	**1**	0	1	1	1	2	0	1	2	0	45.7	49.6	D	D
7	Bradley Rd. & McCall Bl.																	
	- Without Improvements	TS	1	1	1>	1	1	0	1	2	d	1	2	0	79.0	**126.6**	E	**F**
	- With Improvements	TS	1	1	1>	1	1	0	1	2	d	**2**	2	0	39.5	44.0	D	D
10	I-215 SB Ramps & Ethanac Rd.																	
	- Without Improvements	TS	0	0	0	0	1	1	0	1	1	1	2	0	**85.3**	**153.9**	**F**	**F**
	- With Improvements	TS	0	0	0	0	1	1	0	**3**	1	1	**3**	0	25.1	29.5	C	C
11	I-215 SB Ramps & McCall Bl.																	
	- Without Improvements	TS	0	0	0	0	1	1	0	2	1	1	2	0	39.9	**98.8**	D	**F**
	- With Improvements	TS	0	0	0	0	1	1	0	2	1	**2**	2	0	25.3	44.1	C	D
13	I-215 NB Ramps & Ethanac Rd.																	
	- Without Improvements	TS	0	1	1	0	0	0	1	1	0	0	1	0	**154.3**	**>200.0**	**F**	**F**
	- With Improvements	TS	0	1	1	0	0	0	**2**	**3**	0	0	**3**	0	25.3	29.2	C	C
15	Encanto Dr. & Ethanac Rd.																	
	- Without Improvements	CSS	0	1	0	0	0	0	0	1	0	1	1	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	**TS**	**1**	**0**	**1**	0	0	0	0	1	**1>**	1	**2**	0	42.7	44.1	D	D
20	Encanto Dr. & McCall Bl.																	
	- Without Improvements	TS	1	1	1	1	1	0	1	2	0	1	2	0	70.9	**102.6**	E	**F**
	- With Improvements	TS	1	1	1	1	1	**1>**	1	2	**1**	1	2	0	44.4	39.6	D	D
33	Sherman Rd. & McCall Bl.																	
	- Without Improvements	TS	1	1	d	1	1	1	1	2	0	1	2	0	**129.2**	**78.0**	**F**	**E**
	- With Improvements	TS	1	1	d	1	1	1	1	2	0	1	**3**	0	42.4	48.9	D	D
40	Antelope Rd. & McCall Bl.																	
	- Without Improvements	CSS	1	**1**	**0**	0	**1**	0	0	2	d	1	2	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	**TS**	1	**1**	**0**	0	**1**	0	**1**	**3**	**0**	1	**3**	0	28.3	25.2	C	C
42	Menifee Rd. & SR-74																	
	- Without Improvements	TS	0	1	1	0	1	0	1	2	0	1	2	0	**194.5**	**>200.0**	**F**	**F**
	- With Improvements[4]	TS	**1**	1	**1>**	**1**	1	0	1	**3**	**1**	1	**3**	0	46.1	45.5	D	D
44	Menifee Rd. & McCall Bl.																	
	- Without Improvements	TS	1	3	d	1	2	0	2	2	0	2	2	1	**93.0**	**71.2**	**F**	**E**
	- With Improvements[5]	TS	**2**	3	**0**	1	2	0	2	2	**1>**	2	2	1	50.5	39.4	D	D

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

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 = Defacto Right Turn Lane; **1** = Improvement

2 Per the 2010 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; TS = Traffic Signal; **TS** = Improvement

4 Improvement includes implementing protected left turn phasing on the northbound and southbound approaches.

5 Defacto right turn lane will be eliminated in order to accommodate the recommended 2nd northbound left turn lane.

(Urban Crossroads, 2019d, Table 7-6)

2. Traffic Signal Warrants

As required by Mitigation Measure MM 4.14-2, the Project Applicant would be required to construct a traffic signal at the following locations as part of Phase 1 of Project development; therefore, the Project's impacts at the following location due to meeting the traffic signal warrants would be reduced to less-than-significant levels:

- Encanto Dr. & Ethanac Rd. (Intersection #15)

D. Opening Year Cumulative (2025) Conditions

1. Intersections

As indicated in Table 4.14-66, *Intersection Analysis for Opening Year Cumulative (2025) Conditions With Improvements*, implementation of the improvements listed in Mitigation Measure MM 4.14-22 would improve the LOS at the intersection of Encanto Drive at McLaughlin Road (Intersection #16) to an acceptable LOS A in the AM peak hour and an acceptable LOS B in the PM peak hour. Because the Project Applicant would be required to construct the required improvements prior to occupancy of Phase 3 of the Project, impacts to the intersection of Encanto Drive at McLaughlin Road would be reduced to less-than-significant levels for Opening Year Cumulative (2025) conditions.

As indicated in Table 4.14-66, implementation of improvements planned as part of Phase 1 Project development detailed in City Regulation and Design Requirement CRDR 4.14-4, which includes the construction of a traffic signal and a southbound left turn lane, would ensure that the intersection of Encanto Drive at Rouse Road (Intersection #17) operates at an acceptable LOS B during both peak hours. Thus, with the planned improvements associated with buildout of the Project, impacts would be reduced to less-than-significant levels for Opening Year Cumulative (2025) conditions.

As indicated in Table 4.14-66, implementation of the improvements listed in Mitigation Measure MM 4.14-23 would improve the LOS at the intersection of Encanto Drive at Shadel Road (Intersection #19) to an acceptable LOS B in the AM peak hour and LOS A in the PM peak hour. Because the Project Applicant would be required to construct the required improvements prior to occupancy of Phase 3 of the Project, impacts to the intersection of Encanto Drive at Shadel Road would be reduced to less-than-significant levels for Opening Year Cumulative (2025) conditions.

As indicated in Table 4.14-66, implementation of Mitigation Measures MM 4.14-14 and MM 4.14-24 would improve the LOS at the intersection of Encanto Drive at McCall Boulevard (Intersection #20) to an acceptable LOS D during both peak hours. Because the Project Applicant would be required to construct the required improvements prior to occupancy of Phase 2 of the Project, impacts to the intersection of Encanto Drive at McCall Boulevard would be reduced to less-than-significant levels for Opening Year Cumulative (2023) conditions.

Table 4.14-66 Intersection Analysis for Opening Year Cumulative (2025) Conditions With Improvements

#	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
1	Goetz Rd. & Ethanac Rd.																	
	- Without Improvements	TS	1	1	1	1	2	1	2	1	1	2	1	1	**107.2**	**104.5**	**F**	**F**
	- With Improvements	TS	1	1	**1>**	**2**	2	1	2	1	1	2	1	**1>**	42.1	36.6	D	D
2	Murrieta Rd. & Ethanac Rd.																	
	- Without Improvements	TS	0	1	0	0	1	1	1	2	0	1	2	0	**124.6**	**150.2**	**F**	**F**
	- With Improvements	TS	**1**	1	**1**	**1**	1	**0**	1	2	**1**	1	2	0	48.9	54.1	D	D
7	Bradley Rd. & McCall Bl.																	
	- Without Improvements	TS	1	1	1>	1	1	0	1	2	d	1	2	0	**104.1**	**166.0**	**F**	**F**
	- With Improvements[4]	TS	1	1	1>	1	1	0	1	2	d	**2**	2	0	44.3	59.2	D	E
8	Bradley Rd. & Cherry Hills Bl.																	
	- Without Improvements	AWS	1	1	0	0	1	1	1	0	1	0	0	0	17.0	**45.9**	C	**E**
	- With Improvements	**CSS**	1	1	0	0	1	1	1	0	1	0	0	0	19.8	33.2	C	D
	- With Improvements[7]	**TS**	1	1	0	0	1	1	1	0	1	0	0	0	13.0	13.7	B	B
10	I-215 SB Ramps & Ethanac Rd.																	
	- Without Improvements	TS	0	0	0	0	1	1	0	1	1	1	2	0	**134.2**	**>200.0**	**F**	**F**
	- With Improvements	TS	0	0	0	0	1	1	0	**3**	1	**1**	**3**	0	38.4	54.9	D	D
11	I-215 SB Ramps & McCall Bl.																	
	- Without Improvements	TS	0	0	0	0	1	1	0	2	1	1	2	0	**62.8**	**147.4**	**E**	**F**
	- With Improvements	TS	0	0	0	**1**	1	1	0	2	1	**2**	2	0	25.1	53.7	C	D
13	I-215 NB Ramps & Ethanac Rd.																	
	- Without Improvements	TS	0	1	1	0	0	0	1	1	0	0	1	0	**>200.0**	**>200.0**	**F**	**F**
	- With Improvements	TS	0	1	1	0	0	0	**2**	**3**	0	0	**3**	0	27.0	53.0	C	D
14	I-215 NB Ramps & McCall Bl.																	
	- Without Improvements	TS	0	1	1	0	0	0	1	2	0	0	2	1	37.5	**90.3**	D	**F**
	- With Improvements	TS	0	1	1	0	0	0	**2**	2	0	0	2	1	27.5	42.8	C	D
15	Encanto Dr. & Ethanac Rd.																	
	- Without Improvements	CSS	0	1	0	0	0	0	0	1	0	1	1	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	**TS**	**1**	**0**	**1**	0	0	0	0	**2**	**1>**	1	**2**	0	24.7	41.4	C	D
16	Encanto Dr. & McLaughlin Rd.																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	0	0	0	1	0	15.8	**62.3**	C	**F**
	- With Improvements	**TS**	0	1	0	**1**	1	0	0	0	0	0	1	0	9.7	12.2	A	B
19	Encanto Dr. & Shadel Rd.																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	0	0	0	1	0	**46.0**	26.1	**E**	D
	- With Improvements	**TS**	0	1	0	**1**	1	0	0	0	0	0	1	0	12.7	8.5	B	A
20	Encanto Dr. & McCall Bl.																	
	- Without Improvements	TS	1	1	1	1	1	0	1	2	0	1	2	0	**114.4**	**189.6**	**F**	**F**
	- With Improvements	TS	1	1	1	1	1	**1>**	**2**	2	**1**	1	2	**1**	44.3	38.6	D	D
33	Sherman Rd. & McCall Bl.																	
	- Without Improvements	TS	1	1	d	1	1	1	1	2	0	1	2	0	**152.9**	**88.0**	**F**	**F**
	- With Improvements	TS	1	1	d	1	1	1	1	**3**	0	1	**3**	0	53.9	32.7	D	C
40	Antelope Rd. & McCall Bl.																	
	- Without Improvements	CSS	1	**1**	**0**	0	**1**	0	0	2	d	1	2	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	**TS**	1	**1**	**0**	0	**1**	0	**1**	**3**	**0**	1	**3**	0	45.8	35.8	D	D

Table 4.14-66 Intersection Analysis for Opening Year Cumulative (2025) Conditions With Improvements (Cont'd)

#	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
42	Menifee Rd. & SR-74																	
	- Without Improvements	TS	0	1	1	0	1	0	1	2	0	1	2	0	**>200.0**	**>200.0**	**F**	**F**
	- With Improvements[5]	TS	**1**	1	**1>**	**1**	1	**1**	1	**3**	**1**	**2**	**3**	0	50.3	54.9	D	D
44	Menifee Rd. & McCall Bl.																	
	- Without Improvements	TS	1	3	d	1	2	0	2	2	0	2	2	1	**133.8**	**107.5**	**F**	**F**
	- With Improvements[6]	TS	**2**	3	**0**	1	2	**1**	2	2	**1>**	2	2	1	54.8	43.8	D	D

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[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 = Defacto Right Turn Lane; **1** = Improvement

[2] Per the 2010 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; TS = Traffic Signal; **TS** = Improvement

[4] As provided by City staff, improvements shown are consistent with the Tight Diamond Alternative 2 improvements (locally preferred alternative). Due to their proximity to the I-215 Freeway, LOS "E" is considered acceptable at both Bradley Road and Encanto Drive on McCall Boulevard per the City's General Plan Policy C-1.2.

[5] Improvement includes implementing protected left turn phasing on the northbound and southbound approaches.

[6] Defacto right turn lane will be eliminated in order to accommodate the recommended 2nd northbound left turn lane.

[7] Although a cross-street stop control would mitigate the deficiency, the City of Menifee may request a traffic signal improvement for safety concerns.

(Urban Crossroads, 2019d, Table 8-6)

2. Roadway Segments

As indicated in Table 4.14-67, *Roadway Segment Capacity Analysis for Opening Year Cumulative (2025) Conditions With Improvements,* implementation of the improvements listed in Mitigation Measures MM 4.14-23 and MM 4.14-24 would improve the LOS at the roadway segment of Encanto Dr., Shadel Rd. to McCall Blvd. (Roadway Segment #31) to an acceptable LOS A in the AM and PM peak hours. Because the Project Applicant would be required to construct the required improvements prior to occupancy of Phase 3 of the Project, impacts to the roadway segment of Encanto Dr., Shadel Rd. to McCall Blvd. would be reduced to less-than-significant levels for Opening Year Cumulative (2025) conditions.

Table 4.14-67 Roadway Segment Capacity Analysis for Opening Year Cumulative (2025) Conditions With Improvements

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	2025 NP	V/C[2]	LOS[3]	Project Only Buildout	2025 WP	V/C[2]	LOS[3]	General Plan Classification
5	Ethanac Rd.	Case Rd. to I-215 Freeway	6D	Expressway	95,000	41,617	0.44	A	1,560	43,177	0.45	A	Expressway
6	Ethanac Rd.	I-215 Freeway to Encanto Dr.	4D	Expressway	64,000	35,735	0.56	A	4,478	40,213	0.63	B	Expressway
7	Ethanac Rd.	Encanto Dr. to Trumble Rd.	4D	Expressway	64,000	31,327	0.49	A	124	31,451	0.49	A	Expressway
8	Ethanac Rd.	Trumble Rd. to Sherman Rd.	4D	Expressway	64,000	27,962	0.44	A	124	28,086	0.44	A	Expressway
9	Ethanac Rd.	Sherman Rd. to Antelope Rd.	4D	Expressway	64,000	24,196	0.38	A	0	24,196	0.38	A	Expressway
20	McCall Bl.[5]	Sun City Bl. to Bradley Rd.	4D	Major	34,100	30,523	0.90	D	1,990	**32,513**	**0.95**	**E**	Major
21	McCall Bl.[4]	Bradley Rd. to I-215 Freeway	6D	Major	56,300	49,466	0.88	D	3,154	52,620	0.93	E	Major
22	McCall Bl.[4,5]	I-215 Freeway to Encanto Dr.	6D	Urban Arterial	56,300	54,321	0.96	E	6,394	**60,715**	**1.08**	**F**	Urban Arterial
23	McCall Bl.	Encanto Dr. to Sherman Rd.	6D	Urban Arterial	56,300	44,253	0.79	C	4,134	48,387	0.86	D	Urban Arterial
24	McCall Bl.	Sherman Rd. to Antelope Rd.	6D	Urban Arterial	56,300	38,133	0.68	B	2,852	40,985	0.73	B	Urban Arterial
25	McCall Bl.	Antelope Rd. to Menifee Rd.	6D	Urban Arterial	56,300	34,887	0.62	B	2,606	37,493	0.67	B	Urban Arterial
27	Encanto Dr.	Ethanac Rd. to McLaughlin Rd.	4D	Major	34,100	11,028	0.32	A	4,602	15,630	0.46	A	Major
28	Encanto Dr.	McLaughlin Rd. to Rouse Rd.	4D	Major	34,100	7,637	0.22	A	4,602	12,239	0.36	A	Major
30	Encanto Dr.	Chambers Av. to Shadel Rd.	4D	Major	34,100	9,276	0.27	A	5,224	14,500	0.43	A	Major
31	Encanto Dr.	Shadel Rd. to McCall Bl.	4D	Major	34,100	10,303	0.30	A	5,162	15,465	0.45	A	Major
32	Sherman Rd.	SR-74 to Ethanac Rd.	4D	Major	34,100	6,435	0.19	A	124	6,559	0.19	A	Major
33	Sherman Rd.	Ethanac Rd. to McLaughlin Rd.	4D	Major	34,100	1,352	0.04	A	0	1,352	0.04	A	Major
43	Menifee Rd.	Biscayne Av. to Rouse Rd.	4D	Major	34,100	25,414	0.75	C	918	26,332	0.77	C	Urban Arterial

6D = Improvement

[1] These maximum roadway capacities have been extracted from the following source: City of Menifee Traffic Impact Analysis Guidelines and Requirements (Attachment B). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. By using the LOS E capacity for each roadway facility type, volume-to-capacity (v/c) values between 0.00-0.60 will represent LOS A, 0.61-0.70 will represent LOS B, 0.71-0.80 will represent LOS C, 0.81-0.90 will represent LOS D, 0.91-1.00 will represent LOS E, and v/c values greater than 1.00 will represent LOS F operations. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] v/c = Volume to Capacity ratio

[3] LOS = Level of Service

[4] There are currently improvement plans for this segment as part of the I-215 Freeway/McCall Boulevard Interchange Improvement Project (Alternative 2). The Interchange Improvement Project would improve this segment of McCall Boulevard to a 6-lane divided roadway.

[5] Where the average daily volume (ADT) based roadway segment analysis indicates a deficiency (unacceptable LOS), the more detailed peak hour intersection analysis is also reviewed (see Table 8-1 and Table 8-6). The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. While this traffic study recognizes LOS D is the City's target LOS for roadway segments, a review of the more detailed peak hour intersection analysis is necessary to determine whether roadway widening along the segment is necessary. For the purposes of this analysis, if the peak hour intersection operations on either side of the roadway segment are anticipated to operate at an acceptable LOS, then additional roadway segment widening has not been recommended. Therefore, for the purposes of this assessment, roadway segment widening has only been recommended if the peak hour intersection analysis indicates the need for additional through lanes. Furthermore, it is likely that a roadway segment can have a volume-to-capacity ratio of up to 1.25 if the adjacent intersections are anticipated to operate at acceptable LOS, without the need for additional widening. As the LOS threshold for the study area intersections is LOS D, LOS D have also been utilized as the minimum LOS criteria for roadway segments for the purposes of this analysis.

(Urban Crossroads, 2019d, Table 8-7)

3. *Traffic Signal Warrants*

As indicated in Table 4.14-66, implementation of Mitigation Measure MM 4.14-21, which includes the installation of a traffic signal, would improve the LOS at the intersection of Bradley Road at Cherry Hills Boulevard (Intersection #8) to an acceptable LOS B in the AM peak hour and an acceptable LOS B in the PM peak hour. Because the Project Applicant would be required to construct the improvements required by Mitigation Measure MM 4.14-21 prior to occupancy of Phase 3 of the Project, Project impacts to the intersection of Bradley Road at Cherry Hills Boulevard would be reduced to less-than-significant levels under Opening Year Cumulative (2025) conditions.

As indicated in Table 4.14-66, implementation of Mitigation Measure MM 4.14-22, which includes the installation of a traffic signal, would improve the LOS at the intersection of Encanto Drive at McLaughlin Road (Intersection #16) to an acceptable LOS A in the AM peak hour and an acceptable LOS B in the PM peak hour. Because the Project Applicant would be required to construct the improvements required by Mitigation Measure MM 4.14-22 prior to occupancy of Phase 3 of the Project, Project impacts to the intersection of Encanto Drive at McLaughlin Road would be reduced to less-than-significant levels under Opening Year Cumulative (2025) conditions.

The Project Applicant would be required to construct improvements at the intersection of Encanto Drive at Rouse Road (Intersection #17) prior to occupancy of Phase 3 of the Project, including the installation of a traffic signal. As shown in Table 4.14-66, installation of a traffic signal and construction of a southbound left turn lane at the intersection of Encanto Drive at Rouse Road prior to occupancy of Phase 3 of the Project would improve the LOS at the intersection of Encanto Drive at Rouse Road to an acceptable LOS B during both peak hours. Accordingly, Project impacts to the intersection of Encanto Drive at Rouse Road would be reduced to less-than-significant levels under Opening Year Cumulative (2025) conditions.

As indicated in Table 4.14-66, implementation of Mitigation Measure MM 4.14-23, including the installation of a traffic signal, would improve the LOS at the intersection of Encanto Drive at Shadel Road (Intersection #19) to an acceptable LOS B in the AM peak hour and LOS A in the PM peak hour. Because the Project would be required to construct the improvements listed in Mitigation Measure MM 4.14-23 prior to occupancy of Phase 3 of the Project, Project impacts to the intersection of Encanto Drive at Shadel Road (including signal warrants) would be reduced to less-than-significant levels under Opening Year Cumulative (2025) conditions.

As required by Mitigation Measure MM 4.14-2, the Project Applicant would be required to construct a traffic signal at the following locations as part of Phase 1 of Project development; therefore, the Project's impacts at the following location due to meeting the traffic signal warrants would be reduced to less-than-significant levels:

- Encanto Dr. & Ethanac Rd. (Intersection #15)

E. *Horizon Year (2040) Conditions*

1. *Intersections*

As indicated in Table 4.14-68, *Intersection Analysis for Horizon Year (2040) Conditions With Improvements*, implementation of improvements planned as part of Phase 1 Project development detailed in City Regulation and Design Requirement CRDR 4.14-4, which includes the construction of a traffic signal, a southbound left turn lane, a second northbound through lane (shared through-right turn lane) and a second southbound through lane, would ensure that the intersection of Encanto Drive at Rouse Road (Intersection #17) operates at an

acceptable LOS B during both peak hours. Implementation of the required Project improvements would reduce the Project's impacts to less-than-significant levels under Horizon Year (2040) conditions.

As indicated in Table 4.14-68, implementation of improvements planned as part of Phase 1 Project development, detailed in City Regulation and Design Requirement CRDR 4.14-4, would improve the LOS at the intersection of Encanto Drive at Chambers Avenue (Intersection #18) to an acceptable LOS B during the AM peak hour and LOS C during the PM peak hour. Because the Project Applicant would be required to implement all of the required improvements prior to occupancy of Phase 1 of the Project, the Project's impacts to the intersection of Encanto Drive at Chambers Avenue would be reduced to less-than-significant levels.

As indicated in Table 4.14-68, with implementation of improvements planned by the Project to the intersection of Sherman Road at Rouse Road (Intersection #29) as part of Phase 1 and Phase 3 of Project development detailed in City Regulation and Design Requirement CRDR 4.14-4, and Mitigation Measure MM 4.14-47 that would be constructed as part of Phase 3 of Project development, would improve the LOS at the intersection of Sherman Road at Rouse Road to an acceptable LOS B in the AM peak hour and an acceptable LOS C in the PM peak hour. Because the Project Applicant would be required to construct the required improvements as part of Phases 1 and 3 of the Project, Project impacts to the intersection of Sherman Road at Rouse Road would be reduced to less-than-significant levels under Horizon Year (2040) conditions.

As indicated in Table 4.14-68, with implementation of improvements planned by the Project to the intersection of Sherman Road at Chambers Avenue (Intersection #31) as part of Phase 1 of Project development detailed in City Regulation and Design Requirement CRDR 4.14-4, that would be constructed as part of Phase 3 of Project development, would improve the LOS at the intersection of Sherman Road at Chambers Avenue to an acceptable LOS B in the AM peak hour and an acceptable LOS C in the PM peak hour. Because the Project Applicant would be required to construct the required improvements as part of Phase 1 of the Project, Project impacts to the intersection of Sherman Road at Chambers Avenue would be reduced to less-than-significant levels under Horizon Year (2040) conditions.

Table 4.14-68 Intersection Analysis for Horizon Year (2040) Conditions With Improvements

#	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
1	Goetz Rd. & Ethanac Rd.																	
	- Without Improvements	TS	1	1	1	1	2	1	2	1	1	2	1	1	**>200.0**	**>200.0**	**F**	**F**
	- With Improvements	TS	**2**	**2**	**1>**	**2**	2	**1>**	2	**3**	1	2	**3**	**1>**	54.8	44.6	D	D
2	Murrieta Rd. & Ethanac Rd.																	
	- Without Improvements	AWS	0	1	0	0	1	1	1	1	0	1	1	0	**>200.0**	**>200.0**	**F**	**F**
	- With Improvements[4]	**TS**	**1**	1	**1**	**1**	1	**0**	**2**	**3**	**1**	**2**	**3**	**1**	35.8	25.8	D	C
3	Murrieta Rd. & McCall Bl.																	
	- Without Improvements	TS	1	2	0	1	2	0	1	2	d	1	2	d	43.0	**58.0**	D	**E**
	- With Improvements[5]	TS	1	2	0	1	2	0	1	2	d	1	2	d	42.9	54.2	D	D
4	Sun City Bl. & McCall Bl.																	
	- Without Improvements	TS	0	2	1	0	2	0	1	2	d	1	2	0	**67.4**	**>200.0**	**E**	**F**
	- With Improvements	TS	**1**	2	1	**2**	2	0	1	2	d	**2**	2	**1**	34.9	50.2	C	D
5	Barnett Rd. & Ethanac Rd.																	
	- Without Improvements	TS	0	1	0	0	0	0	0	3	1	1	2	0	**154.9**	**>200.0**	**F**	**F**
	- With Improvements	TS	0	1	0	0	0	0	0	3	1	1	**3**	0	21.9	41.5	C	D
6	Case Rd. & Ethanac Rd.																	
	- Without Improvements	TS	0	0	0	2	0	2	1	2	0	0	3	1	**155.9**	**158.0**	**F**	**F**
	- With Improvements	TS	0	0	0	2	0	**2>**	**2**	**3**	0	0	3	**1>**	20.9	28.0	C	C
7	Bradley Rd. & McCall Bl.																	
	- Without Improvements	TS	1	1	1>	1	1	0	1	2	d	1	2	0	**180.0**	**>200.0**	**F**	**F**
	- With Improvements[6,7,8]	TS	1	1	**2>**	1	1	0	1	2	**1>**	**2**	2	0	65.1	78.5	E	E
9	I-215 SB Ramps/SR-74 & Bonnie Dr.																	
	- Without Improvements	TS	1	1	0	0	1	1	1	0	1>>	0	0	0	**>200.0**	**>200.0**	**F**	**F**
	- With Improvements	TS	**2**	1	0	0	**2**	1	1	0	1>>	0	0	0	26.1	52.9	C	D
10	I-215 SB Ramps & Ethanac Rd.																	
	- Without Improvements	TS	0	0	0	0	1	1	0	1	1	1	2	0	**>200.0**	**>200.0**	**F**	**F**
	- With Improvements	TS	0	0	0	**1**	1	**2**	0	**3**	**1>>**	**0**	**3**	**1>>**	13.7	27.1	B	C
11	I-215 SB Ramps & McCall Bl.																	
	- Without Improvements	TS	0	0	0	0	1	1	0	2	1	1	2	0	**164.1**	**>200.0**	**F**	**F**
	- With Improvements[7]	TS	0	0	0	**1**	1	1	0	**3**	1	**2**	**3**	0	27.2	51.1	C	D
12	I-215 NB Ramps & SR-74																	
	- Without Improvements	TS	0	0	0	0	1	0	1	2	0	0	2	1>>	**161.8**	**192.1**	**F**	**F**
	- With Improvements	TS	0	0	0	**2**	**0**	**1**	1	2	0	0	2	1>>	35.5	51.0	D	D
13	I-215 NB Ramps & Ethanac Rd.																	
	- Without Improvements	TS	0	1	1	0	0	0	1	1	0	0	1	0	**>200.0**	**>200.0**	**F**	**F**
	- With Improvements	TS	**1**	1	**2**	0	0	0	**0**	**3**	**1>>**	0	**3**	**1>>**	23.6	27.8	C	C
14	I-215 NB Ramps & McCall Bl.																	
	- Without Improvements	TS	0	1	1	0	0	0	1	2	0	0	2	1	**92.3**	**>200.0**	**F**	**F**
	- With Improvements[7]	TS	0	1	**2**	0	0	0	**2**	**3**	0	0	**3**	1	24.6	52.5	C	D
15	Encanto Dr. & Ethanac Rd.																	
	- Without Improvements	CSS	0	1	0	0	0	0	0	1	0	1	1	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	**TS**	**2**	**0**	**1>**	0	0	0	0	**3**	**1>**	1	**3**	0	27.6	46.1	C	D
16	Encanto Dr. & McLaughlin Rd.																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	0	0	0	1	0	22.4	**>100.0**	C	**F**
	- With Improvements	**TS**	0	**2**	0	**1**	**2**	0	0	0	0	0	1	0	9.2	11.5	A	B
17	Encanto Dr. & Rouse Rd.																	
	- Without Improvements	**TS**	0	1	0	0	1	0	0	0	0	0	1	0	49.1	**61.9**	D	**E**
	- With Improvements	**TS**	0	**2**	0	**1**	**2**	0	0	0	0	0	1	0	16.8	17.9	B	B

Table 4.14-68 Intersection Analysis for Horizon Year (2040) Conditions With Improvements (Cont'd)

#	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
18	Encanto Dr. & Chambers Av.																	
	- Without Improvements	TS	0	1	0	1	1	0	0	0	0	0	1	0	9.1	**63.2**	C	**E**
	- With Improvements	TS	0	2	0	1	2	0	0	0	0	0	1	0	10.6	27.6	B	C
19	Encanto Dr. & Shadel Rd.																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	0	0	0	1	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	TS	0	2	0	1	2	0	0	0	0	0	1	0	15.6	8.5	B	A
20	Encanto Dr. & McCall Bl.																	
	- Without Improvements	TS	1	1	1	1	1	0	1	2	0	1	2	0	**>200.0**	**>200.0**	**F**	**F**
	- With Improvements[7]	TS	1	1	1	0	2	1>	2	3	1>	1	3	1	77.2	61.9	E	E
21	Trumble Rd. & SR-74																	
	- Without Improvements	TS	0	0	0	1	0	1	1	2	0	0	2	d	**126.8**	**109.3**	**F**	**F**
	- With Improvements	TS	0	0	0	1	0	1>	2	2	0	0	2	d	37.8	18.6	D	C
22	Trumble Rd. & Ethanac Rd.																	
	- Without Improvements	TS	0	1	0	0	1	1	1	1	0	1	1	0	**>200.0**	**>200.0**	**F**	**F**
	- With Improvements	TS	1	1	0	1	1	0	1	3	0	1	3	0	31.3	29.1	C	C
26	Sherman Rd. & SR-74																	
	- Without Improvements	TS	0	1	1	0	1	0	1	2	d	1	2	0	**186.8**	**>200.0**	**F**	**F**
	- With Improvements	TS	0	1	1>	1	1	0	1	3	1	2	3	0	36.2	53.0	D	D
27	Sherman Rd. & Ethanac Rd.																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	1	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	TS	2	1	1	1	1	1>	2	3	1	1	3	0	54.7	28.5	D	C
28	Sherman Rd. & McLaughlin Rd.																	
	- Without Improvements	AWS	0	1	0	0	1	0	0	1	0	0	1	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	TS	1	2	0	1	2	0	1	1	0	1	1	0	11.4	13.3	B	B
29	Sherman Rd. & Rouse Rd.																	
	- Without Improvements	AWS	0	1	0	0	1	1	0	1	0	0	1	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	TS	1	2	0	1	2	0	1	1	1	1	1	0	13.4	28.7	B	C
31	Sherman Rd. & Chambers Av.																	
	- Without Improvements	AWS	1	0	1	0	0	0	0	1	1	0	1	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	TS	1	2	0	1	2	0	1	1	0	1	1	0	15.3	20.5	B	C
33	Sherman Rd. & McCall Bl.																	
	- Without Improvements	TS	1	1	d	1	1	1	1	2	0	1	2	0	**191.0**	**>200.0**	**F**	**F**
	- With Improvements	TS	1	1	d	1	1	1>	2	3	0	1	3	1	53.9	41.7	D	D
36	Antelope Rd. & Ethanac Rd.																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	1	1	0	1	0	**58.5**	**>100.0**	**F**	**F**
	- With Improvements	TS	1	2	0	2	2	1	2	3	0	2	3	1>	35.7	46.3	D	D
37	Antelope Rd. & Rouse Rd. (North)																	
	- Without Improvements	CSS	0	1	0	0	1	0	1	1	0	1	1	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	TS	1	1	0	1	1	0	1	2	0	1	2	0	20.6	23.7	C	C
38	Antelope Rd. & Rouse Rd. (South)																	
	- Without Improvements	CSS	1	1	0	0	1	0	1	0	1	0	0	0	28.7	**>100.0**	D	**F**
	- With Improvements	CSS	1	2	0	0	2	1	1	0	1	0	0	0	13.5	25.0	B	D
39	Antelope Rd. & Chambers Av.																	
	- Without Improvements	CSS	1	1	0	1	1	0	0	1	0	0	1	0	23.5	**88.9**	C	**F**
	- With Improvements	CSS	1	2	0	1	2	0	0	1	0	0	1	0	15.9	24.3	C	C

Table 4.14-68 Intersection Analysis for Horizon Year (2040) Conditions With Improvements (Cont'd)

#	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
40	Antelope Rd. & McCall Bl.																	
	- Without Improvements	CSS	1	1	0	0	1	0	0	2	d	1	2	0	35.0	**>100.0**	D	**F**
	- With Improvements	TS	1	1	0	1	1	1	1	3	0	1	3	0	23.8	47.7	C	D
41	Palomar Rd. & SR-74																	
	- Without Improvements	TS	1	1	1	1	2	0	1	2	d	1	2	0	**137.2**	**82.3**	**F**	**F**
	- With Improvements	TS	1	2	1>	1	2	0	1	3	0	1	3	0	31.2	27.1	C	C
42	Menifee Rd. & SR-74																	
	- Without Improvements	TS	0	1	1	0	1	0	1	2	0	1	2	0	**>200.0**	**>200.0**	**F**	**F**
	- With Improvements[6]	TS	2	3	1>	2	3	1	2	3	1>	2	3	0	50.6	54.1	D	D
43	Menifee Rd. & Rouse Rd./Turtle Point Dr.																	
	- Without Improvements	TS	1	2	0	1	2	0	0	1	0	0	1	d	**>200.0**	**>200.0**	**F**	**F**
	- With Improvements	TS	2	3	0	1	3	0	1	1	1>	0	1	d	29.3	53.3	C	D
44	Menifee Rd. & McCall Bl.																	
	- Without Improvements	TS	1	3	d	1	2	0	2	2	0	2	2	1	**>200.0**	**>200.0**	**F**	**F**
	- With Improvements[8,9]	TS	2	3	1>	2	3	1>	2	3	1>	2	3	2>	50.7	52.4	D	D

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

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; >> = Free Right-Turn Lane; d = Defacto Right Turn Lane; 1 = Improvement

2 Per the 2010 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; TS = Traffic Signal; TS = Improvement

4 Improvement consists of modifying the traffic signal to implement permitted phasing for the northbound and southbound left turns.

5 Improvement consists of modifying the traffic signal to protect the eastbound and westbound left turns and run the eastbound and westbound left turns as lead-lag, with the westbound left turn running as lag.

6 Implement protected left turn phasing on the northbound and southbound approaches in conjunction with the recommended improvements shown.

7 As provided by City staff, improvements shown are consistent with the Tight Diamond Alternative 2 improvements (locally preferred alternative). Due to their proximity to the I-215 Freeway, LOS "E" is considered acceptable at both Bradley Road and Encanto Drive on McCall Boulevard per the City's General Plan Policy C-1.2.

8 Includes modifying the cycle length from 120 seconds to 130 seconds.

9 Defacto right turn lane will be eliminated in order to accommodate the recommended 2nd northbound left turn lane.

(Urban Crossroads, 2019d, Table 9-6)

2. Traffic Signal Warrants

As part of planned improvements as part of Phase 1 of Project development detailed in City Regulation and Design Requirement CRDR 4.14-4, the Project would be required to construct a traffic signal at the following location, which in conjunction with the mitigation identified in Subsection 4.14.9 would improve the LOS at the following location to acceptable LOS under Horizon Year (2040) conditions. Accordingly, because the Project would be required to install the traffic signal, impacts to the following intersection that meets the traffic signal warrant under Horizon Year (2040) conditions would be reduced to less-than-significant levels:

- Encanto Dr. & Rouse Rd. (Intersection #17)

As required by City Regulation and Design Requirement CRDR 4.14-4 and Mitigation Measures MM 4.14-2, MM 4.14-21, MM 4.14-22, and MM 4.14-23 the Project Applicant would be required to construct traffic signals at the following locations as part of Phases 1 and 3 of Project development; therefore, the Project's impacts at the following locations due to meeting the traffic signal warrants would be reduced to less-than-significant levels:

- Bradley Road at Cherry Hills Boulevard (Intersection #8)
- Encanto Dr. & Ethanac R. (Intersection #15)
- Encanto Dr. & McLaughlin Rd. (Intersection #16)
- Encanto Dr. & Chambers Av. (Intersection #18)
- Encanto Dr. & Shadel Rd. (Intersection #19)
- Sherman Rd. & Rouse Rd. (Intersection #29)

❑ Threshold a: Significant and Unavoidable Cumulatively-Considerable Impacts.

Provided below is a summary of the Project's impacts that cannot be reduced to less-than-significant levels even following the incorporation of mitigation measures.

A. E+P Conditions

1. Intersections

As shown in Table 4.14-63 , with implementation of the improvements listed in Mitigation Measure MM 4.14-8 the LOS at the following intersection would improve to acceptable levels under E+P conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 1 of the proposed Project; therefore, near-term Project impacts to the following intersections would be cumulatively considerable and unavoidable under E+P conditions until the required improvements are in place:

- Menifee Road at SR-74 (Intersection #42)

2. Roadway Segments

As shown in Table 4.14-69, *Roadway Segment Capacity Analysis for E+P (Project Buildout) Conditions With Improvements*, improvements identified as part of TUMF would improve the LOS at the following roadway segments to acceptable levels under E+P conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 1 of the proposed Project; therefore, near-term Project impacts to the following roadway segments would be cumulatively considerable and unavoidable under E+P conditions until the required improvements are in place:

- Ethanac Rd., I-215 Freeway to Encanto Dr. (Roadway Segment #6)
- Ethanac Rd., Encanto Dr. to Trumble Rd. (Roadway Segment #7)
- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25)

As indicated in Table 4.14-69, the improvements listed in Mitigation Measures MM 4.14-10, MM 4.14-11, and MM 4.14-16 would improve the LOS at the following roadway segments to acceptable levels under E+P conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 1 of the proposed Project; therefore, near-term Project impacts to the following roadway segments would be cumulatively considerable and unavoidable under E+P conditions until the required improvements are in place:

Table 4.14-69 Roadway Segment Capacity Analysis for E+P (Project Buildout) Conditions With Improvements

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	Existing (2017)	V/C[2]	LOS[3]	Project Only Buildout	E+P Project Buildout	V/C[2]	LOS[3]	General Plan Classification
6	Ethanac Rd.	I-215 Freeway to Encanto Dr.	**4D**	**Expressway**	64,000	13,992	0.22	A	4,478	18,470	0.29	A	Expressway
7	Ethanac Rd.	Encanto Dr. to Trumble Rd.	**4D**	**Expressway**	64,000	13,239	0.21	A	124	13,363	0.21	A	Expressway
21	McCall Bl.	Bradley Rd. to I-215 Freeway[4]	**6D**	**Major**	56,300	32,750	0.58	A	3,154	35,904	0.64	B	Major
22	McCall Bl.	I-215 Freeway to Encanto Dr.[4]	**6D**	**Urban Arterial**	56,300	30,696	0.55	A	6,394	37,090	0.66	B	Urban Arterial
25	McCall Bl.	Antelope Rd. to Menifee Rd.	**4D**	**Major**	34,100	19,203	0.56	A	2,606	21,809	0.64	B	Urban Arterial
43	Menifee Rd.	Biscayne Av. to Rouse Rd.	**4D**	**Major**	34,100	11,186	0.33	A	918	12,104	0.35	A	Urban Arterial

6D = Improvement

[1] These maximum roadway capacities have been extracted from the following source: City of Menifee Traffic Impact Analysis Guidelines and Requirements (Attachment B). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. By using the LOS E capacity for each roadway facility type, volume-to-capacity (v/c) values between 0.00-0.60 will represent LOS A, 0.61-0.70 will represent LOS B, 0.71-0.80 will represent LOS C, 0.81-0.90 will represent LOS D, 0.91-1.00 will represent LOS E, and v/c values greater than 1.00 will represent LOS F operations. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] v/c = Volume to Capacity ratio

[3] LOS = Level of Service

[4] There are currently improvement plans for this segment as part of the I-215 Freeway/McCall Boulevard Interchange Improvement Project (Alternative 2). The Interchange Improvement Project would improve this segment of McCall Boulevard to a 6-lane divided roadway.

(Urban Crossroads, 2019d, Table 5-19)

- McCall Bl., between Bradley Rd. and the I-215 Freeway (Roadway Segment #21)
- McCall Bl., between the I-215 Freeway to Encanto Dr. (Roadway Segment #22)
- Menifee Rd., from Biscayne Ave to Rouse Rd. (Roadway Segment #43)

3. Traffic Signal Warrants

Mitigation Measure MM 4.14-2 requires the installation of a traffic signal at the following location, which would reduce the Project's impacts due to signal warrants to less-than-significant levels:

- Encanto Dr. at Ethanac Rd. (Intersection #15)

4. Freeway Merge/Diverge

As shown in Table 4.14-30, Table 4.14-31, and Table 4.14-32, the Project would result in cumulatively-considerable impacts to the following merge/diverge analysis locations under all phases of the Project under E+P conditions:

- I-215 Freeway – Southbound, Off-Ramp at Ethanac Road (Merge/Diverge Location #1)
- I-215 Freeway – Southbound, Off-Ramp at McCall Boulevard (Merge/Diverge Location #3)

At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the City of Menifee (or other neighboring jurisdictions) on the SHS roadway segments. Therefore, the Project's cumulatively-considerable impact to the above-listed freeway merge/diverge locations would be significant and unavoidable under E+P conditions.

B. Opening Year Cumulative (2020) Conditions

1. Intersections

As shown in Table 4.14-64 , improvements identified as part of TUMF would improve the LOS at the following intersections to acceptable levels under Opening Year Cumulative (2020) conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 1 of the proposed Project; therefore, near-term Project impacts to the following intersections would be cumulatively considerable and unavoidable under Opening Year Cumulative (2020) conditions until the required improvements are in place:

- I-215 SB Ramps / Ethanac Rd. (Intersection #10)
- I-215 SB Ramps / McCall Bl. (Intersection #11)
- I-215 Northbound Ramps at Ethanac Road (Intersection #13)

As shown in Table 4.14-64, improvements identified as part of DIF would improve the LOS at the following intersections to acceptable levels. However, it cannot be assured that the required improvements would be in place prior to occupancy of Phase 1 of the proposed Project; therefore, Project impacts to the following intersections would represent near-term significant and unavoidable impacts of the proposed Project for Phase 1 traffic conditions prior to implementation of the required improvements:

- Antelope Road at McCall Boulevard (Intersection #40)

As shown in Table 4.14-64, with implementation of the improvements listed in Mitigation Measures MM 4.14-3, MM 4.14-4, MM 4.14-5, MM 4.14-6, MM 4.14-7, and MM 4.14-9 would improve the LOS at the following intersections to acceptable levels under Opening Year Cumulative (2020) conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 1 of the proposed Project; therefore, near-term Project impacts to the following intersections would be cumulatively considerable and unavoidable under Opening Year Cumulative (2020) conditions until the required improvements are in place:

- Murrieta Road at Ethanac Road (Intersection #2)
- Bradley Road at McCall Boulevard (Intersection #7)
- Encanto Drive and Ethanac Road (Intersection #15)
- Sherman Road at McCall Boulevard (Intersection #33)
- Antelope Road at McCall Boulevard (Intersection #40)
- Menifee Road at SR-74 (Intersection #42)
- Menifee Road at McCall Boulevard (Intersection #44)

2. Roadway Segments

As indicated in Table 4.14-70, *Roadway Segment Capacity Analysis for Opening Year Cumulative (2020) Conditions With Improvements*, improvements identified as part of TUMF would improve the LOS at the following segments to acceptable levels under Opening Year Cumulative (2020) conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 1 of the proposed Project; therefore, near-term Project impacts to the following roadway segments would be significant and unavoidable under Opening Year Cumulative (2020) conditions until the required improvements are in place:

- Ethanac Rd., I-215 Freeway to Encanto Dr. (Roadway Segment #6)
- Ethanac Rd., Encanto Dr. to Trumble Rd. (Roadway Segment #7)
- Ethanac Rd., Trumble Rd. to Sherman Rd. (Roadway Segment #8)
- Ethanac Rd., Sherman Rd. to Antelope Rd. (Roadway Segment #9)
- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25)

As shown in Table 4.14-70, improvements identified as part of DIF would improve the LOS at the following roadway segment to acceptable levels. However, it cannot be assured that the required improvements would be in place prior to occupancy of Phase 1 of the proposed Project; therefore, Project impacts to the following roadway segment would represent near-term significant and unavoidable impacts of the proposed Project for Phase 1 traffic conditions prior to implementation of the required improvements:

- Sherman Rd., Ethanac Rd. to McLaughlin Rd. (Roadway Segment #33)

As indicated in Table 4.14-70, the improvements listed in Mitigation Measures MM 4.14-10, MM 4.14-11, MM 4.14-12, and MM 4.14-16 would improve the LOS at the following roadway segments to acceptable levels under Opening Year Cumulative (2020) conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 1 of the proposed Project; therefore, near-term Project impacts to the following roadway segments would be cumulatively considerable and unavoidable under Opening Year Cumulative (2020) conditions until the required improvements are in place:

Table 4.14-70 Roadway Segment Capacity Analysis for Opening Year Cumulative (2020) Conditions With Improvements

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	2020 NP	V/C[2]	LOS[3]	Project Only Phase 1	2020 WP	V/C[2]	LOS[3]	General Plan Classification
6	Ethanac Rd.	I-215 Freeway to Encanto Dr.	**4D**	**Expressway**	64,000	24,519	0.38	A	1,428	25,947	0.41	A	Expressway
7	Ethanac Rd.	Encanto Dr. to Trumble Rd.	**4D**	**Expressway**	64,000	21,957	0.34	A	0	21,957	0.34	A	Expressway
8	Ethanac Rd.	Trumble Rd. to Sherman Rd.	**4D**	**Expressway**	64,000	18,963	0.30	A	0	18,963	0.30	A	Expressway
9	Ethanac Rd.	Sherman Rd. to Antelope Rd.	**4D**	**Expressway**	64,000	15,552	0.24	A	0	15,552	0.24	A	Expressway
21	McCall Bl.	Bradley Rd. to I-215 Freeway[4]	**6D**	**Major**	56,300	40,302	0.72	C	1,286	41,588	0.74	C	Major
22	McCall Bl.	I-215 Freeway to Encanto Dr.[4]	**6D**	**Urban Arterial**	56,300	41,753	0.74	C	2,000	43,753	0.78	C	Urban Arterial
23	McCall Bl.	Encanto Dr. to Sherman Rd.	**6D**	**Urban Arterial**	56,300	33,599	0.60	A	1,762	35,361	0.63	B	Urban Arterial
25	McCall Bl.	Antelope Rd. to Menifee Rd.	**4D**	**Major**	34,100	26,572	0.78	C	1,000	27,572	0.81	D	Urban Arterial
33	Sherman Rd.	Ethanac Rd. to McLaughlin Rd.	**4D**	**Major**	34,100	7,684	0.23	A	0	7,684	0.23	A	Major
43	Menifee Rd.	Biscayne Av. to Rouse Rd.	**4D**	**Major**	34,100	18,025	0.53	A	380	18,405	0.54	A	Urban Arterial

6D = Improvement

[1] These maximum roadway capacities have been extracted from the following source: City of Menifee Traffic Impact Analysis Guidelines and Requirements (Attachment B). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. By using the LOS E capacity for each roadway facility type, volume-to-capacity (v/c) values between 0.00-0.60 will represent LOS A, 0.61-0.70 will represent LOS B, 0.71-0.80 will represent LOS C, 0.81-0.90 will represent LOS D, 0.91-1.00 will represent LOS E, and v/c values greater than 1.00 will represent LOS F operations. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] v/c = Volume to Capacity ratio

[3] LOS = Level of Service

[4] There are currently improvement plans for this segment as part of the I-215 Freeway/McCall Boulevard Interchange Improvement Project (Alternative 2). The Interchange Improvement Project would improve this segment of McCall Boulevard to a 6-lane divided roadway.

(Urban Crossroads, 2019d, Table 6-7)

- McCall Bl., between Bradley Rd. and the I-215 Freeway (Roadway Segment #21)
- McCall Bl., between the I-215 Freeway to Encanto Dr. (Roadway Segment #22)
- McCall Bl., Encanto Dr. to Sherman Rd. (Roadway Segment #23)
- Menifee Rd., from Biscayne Ave to Rouse Rd. (Roadway Segment #43)

3. Traffic Signal Warrants

As shown in Table 4.14-64, payment of DIF fees, including the installation of a traffic signal, would improve the LOS at the intersection of Antelope Road at McCall Boulevard (Intersection #40) to an acceptable LOS C during both peak hours. Fair share payment for the traffic signal improvement for this intersection would be in accordance with City Regulation and Design Requirement CRDR 4.14-2, which requires payment of appropriate DIF fees. Although the Project Applicant would be required to pay appropriate DIF fees, it cannot be assured that the improvement would be in place at the time of occupancy for Phase 1 of the Project. Accordingly, Project impacts due to the signal warrant at the intersections of Antelope Road at McCall Boulevard would remain significant and unavoidable on a cumulative basis for Opening Year Cumulative (2020) conditions.

Mitigation Measure MM 4.14-2 requires the installation of a traffic signal at the following location, which would reduce the Project's impacts due to signal warrants to less-than-significant levels:

- Encanto Dr. at Ethanac Rd. (Intersection #15)

4. Basic Freeway Operations

As shown on Table 4.14-37, the Project would result in cumulatively-considerable impacts at the following freeway segments under Opening Year Cumulative (2020) conditions:

- I-215 Freeway Southbound, Case Rd. to Ethanac Rd. (Freeway Segment #1)
- I-215 Freeway Southbound, Ethanac Rd. to McCall Bl. (Freeway Segment #2)
- I-215 Freeway Southbound, McCall Bl. to Newport Rd. (Freeway Segment #3)

At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the City of Menifee (or other neighboring jurisdictions) on the SHS roadway segments. Therefore, the Project's cumulatively-considerable impact to the above-listed freeway segment locations would be significant and unavoidable under Opening Year Cumulative (2020) conditions.

5. Freeway Merge/Diverge

As shown in Table 4.14-38, the Project would result in cumulatively-considerable impacts to the following merge/diverge ramp locations a under Opening Year Cumulative (2020) conditions:

- I-215 Freeway Southbound, Off-Ramp at Ethanac Road (Merge/Diverge Location #1)
- I-215 Freeway Southbound, On-Ramp at Ethanac Road (Merge/Diverge Location #2)
- I-215 Freeway Southbound, Off-Ramp at McCall Boulevard (Merge/Diverge Location #3)
- I-215 Freeway Southbound, On-Ramp at McCall Bl. (Merge/Diverge Location #4)

At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the City of Menifee (or other neighboring jurisdictions) on the SHS roadway

segments. Therefore, the Project's cumulatively-considerable impact to the above-listed freeway merge/diverge locations would be significant and unavoidable under Opening Year Cumulative (2020) conditions.

C. Opening Year Cumulative (2023) Conditions

1. Intersections

As shown in Table 4.14-65 , improvements identified as part of TUMF would improve the LOS at the following intersections to acceptable levels under Opening Year Cumulative (2023) conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 2 of the proposed Project; therefore, near-term Project impacts to the following intersections would be significant and unavoidable under Opening Year Cumulative (2023) conditions until the required improvements are in place:

- I-215 Southbound Ramps at Ethanac Road (Intersection #10)
- I-215 Southbound Ramps at McCall Boulevard (Intersection #11)
- I-215 Northbound Ramps at Ethanac Road (Intersection #13)

As shown in Table 4.14-65, improvements identified as part of DIF, TUMF, and Mitigation Measures MM 4.14-5, MM 4.14-7, and MM 4.14-8 would improve the LOS at the following intersection to acceptable levels. However, it cannot be assured that the required improvements would be in place prior to occupancy of Phase 2 of the proposed Project; therefore, Project impacts to the following intersection would represent near-term significant and unavoidable impacts of the proposed Project for Phase 2 conditions prior to implementation of the required improvements:

- Encanto Drive and Ethanac Road (Intersection #15)
- Antelope Road at McCall Boulevard (Intersection #40)
- Menifee Road at SR-74 (Intersection #42)

As shown in Table 4.14-65, with implementation of the improvements listed in Mitigation Measures MM 4.14-3, MM 4.14-4, MM 4.14-6, MM 4.14-8, MM 4.14-9, MM 4.14-14, MM 4.14-16, MM 4.14-17 and with planned improvements by DIF and/or TUMF (as applicable), the LOS at the following intersections would improve to acceptable levels under Opening Year Cumulative (2023) conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 2 of the proposed Project; therefore, near-term Project impacts to the following intersections would be cumulatively considerable and unavoidable under Opening Year Cumulative (2023) conditions until the required improvements are in place:

- Murrieta Road and Ethanac Road (Intersection #2)
- Bradley Road at McCall Boulevard (Intersection #7)
- Sherman Road at McCall Boulevard (Intersection #33)
- Menifee Road at McCall Boulevard (Intersection #44)

2. Roadway Segments

As indicated in Table 4.14-71, *Roadway Segment Capacity Analysis for Opening Year Cumulative (2023) Conditions With Improvements,* improvements identified as part of TUMF would improve the LOS at the following segments to acceptable levels under Opening Year Cumulative (2023) conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 2 of the proposed Project; therefore, near-term Project impacts to the following roadway segments would be significant and unavoidable under Opening Year Cumulative (2023) conditions until the required improvements are in place:

- Ethanac Rd., I-215 Freeway to Encanto Dr. (Roadway Segment #6)
- Ethanac Rd., Encanto Dr. to Trumble Rd. (Roadway Segment #7)
- Ethanac Rd., Trumble Rd. to Sherman Rd. (Roadway Segment #8)
- Ethanac Rd., Sherman Rd. to Antelope Rd. (Roadway Segment #9)
- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25)

As shown in Table 4.14-71, improvements identified as part of DIF would improve the LOS at the following roadway segment to acceptable levels. However, it cannot be assured that the required improvements would be in place prior to occupancy of Phase 2 of the proposed Project; therefore, Project impacts to the following roadway segment would represent near-term significant and unavoidable impacts of the proposed Project for Phase 2 conditions prior to implementation of the required improvements:

- Sherman Rd., Ethanac Rd. to McLaughlin Rd. (Roadway Segment #33)

As indicated in Table 4.14-71, the improvements listed in Mitigation Measures MM 4.14-10, MM 4.14-11, MM 4.14-12, MM 4.14-16, MM 4.14-18, MM 4.14-19, and MM 4.14-20 would improve the LOS at the following roadway segments to acceptable levels under Opening Year Cumulative (2023) conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 2 of the proposed Project; therefore, near-term Project impacts to the following roadway segments would be cumulatively considerable and unavoidable under Opening Year Cumulative (2023) conditions until the required improvements are in place:

- Ethanac Rd., Goetz Rd. to Murrieta Rd. (Roadway Segment #5)
- McCall Bl., Bradley Rd. to the I-215 Freeway (Roadway Segment #21)
- McCall Bl., I-215 Freeway to Encanto Dr. (Roadway Segment #22)
- McCall Bl., from Encanto Dr. to Sherman Rd. (Roadway Segment #23)
- McCall Bl., from Sherman Rd. to Antelope Rd. (Roadway Segment #24)
- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25)
- Menifee Rd., from Biscayne Ave to Rouse Rd. (Roadway Segment #43)

Table 4.14-71 Roadway Segment Capacity Analysis for Opening Year Cumulative (2023) Conditions With Improvements

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	2023 NP	V/C[2]	LOS[3]	Project Only Phase 2	2023 WP	V/C[2]	LOS[3]	General Plan Classification
5	Ethanac Rd.	Case Rd. to I-215 Freeway	6D	Expressway	95,000	36,988	0.39	A	1,180	38,168	0.40	A	Expressway
6	Ethanac Rd.	I-215 Freeway to Encanto Dr.	4D	Expressway	64,000	30,263	0.47	A	2,359	32,622	0.51	A	Expressway
7	Ethanac Rd.	Encanto Dr. to Trumble Rd.	4D	Expressway	64,000	26,771	0.42	A	0	26,771	0.42	A	Expressway
8	Ethanac Rd.	Trumble Rd. to Sherman Rd.	4D	Expressway	64,000	23,564	0.37	A	0	23,564	0.37	A	Expressway
9	Ethanac Rd.	Sherman Rd. to Antelope Rd.	4D	Expressway	64,000	19,945	0.31	A	0	19,945	0.31	A	Expressway
21	McCall Bl.	Bradley Rd. to I-215 Freeway[4]	6D	Major	56,300	45,202	0.80	C	2,122	47,324	0.84	D	Major
22	McCall Bl.	I-215 Freeway to Encanto Dr.[4]	6D	Urban Arterial	56,300	48,336	0.86	D	3,302	51,638	0.92	E	Urban Arterial
23	McCall Bl.	Encanto Dr. to Sherman Rd.	6D	Urban Arterial	56,300	39,160	0.70	B	2,890	42,050	0.75	C	Urban Arterial
24	McCall Bl.	Sherman Rd. to Antelope Rd.	6D	Urban Arterial	56,300	33,278	0.59	A	1,652	34,930	0.62	A	Urban Arterial
25	McCall Bl.	Antelope Rd. to Menifee Rd.	6D	Urban Arterial	56,300	30,917	0.55	A	1,652	32,569	0.58	A	Urban Arterial
33	Sherman Rd.	Ethanac Rd. to McLaughlin Rd.	4D	Major	34,100	1,103	0.03	A	0	1,103	0.03	A	Major
43	Menifee Rd.	Biscayne Av. to Rouse Rd.	4D	Major	34,100	21,828	0.64	B	628	22,456	0.66	B	Urban Arterial

6D = Improvement

[1] These maximum roadway capacities have been extracted from the following source: City of Menifee Traffic Impact Analysis Guidelines and Requirements (Attachment B). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. By using the LOS E capacity for each roadway facility type, volume-to-capacity (v/c) values between 0.00-0.60 will represent LOS A, 0.61-0.70 will represent LOS B, 0.71-0.80 will represent LOS C, 0.81-0.90 will represent LOS D, 0.91-1.00 will represent LOS E, and v/c values greater than 1.00 will represent LOS F operations. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] v/c = Volume to Capacity ratio

[3] LOS = Level of Service

[4] There are currently improvement plans for this segment as part of the I-215 Freeway/McCall Boulevard Interchange Improvement Project (Alternative 2). The Interchange Improvement Project would improve this segment of McCall Boulevard to a 6-lane divided roadway.

(Urban Crossroads, 2019d, Table 7-7)

3. *Traffic Signal Warrants*

As shown in Table 4.14-65, payment of DIF fees, which would fund the installation of a traffic signal, would improve the LOS at the intersections of Antelope Road at McCall Boulevard (Intersection #40) to an acceptable LOS C during both peak hours. Fair share payment for the traffic signal improvement would be in accordance with City Regulation and Design Requirement CRDR 4.14-2, which requires payment of appropriate DIF fees. Although the Project Applicant would be required to pay appropriate DIF fees, it cannot be assured that the improvement would be in place at the time of occupancy for Phase 2 of the Project. Accordingly, Project impacts due to the signal warrant at the intersections of Antelope Road at McCall Boulevard would remain significant and unavoidable on a cumulative basis for Opening Year Cumulative (2023) conditions. Mitigation Measure MM 4.14-2 requires the installation of a traffic signal at the following location, which would reduce the Project's impacts due to signal warrants to less-than-significant levels:

- Encanto Dr. at Ethanac Rd. (Intersection #15)

4. *Basic Freeway Operations*

As shown on Table 4.14-43, the Project would result in cumulatively-considerable impacts at the following freeway segments under Opening Year Cumulative (2023) conditions:

- I-215 Freeway Southbound, Case Rd. to Ethanac Rd. (Freeway Segment #1)
- I-215 Freeway Southbound, Ethanac Rd. to McCall Bl. (Freeway Segment #2)
- I-215 Freeway Southbound, McCall Bl. to Newport Rd. (Freeway Segment #3)

At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the City of Menifee (or other neighboring jurisdictions) on the SHS roadway segments. Therefore, the Project's cumulatively-considerable impact to the above-listed freeway segments would be significant and unavoidable under Opening Year Cumulative (2023) conditions.

5. *Freeway Merge/Diverge*

As shown in Table 4.14-44, the Project would result in cumulatively-considerable impacts to the following merge/diverge ramp locations a under Opening Year Cumulative (2023) conditions:

- I-215 Freeway Southbound, Off-Ramp at Ethanac Road (Merge/Diverge Location #1)
- I-215 Freeway Southbound, On-Ramp at Ethanac Rd. (Merge/Diverge Location #2)
- I-215 Freeway Southbound, Off-Ramp at McCall Boulevard (Merge/Diverge Location #3)
- I-215 Freeway Southbound, On-Ramp at McCall Bl. (Merge/Diverge Location #4)

At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the City of Menifee (or other neighboring jurisdictions) on the SHS roadway segments. Therefore, the Project's cumulatively-considerable impact to the above-listed freeway merge/diverge locations would be significant and unavoidable under Opening Year Cumulative (2023) conditions.

D. Opening Year Cumulative (2025) Conditions

1. Intersections

As indicated in Table 4.14-66, improvements identified as part of TUMF would improve the LOS at the following intersections to acceptable levels under Opening Year Cumulative (2025) conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 3 of the proposed Project; therefore, near-term Project impacts to the following intersections would be significant and unavoidable under Opening Year Cumulative (2025) conditions until the required improvements are in place:

- I-215 Southbound Ramps at Ethanac Road (Intersection #10)
- I-215 Southbound Ramps at McCall Boulevard (Intersection #11)
- I-215 Northbound Ramps at Ethanac Road (Intersection #13)
- I-215 Northbound Ramps at McCall Boulevard (Intersection #14)

As shown in Table 4.14-66, improvements identified as part of TUMF, DIF, and/or Mitigation Measures MM 4.14-5, MM 4.14-7, MM 4.14-8, MM 4.14-17, and MM 4.14-52 would improve the LOS at the following intersections to acceptable levels. However, it cannot be assured that the required improvements would be in place prior to occupancy of Phase 3 of the proposed Project; therefore, Project impacts to the following intersections would represent near-term significant and unavoidable impacts of the proposed Project for Phase 3 conditions prior to implementation of the required improvements:

- Encanto Drive at Ethanac Road (Intersection #15)
- Antelope Road at McCall Boulevard (Intersection #40)
- Menifee Road at SR-74 (Intersection #42)

As shown in Table 4.14-66, with implementation of the improvements listed in Mitigation Measures MM 4.14-3, MM 4.14-4, MM 4.14-5, MM 4.14-6, MM 4.14-7, MM 4.14-9, MM 4.14-14, MM 4.14-16, MM 4.14-17, MM 4.14-26, MM 4.14-31, and MM 4.14-32 would improve the LOS at the following intersections to acceptable levels under Opening Year Cumulative (2025) conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 3 of the proposed Project; therefore, near-term Project impacts to the following intersections would be cumulatively considerable and unavoidable under Opening Year Cumulative (2025) conditions until the required improvements are in place:

- Goetz Road at Ethanac Road (Intersection #1)
- Murrieta Road at Ethanac Road (Intersection #2)
- Bradley Road at McCall Boulevard (Intersection #7)
- Sherman Road at McCall Boulevard (Intersection #33)
- Menifee Road at McCall Boulevard (Intersection #44)

2. Roadway Segments

As indicated in Table 4.14-67, the following roadway segments still are expected to operate at a deficient LOS E or F. However, the peak hour intersection analysis for the study area intersections on either end of these roadway segments would operate at acceptable LOS during peak hours; thus, additional roadway segement widening is not recommended. Therefore, for the purposes of this assessment, roadway segment widening is

typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes. Accordingly, the Project's significant impacts to the following roadway segments would be significant and unavoidable under the Opening Year Cumulative (2025) scenario:

- McCall Bl., Sun City Bl. to Bradley Rd. (Roadway Segment #20)
- McCall Bl., I-215 Freeway to Encanto Dr. (Roadway Segment #22)

As indicated in Table 4.14-67, completion of the improvements identified as part of TUMF would improve the LOS at the following roadway segments to acceptable levels under Opening Year Cumulative (2025) conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 3 of the proposed Project; therefore, near-term Project impacts to the following roadway segments would be cumulatively considerable and unavoidable under Opening Year Cumulative (2025) conditions until the required improvements are in place:

- Ethanac Rd., I-215 Freeway to Encanto Dr. (Roadway Segment #6)
- Ethanac Rd., Encanto Dr. to Trumble Rd. (Roadway Segment #7)
- Ethanac Rd., Trumble Rd. to Sherman Rd. (Roadway Segment #8)
- Ethanac Rd., Sherman Rd. to Antelope Rd. (Roadway Segment #9)
- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25)

As shown in Table 4.14-67, improvements identified as part of DIF would improve the LOS at the following roadway segment to acceptable levels. However, it cannot be assured that the required improvements would be in place prior to occupancy of Phase 3 of the proposed Project; therefore, Project impacts to the following roadway segment would represent near-term significant and unavoidable impacts of the proposed Project for Phase 3 conditions prior to implementation of the required improvements:

- Encanto Dr., McLaughlin Rd. to Rouse Rd. (Roadway Segment #28)
- Encanto Dr., Chambers Dr. to Shadel Rd. (Roadway Segment #30)
- Encanto Dr., Shadel Rd. to McCall Bl. (Roadway Segment #31)
- Sherman Rd., SR-74 to Ethanac Rd. (Roadway Segment #32)
- Sherman Rd., Ethanac Rd. to McLaughlin Rd. (Roadway Segment #33)

As indicated in Table 4.14-67, improvements identified as part of Mitigation Measures MM 4.14-10, MM 4.14-11, MM 4.14-12, MM 4.14-16, MM 4.14-18, MM 4.14-19, MM 4.14-20, and MM 4.14-30 would improve the LOS at the following segments to acceptable levels under Opening Year Cumulative (2025) conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 3 of the proposed Project; therefore, near-term Project impacts to the following roadway segments would be significant and unavoidable under Opening Year Cumulative (2025) conditions until the required improvements are in place:

- Ethanac Rd., Goetz Rd. to Murrieta Rd. (Roadway Segment #5)
- McCall Bl., Bradley Rd. to the I-215 Freeway (Roadway Segment #21)
- McCall Bl., I-215 Freeway to Encanto Dr. (Roadway Segment #22)
- McCall Bl., Encanto Dr. to Sherman Rd. (Roadway Segment #23)
- McCall Bl., Sherman Rd. to Antelope Rd. (Roadway Segment #24)

- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25)
- Encanto Dr., Ethanac Rd. to McLaughlin Rd. (Roadway Segment #27)
- Menifee Rd., from Biscayne Ave to Rouse Rd. (Roadway Segment #43)

3. Traffic Signal Warrants

As indicated in Table 4.14-66, payment of DIF fees, which would fund installation of a traffic signal, would improve the LOS at the intersection of Antelope Road at McCall Boulevard (Intersection #40) to an acceptable LOS during both peak hours. Although the Project Applicant would be required to pay appropriate DIF fees, it cannot be assured that the improvements to this intersection, including a traffic signal, would be in place at the time of Project occupancy for Phase 3; accordingly, impacts to the intersection of Antelope Road at McCall Boulevard would remain significant and unavoidable on a cumulative basis under Opening Year Cumulative (2025) conditions.
Mitigation Measure MM 4.14-2 requires the installation of a traffic signal at the following location, which would reduce the Project's impacts due to signal warrants to less-than-significant levels:

- Encanto Dr. at Ethanac Rd. (Intersection #15)

CRDR 4.14-4 and Mitigation Measures MM 4.14-2, MM 4.14-21, MM 4.14-22 and MM 4.14-23 require the installation of a traffic signal at the following locations, which would reduce the Project's impacts due to signal warrants to less-than-significant levels:

- Bradley Road at Cherry Hills Boulevard (Intersection #8)
- Encanto Dr. at Ethanac Rd. (Intersection #15)
- Encanto Dr. at McLaughlin Rd. (Intersection #16)
- Encanto Dr. at Rouse Rd. (Intersection #17)
- Encanto Dr. at Shadel Rd. (Intersection #19)

4. Basic Freeway Operations

As shown on Table 4.14-49, the Project would result in cumulatively-considerable impacts at the following freeway segments under Opening Year Cumulative (2025) conditions:

- I-215 Freeway Southbound, Case Rd. to Ethanac Rd. (Freeway Segment #1)
- I-215 Freeway Southbound, Ethanac Rd. to McCall Bl. (Freeway Segment #2)
- I-215 Freeway Southbound, McCall Bl. to Newport Rd. (Freeway Segment #3)

At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the City of Menifee (or other neighboring jurisdictions) on the SHS roadway segments. Therefore, the Project's cumulatively-considerable impact to the above-listed freeway segments would be significant and unavoidable under Opening Year Cumulative (2025) conditions.

5. Freeway Merge/Diverge

As indicated in Table 4.14-50, the Project would result in cumulatively-considerable impacts to the following freeway merge/diverge locations under Opening Year Cumulative (2025) conditions:

- I-215 Freeway Southbound, Off-Ramp at Ethanac Road (Merge/Diverge Location #1)

- I-215 Freeway Southbound, On-Ramp at Ethanac Rd. (Merge/Diverge Location #2)
- I-215 Freeway Southbound, Off-Ramp at McCall Boulevard (Merge/Diverge Location #3)
- I-215 Freeway Southbound, On-Ramp at McCall Bl. (Merge/Diverge Location #4)
- I-215 Freeway Northbound, Off-Ramp at McCall Bl. (Merge/Diverge Location #8)

At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the City of Menifee (or other neighboring jurisdictions) on the SHS roadway segments. Therefore, the Project's cumulatively-considerable impact to the above-listed freeway merge/diverge locations would be significant and unavoidable under Opening Year Cumulative (2025) conditions.

E. Horizon Year (2040) Conditions

1. Intersections

As indicated in Table 4.14-68, improvements identified as part of TUMF, in conjunction with Mitigation Measures MM 4.14-9, MM 4.14-14 , MM 4.14-17, MM 4.14-26, MM 4.14-31, MM 4.14-38, MM 4.14-24 , MM 4.14-43, MM 4.14-45, MM 4.14-48, MM 4.14-49, MM 4.14-53, MM 4.14-54, and MM 4.14-56 would improve the LOS at the following intersections to acceptable levels under Horizon Year (2040) conditions. However, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 3 of the proposed Project; therefore, near-term Project impacts to the following intersections would be cumulatively considerable and unavoidable under Horizon Year (2040) conditions until the required improvements are in place:

- Goetz Road at Ethanac Road (Intersection #1)
- I-215 Southbound Ramps at Bonnie Drive (Intersection #9)
- I-215 Southbound Ramps at Ethanac Road (Intersection #10)
- I-215 Southbound Ramps at McCall Boulevard (Intersection #11)
- I-215 Northbound Ramps at SR-74 (Intersection #12)
- I-215 Northbound Ramps at Ethanac Road (Intersection #13)
- I-215 Northbound Ramps at McCall Boulevard (Intersection #14)
- Encanto Drive at McCall Boulevard (Intersection #20)
- Trumble Road at Ethanac Road (Intersection #22)
- Sherman Road at Ethanac Road (Intersection #27)
- Antelope Road at Ethanac Road (Intersection #36)
- Palomar Rd. / SR-71 (Intersection #41)
- Menifee Road at McCall Boulevard (Intersection #44)

As indicated in Table 4.14-68, improvements planned as part of DIF and TUMF, in conjunction with Mitigation Measures MM 4.14-5, MM 4.14-7, MM 4.14-8, MM 4.14-17, MM 4.14-49, and MM 4.14-52 would improve the LOS at the following intersection to acceptable levels. However, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 3 of the proposed Project; therefore, near-term Project impacts to the following intersection would be cumulatively considerable and unavoidable under Horizon Year (2040) conditions until the required improvements are in place:

- Encanto Drive at Ethanac Road (Intersection #15)
- Antelope Road at Ethanac Road (Intersection #36)

- Antelope Road at McCall Boulevard (Intersection #40)
- Menifee Road at SR-74 (Intersection #42)

As shown in Table 4.14-68, improvements identified as part of DIF, in conjunction with CRDR 4.14-4, CRDR 4.14-6, and Mitigation Measures MM 4.14-7, MM 4.14-22, MM 4.14-40, MM 4.14-23, MM 4.14-46, MM 4.14-47, , MM 4.14-50, and MM 4.14-51 would improve the LOS at the following intersections to acceptable levels under Horizon Year (2040) conditions. However, it cannot be assured that the required improvements would be in place prior to occupancy of Phase 3 of the proposed Project; therefore, Project impacts to the following intersections would represent near-term significant and unavoidable impacts of the proposed Project for Horizon Year (2040) conditions prior to implementation of the required improvements:

- Encanto Drive at McLaughlin Boulevard (Intersection #16)
- Encanto Drive at Rouse Road (Intersection #17)
- Encanto Drive at Chambers Avenue (Intersection #18)
- Encanto Drive at Shadel Road (Intersection #19)
- Sherman Road at McLaughlin Road (Intersection #28)
- Sherman Road at Rouse Road (Intersection #29)
- Sherman Road at Chambers Avenue (Intersection #31)
- Antelope Road at Rouse Road (North) (Intersection #37)
- Antelope Road at Rouse Road (South) (Intersection #38)
- Antelope Road at Chambers Avenue (Intersection #39)
- Antelope Road at McCall Boulevard (Intersection #40)

As shown in Table 4.14-68, with implementation of the improvements listed in Mitigation Measures MM 4.14-4, MM 4.14-16, MM 4.14-32, MM 4.14-33, MM 4.14-34, MM 4.14-35, MM 4.14-36, MM 4.14-37, MM 4.14-42, MM 4.14-44, and MM 4.14-55 would improve the LOS at the following intersections to acceptable levels under Horizon Year (2040) conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 3 of the proposed Project; therefore, near-term Project impacts to the following intersections would be cumulatively considerable and unavoidable under Horizon Year (2040) conditions until the required improvements are in place:

- -Murrieta Road at Ethanac Road (Intersection #2)
- Murrieta Road at McCall Boulevard (Intersection #3)
- Sun City Boulevard at McCall Boulevard (Intersection #4)
- Barnett Road at Ethanac Road (Intersection #5)
- Case Road at Ethanac Road (Intersection #6)
- Bradley Road at McCall Boulevard (Intersection #7)
- Trumble Road at SR-74 (Intersection #21)
- Sherman Road at SR-74 (Intersection #26)
- Menifee Road at Rouse Road/Turtle Point Drive (Intersection #43)

2. *Roadway Segments*

As indicated in Table 4.14-72, *Roadway Segment Capacity Analysis for Horizon Year (2040) Conditions With Improvements,* the following roadway segments still are expected to operate at a deficient LOS E or F. However, the peak hour intersection analysis for the study area intersections on either end of these roadway segments would operate at acceptable LOS during peak hours; thus, additional roadway segment widening is not recommended. Therefore, for the purposes of this assessment, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes. Accordingly, the Project's significant impacts to the following roadway segments would be significant and unavoidable under the Horizon Year (2040) scenario:

- SR-74, Bonnie Dr. to I-215 Northbound Ramps (Roadway Segment #1)
- SR-74, I-215 Northbound Ramps to Trumble Rd. (Roadway Segment #2)
- McCall Bl., Sun City Bl. to Bradley Rd. (Roadway Segment #20)
- McCall Bl., Bradley Rd. to I-215 Freeway (Roadway Segment #21)
- McCall Bl., I-215 Freeway to Encanto Dr. (Roadway Segment #22)
- McCall Bl., Encanto Dr. to Sherman Rd. (Roadway Segment #23)

As indicated in Table 4.14-72, improvements identified as part of TUMF would improve the LOS at the following segments to acceptable levels under Horizon Year (2040) conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 3 of the proposed Project; therefore, near-term Project impacts to the following roadway segments would be significant and unavoidable under Horizon Year (2040) conditions until the required improvements are in place:

- SR-74, Bonnie Dr. to I-215 NB Ramps (Roadway Segment #1)
- Ethanac Rd., I-215 Freeway to Encanto Dr. (Roadway Segment #6)
- Ethanac Rd., Encanto Dr. to Trumble Rd. (Roadway Segment #7)
- Ethanac Rd., Trumble Rd. to Sherman Rd. (Roadway Segment #8)
- Ethanac Rd., Sherman Rd. to Antelope Rd. (Roadway Segment #9)
- SR-74, Antelope Rd. to Palomar Rd. (Roadway Segment #10)
- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25)

As shown in Table 4.14-72, improvements identified as part of DIF would improve the LOS at the following roadway segment to acceptable levels under Horizon Year (2040) conditions. However, it cannot be assured that the required improvements would be in place prior to occupancy of Phase 3 of the proposed Project; therefore, Project impacts to the following roadway segment would represent near-term significant and unavoidable impacts of the proposed Project for Phase 3 conditions prior to implementation of the required improvements:

- Encanto Dr., McLaughlin Rd. to Rouse Rd. (Roadway Segment #28)
- Encanto Dr., Chambers Dr. to Shadel Rd. (Roadway Segment #30)
- Encanto Dr., Shadel Rd. to McCall Bl. (Roadway Segment #31)
- Sherman Rd., SR-74 to Ethanac Rd. (Roadway Segment #32)
- Sherman Rd., Ethanac Rd. to McLaughlin Rd. (Roadway Segment #33)
- Sherman Rd., McLaughlin Rd. to Rouse Rd. (Roadway Segment #34)

Table 4.14-72 Roadway Segment Capacity Analysis for Horizon Year (2040) Conditions With Improvements

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	2040 NP	V/C[2]	LOS[3]	Project Only 2040	2040 WP	V/C[2]	LOS[3]	General Plan Classification
1	SR-74[5]	Bonnie Dr. to I-215 NB Ramps	4D	Major	34,100	30,470	0.89	D	690	**31,160**	**0.91**	**E**	Major
2	SR-74[5]	I-215 NB Ramps to Trumble Rd.	4D	Major	34,100	**52,294**	**1.53**	**F**	922	**53,216**	**1.56**	**F**	Major
3	Ethanac Rd.	Goetz Rd. to Murrieta Rd.	6D	Expressway	95,000	50,544	0.53	A	768	51,312	0.54	A	Expressway
4	Ethanac Rd.	Murrieta Rd. to Barnett Rd.	6D	Expressway	95,000	57,358	0.60	A	1,076	58,434	0.62	B	Expressway
5	Ethanac Rd.	Case Rd. to I-215 Freeway	6D	Expressway	95,000	52,168	0.55	A	1,690	53,858	0.57	A	Expressway
6	Ethanac Rd.	I-215 Freeway to Encanto Dr.	6D	Expressway	95,000	63,472	0.67	B	3,686	67,158	0.71	C	Expressway
7	Ethanac Rd.	Encanto Dr. to Trumble Rd.	6D	Expressway	95,000	60,204	0.63	B	1,996	62,200	0.65	B	Expressway
8	Ethanac Rd.	Trumble Rd. to Sherman Rd.	6D	Expressway	95,000	60,724	0.64	B	2,304	63,028	0.66	B	Expressway
9	Ethanac Rd.	Sherman Rd. to Antelope Rd.	6D	Expressway	95,000	57,412	0.60	A	922	58,334	0.61	B	Expressway
10	SR-74	Antelope Rd. to Palomar Rd.	6D	Expressway	95,000	70,661	0.74	C	922	71,583	0.75	C	Expressway
15	Rouse Rd.	Antelope Rd. (N) to Menifee Rd.	4D	Major	34,100	16,561	0.49	A	922	17,483	0.51	A	Major
20	McCall Bl.[5]	Sun City Bl. to Bradley Rd.	4D	Major	34,100	**41,130**	**1.21**	**F**	922	**42,052**	**1.23**	**F**	Major
21	McCall Bl.[4,5]	Bradley Rd. to I-215 Freeway	6D	Major	56,300	**69,292**	**1.23**	**F**	1,382	**70,674**	**1.26**	**F**	Major
22	McCall Bl.[4,5]	I-215 Freeway to Encanto Dr.	6D	Urban Arterial	56,300	**61,113**	**1.09**	**F**	4,300	**65,413**	**1.16**	**F**	Urban Arterial
23	McCall Bl.	Encanto Dr. to Sherman Rd.	6D	Urban Arterial	56,300	**51,070**	**0.91**	**E**	2,150	**53,220**	**0.95**	**E**	Urban Arterial
24	McCall Bl.	Sherman Rd. to Antelope Rd.	6D	Urban Arterial	56,300	42,529	0.76	C	460	42,989	0.76	C	Urban Arterial
25	McCall Bl.	Antelope Rd. to Menifee Rd.	6D	Urban Arterial	56,300	36,842	0.65	B	1,536	38,378	0.68	B	Urban Arterial
27	Encanto Dr.	Ethanac Rd. to McLaughlin Rd.	4D	Major	34,100	13,964	0.41	A	3,226	17,190	0.50	A	Major
28	Encanto Dr.	McLaughlin Rd. to Rouse Rd.	4D	Major	34,100	10,032	0.29	A	3,226	13,258	0.39	A	Major
29	Encanto Dr.	Rouse Rd. to Chambers Av.	4D	Major	34,100	12,272	0.36	A	4,608	16,880	0.50	A	Major
30	Encanto Dr.	Chambers Av. to Shadel Rd.	4D	Major	34,100	12,978	0.38	A	2,304	15,282	0.45	A	Major
31	Encanto Dr.	Shadel Rd. to McCall Bl.	4D	Major	34,100	14,904	0.44	A	2,150	17,054	0.50	A	Major
32	Sherman Rd.	SR-74 to Ethanac Rd.	4D	Major	34,100	16,561	0.49	A	1,690	18,251	0.54	A	Major
33	Sherman Rd.	Ethanac Rd. to McLaughlin Rd.	4D	Major	34,100	17,665	0.52	A	3,840	21,505	0.63	B	Major
34	Sherman Rd.	McLaughlin Rd. to Rouse Rd.	4D	Major	34,100	14,353	0.42	A	3,840	18,193	0.53	A	Major

Table 4.14-72 Roadway Segment Capacity Analysis for Horizon Year (2040) Conditions With Improvements (Cont'd)

#	Roadway	Segment Limits	Roadway Section	Roadway Classification	LOS Capacity[1]	2040 NP	V/C[2]	LOS[3]	Project Only 2040	2040 WP	V/C[2]	LOS[3]	General Plan Classification
42	Menifee Rd.	SR-74 to Biscayne Av.	6D	Urban Arterial	56,300	39,642	0.70	B	614	40,256	0.72	C	Urban Arterial
43	Menifee Rd.	Biscayne Av. to Rouse Rd.	6D	Urban Arterial	56,300	39,642	0.70	B	0	39,642	0.70	B	Urban Arterial
44	Menifee Rd.	Rouse Rd. to McCall Bl.	6D	Urban Arterial	56,300	48,580	0.86	D	0	48,580	0.86	D	Urban Arterial
45	Menifee Rd.	McCall Bl. to Simpson Rd.	4D	Arterial	37,000	27,537	0.74	C	308	27,845	0.75	C	Arterial

6D = Improvement

[1] These maximum roadway capacities have been extracted from the following source: City of Menifee Traffic Impact Analysis Guidelines and Requirements (Attachment B). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. By using the LOS E capacity for each roadway facility type, volume-to-capacity (v/c) values between 0.00-0.60 will represent LOS A, 0.61-0.70 will represent LOS B, 0.71-0.80 will represent LOS C, 0.81-0.90 will represent LOS D, 0.91-1.00 will represent LOS E, and v/c values greater than 1.00 will represent LOS F operations. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] v/c = Volume to Capacity ratio

[3] LOS = Level of Service

[4] There are currently improvement plans for this segment as part of the I-215 Freeway/McCall Boulevard Interchange Improvement Project (Alternative 2). The Interchange Improvement Project would improve this segment of McCall Boulevard to a 6-lane divided roadway.

[5] Where the average daily volume (ADT) based roadway segment analysis indicates a deficiency (unacceptable LOS), the more detailed peak hour intersection analysis is also reviewed (see Table 9-6). The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. While this traffic study recognizes LOS D is the City's target LOS for roadway segments, a review of the more detailed peak hour intersection analysis is necessary to determine whether roadway widening along the segment is necessary. For the purposes of this analysis, if the peak hour intersection operations on either side of the roadway segment are anticipated to operate at an acceptable LOS, then additional roadway segment widening has not been recommended. Therefore, for the purposes of this assessment, roadway segment widening has only been recommended if the peak hour intersection analysis indicates the need for additional through lanes. Furthermore, it is likely that a roadway segment can have a volume-to-capacity ratio of up to 1.25 if the adjacent intersections are anticipated to operate at acceptable LOS, without the need for additional widening. As the LOS threshold for the study area intersections is LOS D, LOS D have also been utilized as the minimum LOS criteria for roadway segments for the purposes of this analysis.

(Urban Crossroads, 2019d, Table 9-7)

As indicated in Table 4.14-72, improvements identified as part of Mitigation Measures MM 4.14-10, MM 4.14-11, MM 4.14-12, MM 4.14-16, MM 4.14-18, MM 4.14-19, MM 4.14-20, MM 4.14-57, MM 4.14-59, MM 4.14-60, MM 4.14-61, MM 4.14-62, MM 4.14-63 , MM 4.14-30, MM 4.14-64, and MM 4.14-65 would improve the LOS at the following segments to acceptable levels under Horizon Year (2040) conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 3 of the proposed Project; therefore, near-term Project impacts to the following roadway segments would be significant and unavoidable under Horizon Year (2040) conditions until the required improvements are in place:

- Ethanac Rd., Goetz Rd. to Murrieta Rd. (Roadway Segment #3)
- Ethanac Rd., Murrieta Rd. to Barnett Rd. (Roadway Segment #4)
- Ethanac Rd., Goetz Rd. to Murrieta Rd. (Roadway Segment #5)
- Ethanac Rd., I-215 Freeway to Encanto Dr. (Roadway Segment #6)
- Ethanac Rd., Encanto Dr. to Trumble Rd. (Roadway Segment #7)
- Ethanac Rd., Trumble Rd. to Sherman Rd. (Roadway Segment #8)
- Ethanac Rd., Sherman Rd. to Antelope Rd. (Roadway Segment #9)
- Rouse Rd., Antelope Rd. (N) to Menifee Rd. (Roadway Segment #15)
- McCall Bl., Bradley Rd. to the I-215 Freeway (Roadway Segment #21)
- McCall Bl., I-215 Freeway to Encanto Dr. (Roadway Segment #22)
- McCall Bl., Encanto Dr. to Sherman Rd. (Roadway Segment #23)
- McCall Bl., Sherman Rd. to Antelope Rd. (Roadway Segment #24)
- McCall Bl., Antelope Rd. to Menifee Rd. (Roadway Segment #25)
- Encanto Dr., Ethanac Rd. to McLaughlin Rd. (Roadway Segment #27)
- Menifee Rd., Ethanac Rd. to Biscayne Av. (Roadway Segment #42)
- Menifee Rd., Biscayne Av. to Rouse Rd. (Roadway Segment #43)
- Menifee Rd., Rouse Rd. to McCall Bl. (Roadway Segment #44)
- Menifee Rd., McCall Bl. To Simpson Rd. (Roadway Segment #45)

3. Traffic Signal Warrants

City Regulation and Design Requirement CRDR 4.14-2 and Mitigation Measures MM 4.14-7 and MM 4.14-49 include improvements requiring the installation of traffic signals at the following locations, which in conjunction with the other improvements identified in City Regulation and Design Requirement CRDR 4.14-2 and Mitigation Measures MM 4.14-7 and MM 4.14-49 would ensure that the intersections listed below would operate at an acceptable LOS under Horizon Year (2040) conditions:

- Sherman Rd. & Ethanac Rd. (Intersection #27)
- Sherman Rd. & McLaughlin Rd. (Intersection #28)
- Antelope Rd. & Ethanac Rd. (Intersection #36)
- Antelope Rd. & Rouse Rd. (North) (Intersection #37)
- Antelope Rd. & McCall Bl. (Intersection #40)

Pursuant to CRDR 4.14-4, the Project Applicant would be required to signalize the Encanto Drive at Chambers Avenue (Intersection #18) as part of Phase 1 development, which would reduce impacts due to signalization to below a level of significance.

Pursuant to Mitigation Measure MM 4.14-2, MM 4.14-21, MM 4.14-22, MM 4.14-23, and MM 4.14-47 the Project Applicant would be required to signalize the following intersections, which would reduce impacts to the following intersections due to signalization to below a level of significance.

- Bradley Road at Cherry Hills Boulevard (Intersection #8)
- Encanto Drive at Ethanac Road (Intersection #15)
- Encanto Drive and McLaughlin Road (Intersection #16)
- Encanto Drive at Shadel Road (Intersection #19)
- Sherman Road at Rouse Road (Intersection #29)
- Sherman Road at Chambers Avenue (Intersection #31)

Although no signals are proposed at the following locations that meet traffic signal warrants under Horizon Year (2040) conditions, Table 4.14-68 shows that the following intersections would operate at an acceptable LOS under Horizon Year (2040) conditions without signalization. Notwithstanding, because the acceptable LOS relies upon fair share contributions and/or DIF payments, it cannot be assured that the required improvements needed to achieve an acceptable LOS would be in place. Therefore, Project impacts to the following intersections due to the need for signalization would be significant and unavoidable under Horizon Year (2040) conditions:

- Murrieta Rd. at Ethanac Rd. (Intersection #2)
- Encanto Drive at Rouse Road (Intersection #17)

4. Basic Freeway Operations

As shown on Table 4.14-55, the Project would result in a direct impact at the following freeway segment under Horizon Year (2040) conditions:

- I-215 Freeway Southbound, McCall Bl. to Newport Rd. (Freeway Segment #3)

Additionally, the Project would result in cumulatively-considerable impacts at the following freeway segment under Horizon Year (2040) conditions:

- I-215 Freeway Southbound, Ethanac Rd. to McCall Bl. (Freeway Segment #2)

At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the City of Menifee (or other neighboring jurisdictions) on the SHS roadway segments. Therefore, the Project's cumulatively-considerable impact to the above-listed freeway segments would be significant and unavoidable under Horizon Year (2040) conditions.

5. Freeway Merge/Diverge

As indicated in Table 4.14-56, the Project would result in cumulatively-considerable impacts to the following freeway merge/diverge locations:

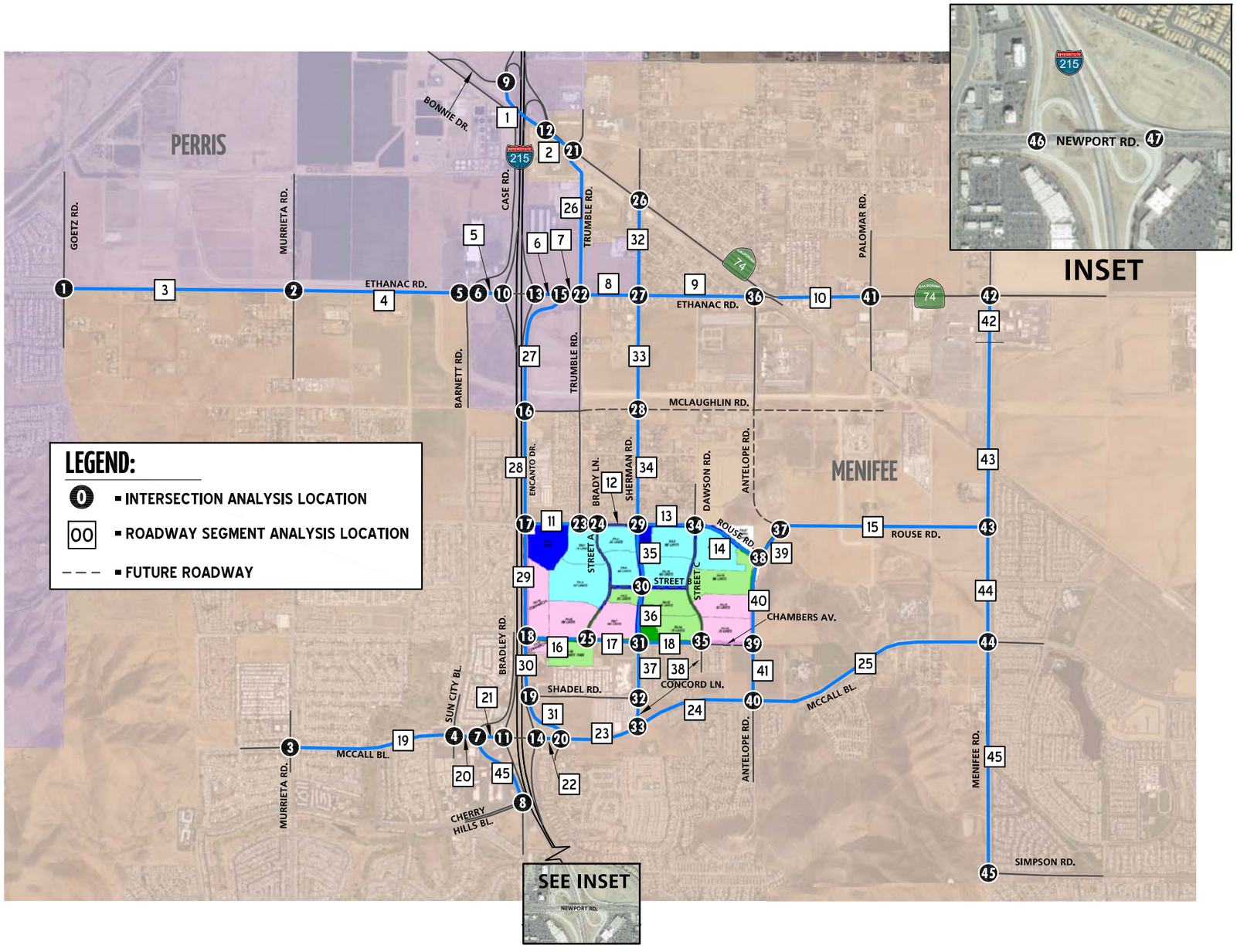
- I-215 Freeway Southbound, Off-Ramp at Ethanac Road (Merge/Diverge Location #1)
- I-215 Freeway Southbound, Off-Ramp at McCall Boulevard (Merge/Diverge Location #3)
- I-215 Freeway Southbound, On-Ramp at McCall Bl. (Merge/Diverge Location #4)
- I-215 Freeway Northbound, Off-Ramp at Ethanac Rd. (Merge/Diverge Location #6)

- I-215 Freeway Northbound, Off-Ramp at McCall Bl. (Merge/Diverge Location #8)

At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the City of Menifee (or other neighboring jurisdictions) on the SHS roadway segments. Therefore, the Project's cumulatively-considerable impact to the above-listed freeway merge/diverge locations would be significant and unavoidable under Horizon Year (2040) conditions.

Threshold d: Less-than-Significant Impact After Mitigation.

Implementation of Mitigation Measure MM 4.14-1 would ensure that the Project Applicant complies with a temporary traffic control plan that meets the applicable requirements of the California Manual on Uniform Traffic Control Devices. With implementation of the required mitigation, the Project's impacts to access during Project construction would be reduced to less-than-significant levels.

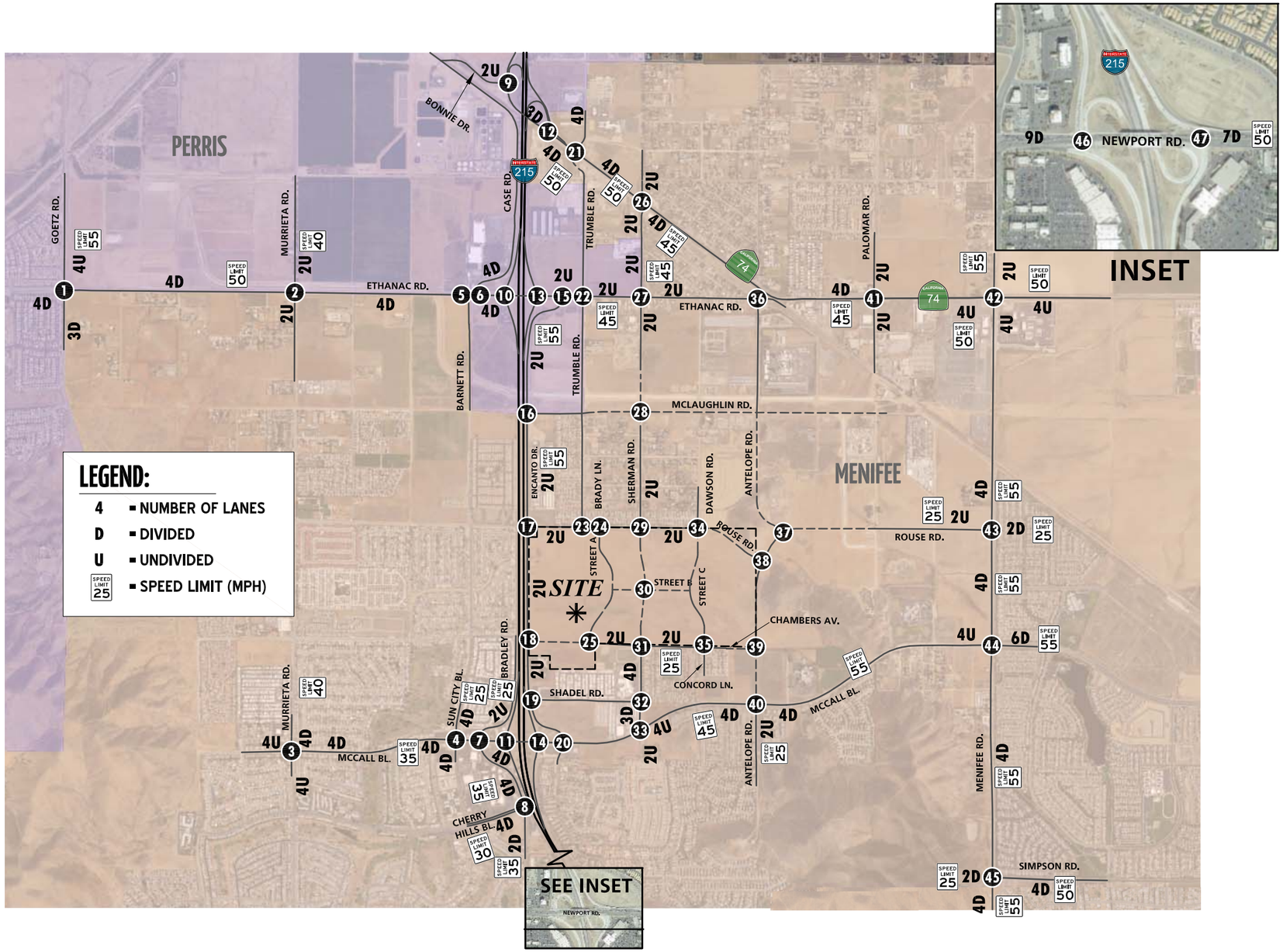


Source(s): Urban Crossroads (05-23-2019)

Figure 4.14-1

NOT TO SCALE

STUDY AREA LOCATION MAP

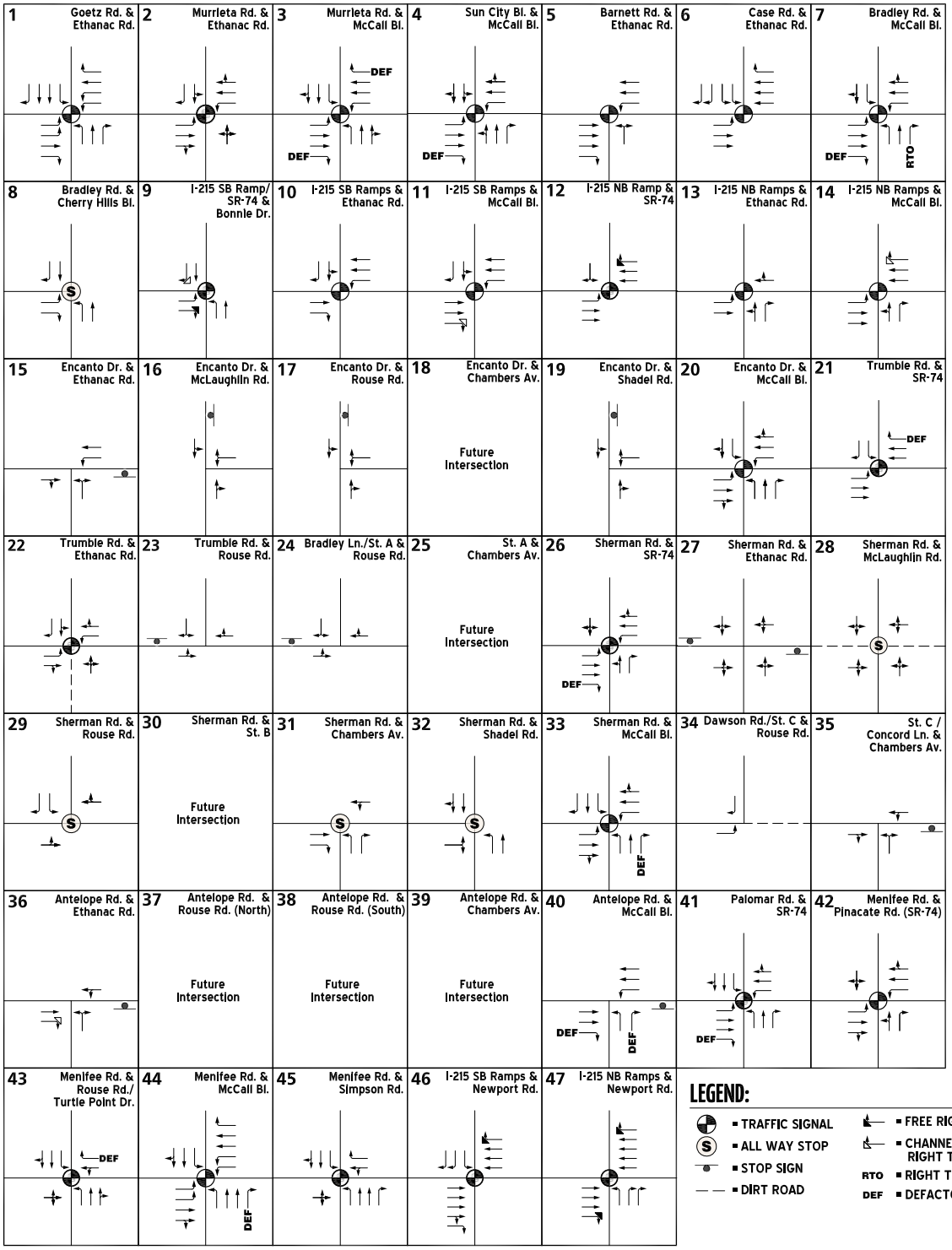


Source(s): Urban Crossroads (08-21-2019)

Figure 4.14-2

NOT TO SCALE

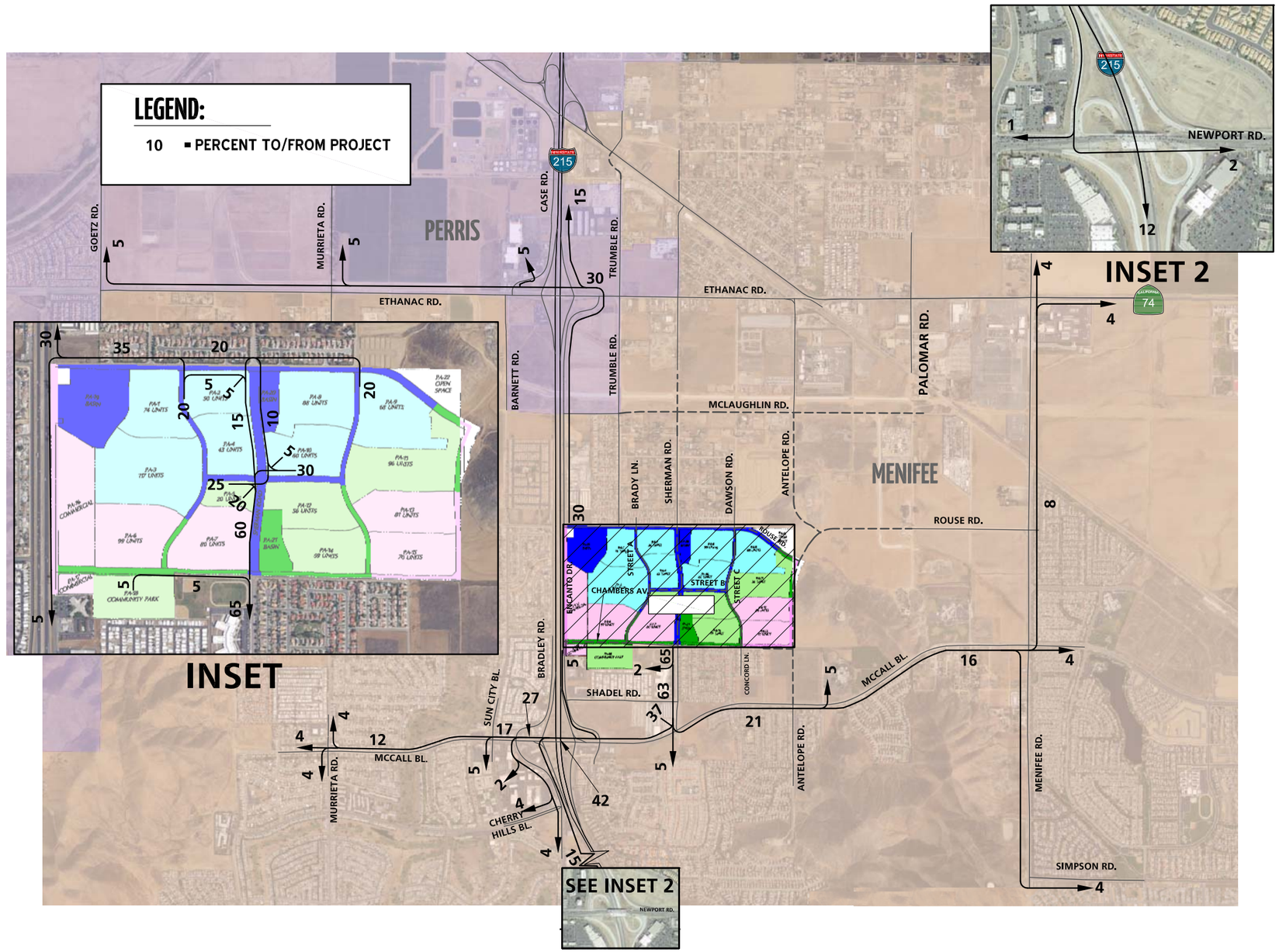
EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS (1 OF 2)



Source(s): Urban Crossroads (08-21-2019)

NOT TO SCALE

Figure 4.14-3
EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS (2 OF 2)

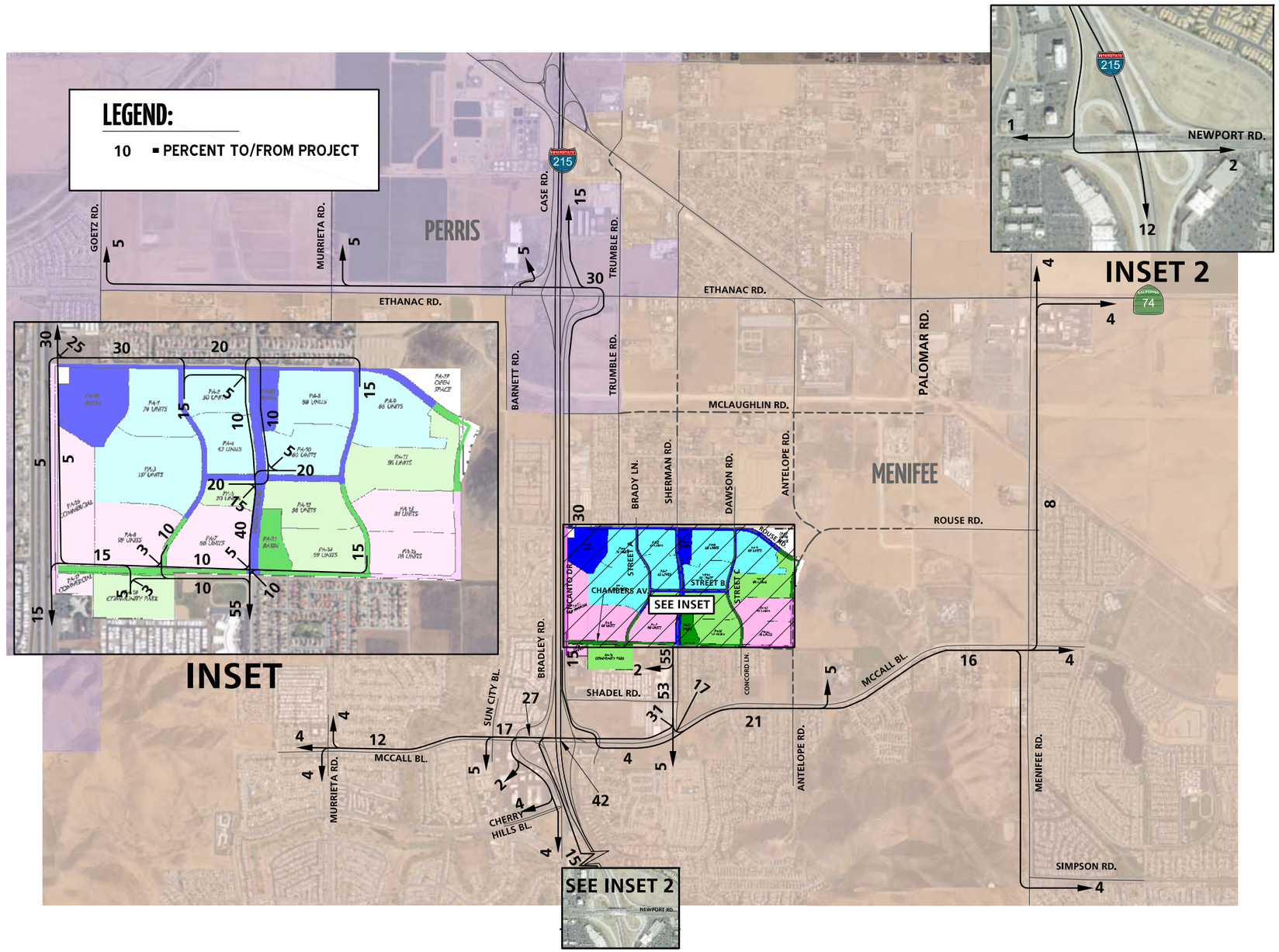


Source(s): Urban Crossroads (08-21-2019)

Figure 4.14-4

NOT TO SCALE

PROJECT PHASES 1 AND 2 (RESIDENTIAL, COMMUNITY PARK, AND COMMUNITY CENTER) TRIP DISTRIBUTION

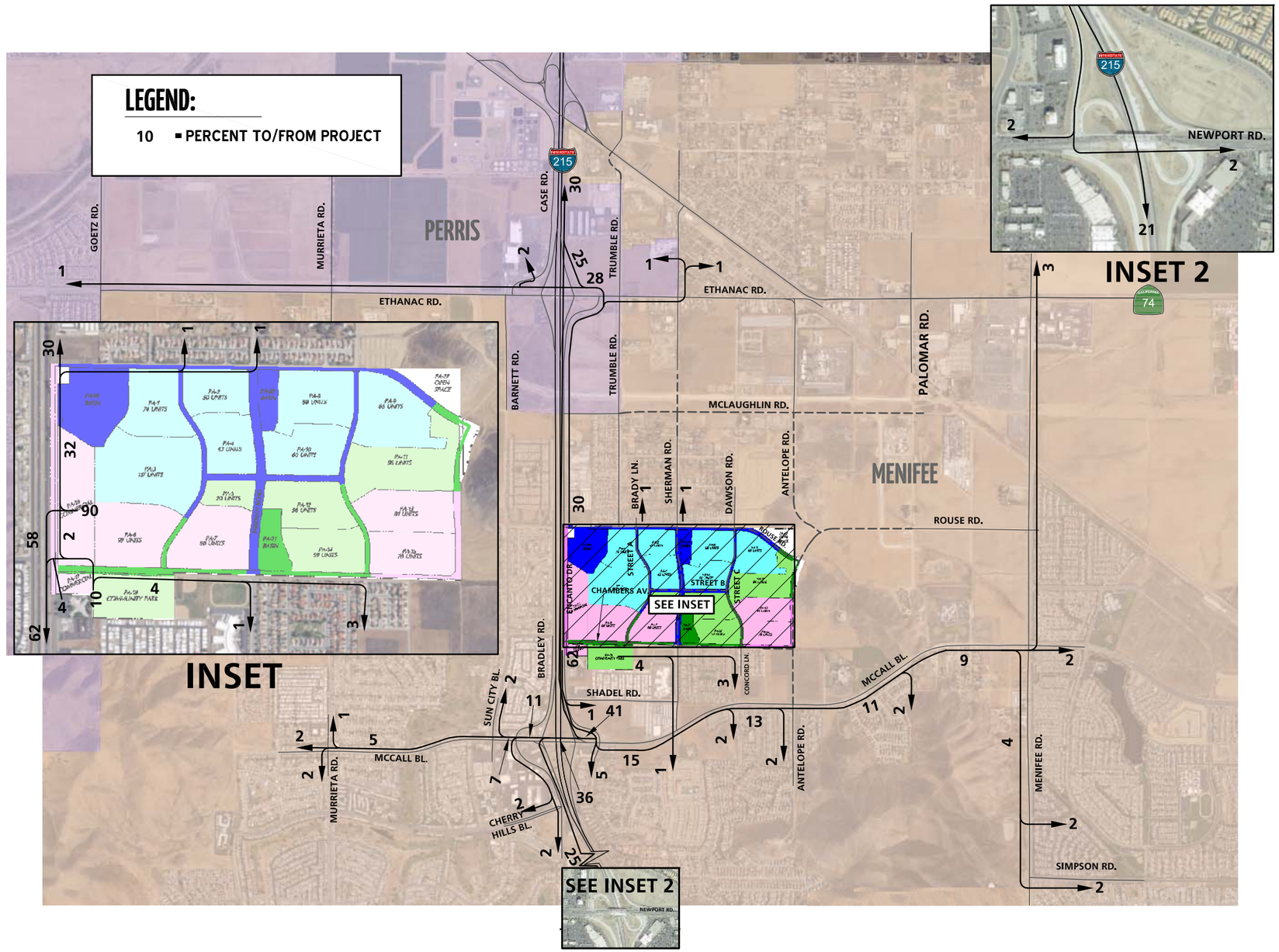


Source(s): Urban Crossroads (08-21-2019)

Figure 4.14-5

NOT TO SCALE

PROJECT PHASES 1 THROUGH 3 (RESIDENTIAL, COMMUNITY PARK, AND COMMUNITY CENTER) TRIP DISTRIBUTION

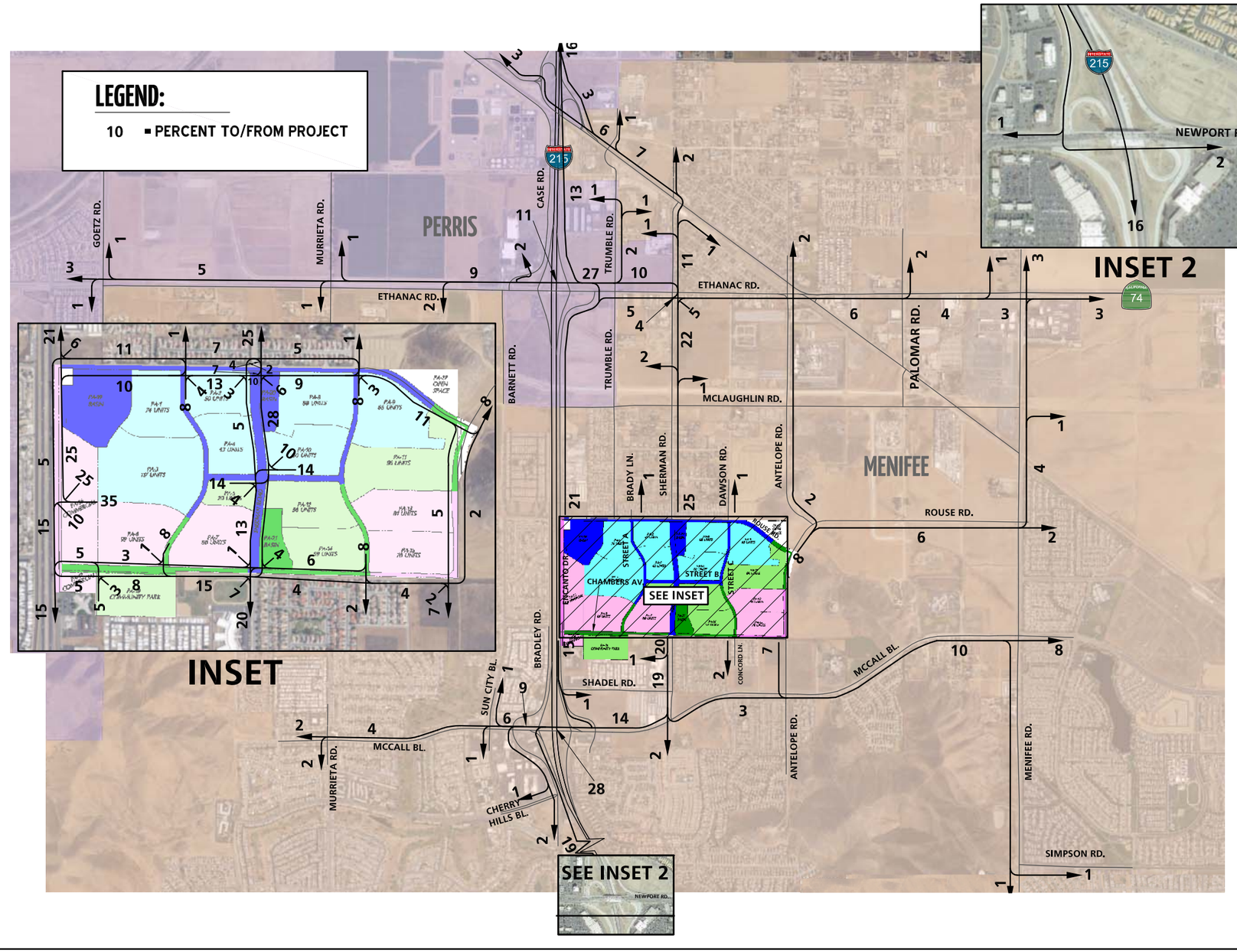


Source(s): Urban Crossroads (08-21-2019)

Figure 4.14-6

NOT TO SCALE

PROJECT BUILDOUT (RESIDENTIAL, COMMERCIAL, COMMUNITY PARK, AND COMMUNITY CENTER) TRIP DISTRIBUTION

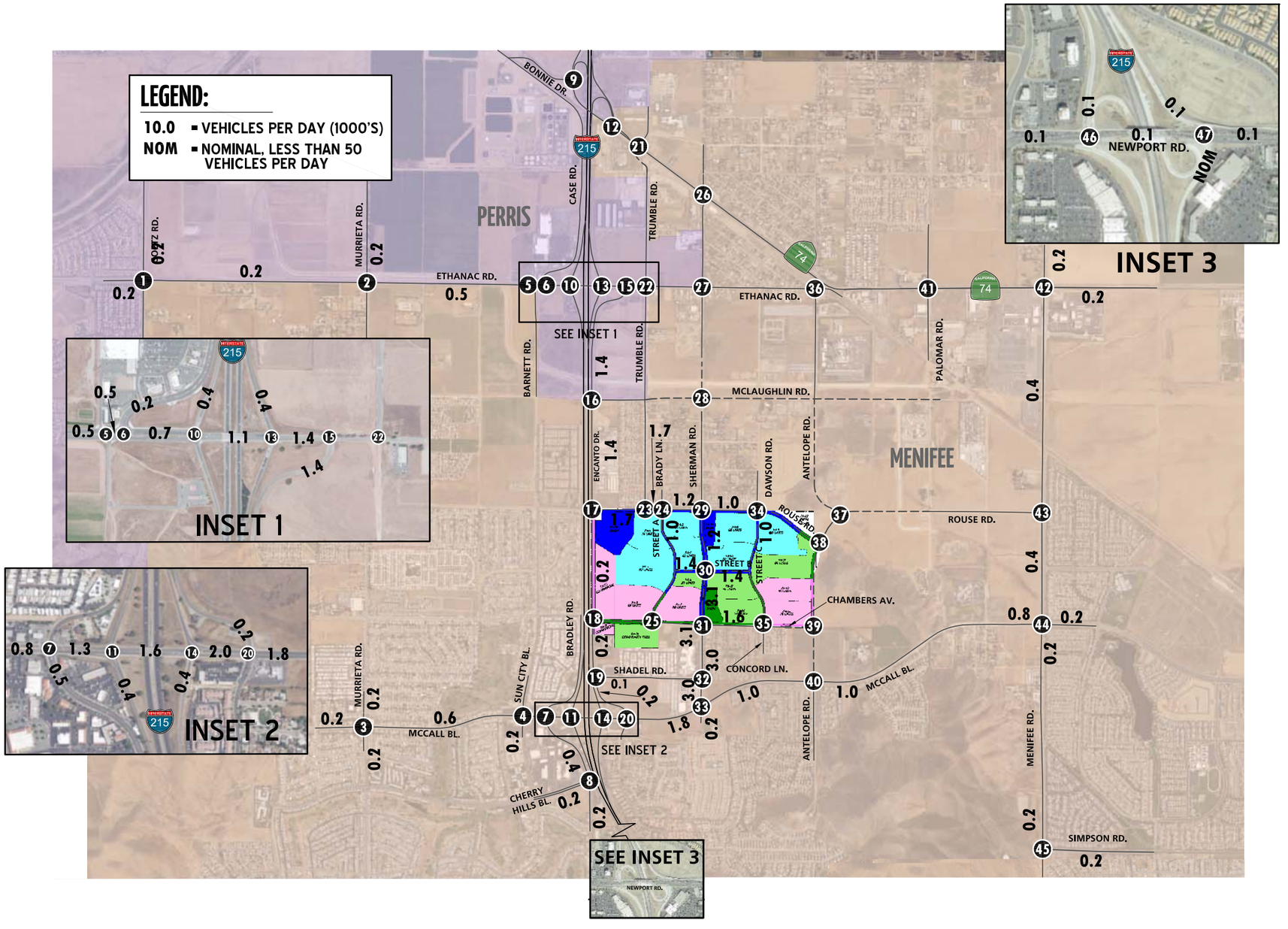


Source(s): Urban Crossroads (08-21-2019)

Figure 4.14-7

NOT TO SCALE

PROJECT HORIZON YEAR TRIP DISTRIBUTION

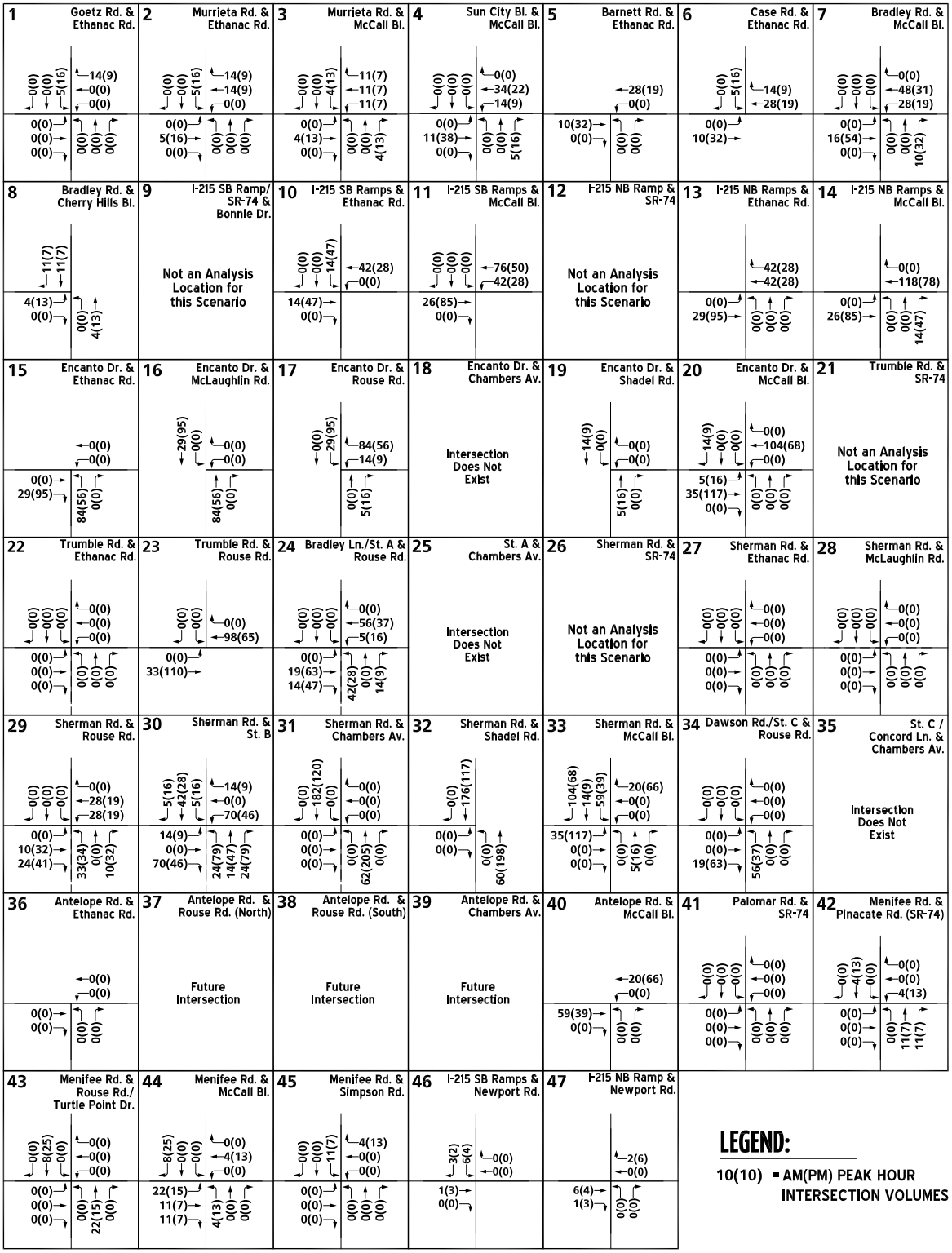


Source(s): Urban Crossroads (08-21-2019)

Figure 4.14-8

NOT TO SCALE

PROJECT PHASE 1 (2020) AVERAGE DAILY TRAFFIC

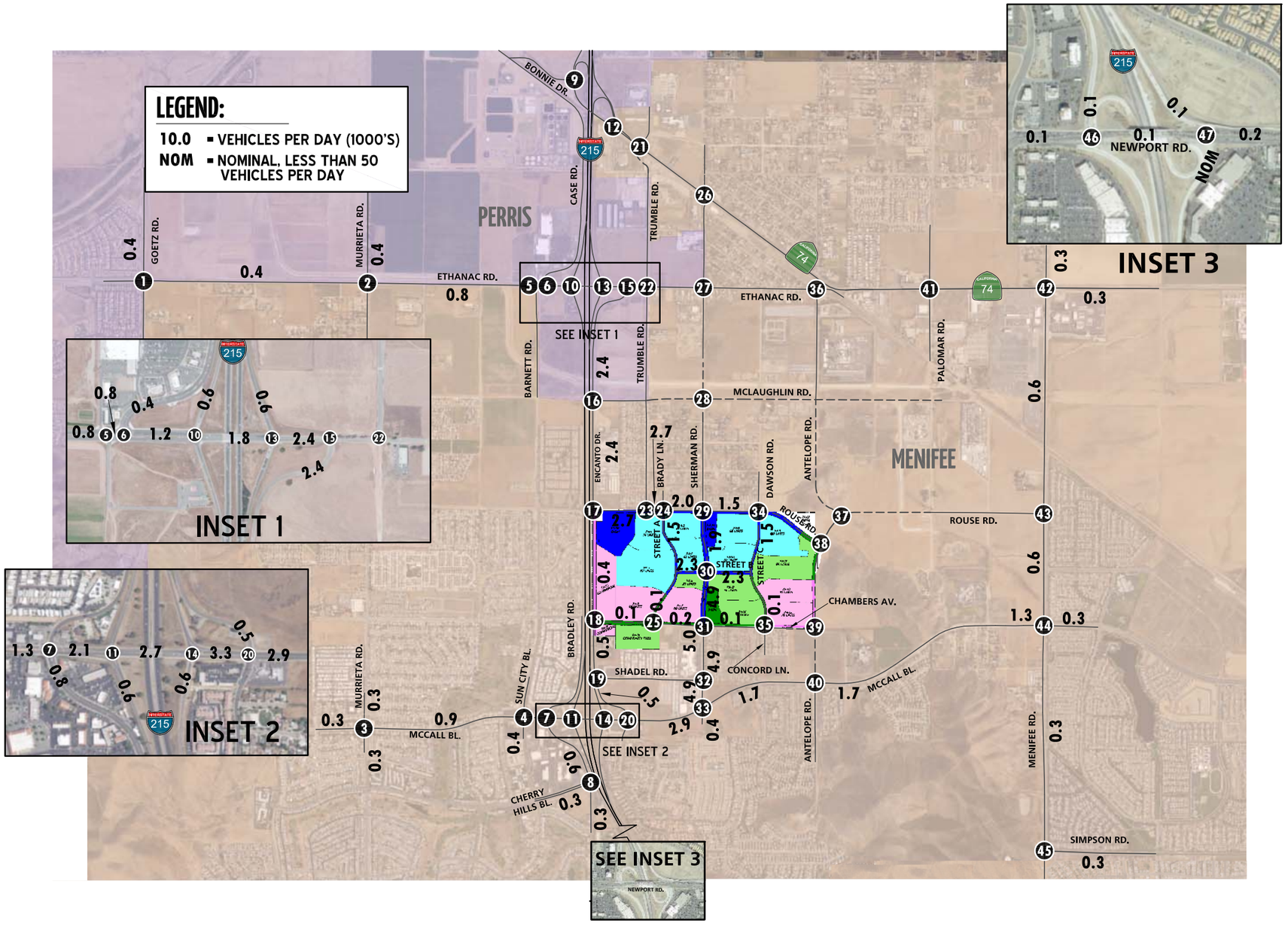


Source(s): Urban Crossroads (08-21-2019)

Figure 4.14-9

NOT TO SCALE

PROJECT PHASE 1 (2020) TRAFFIC VOLUMES

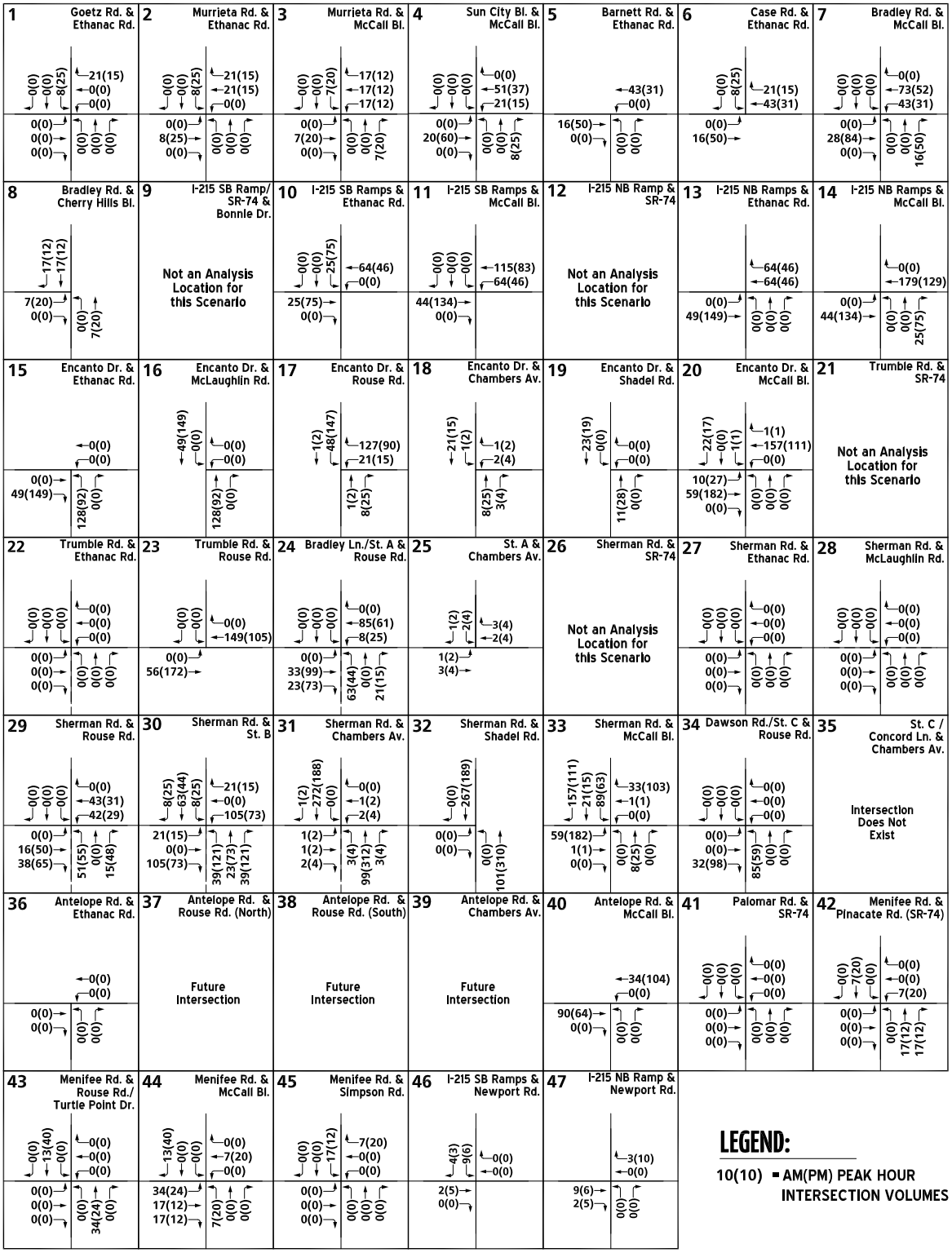


Source(s): Urban Crossroads (08-21-2019)

Figure 4.14-10

NOT TO SCALE

PROJECT PHASE 2 (2023) AVERAGE DAILY TRAFFIC

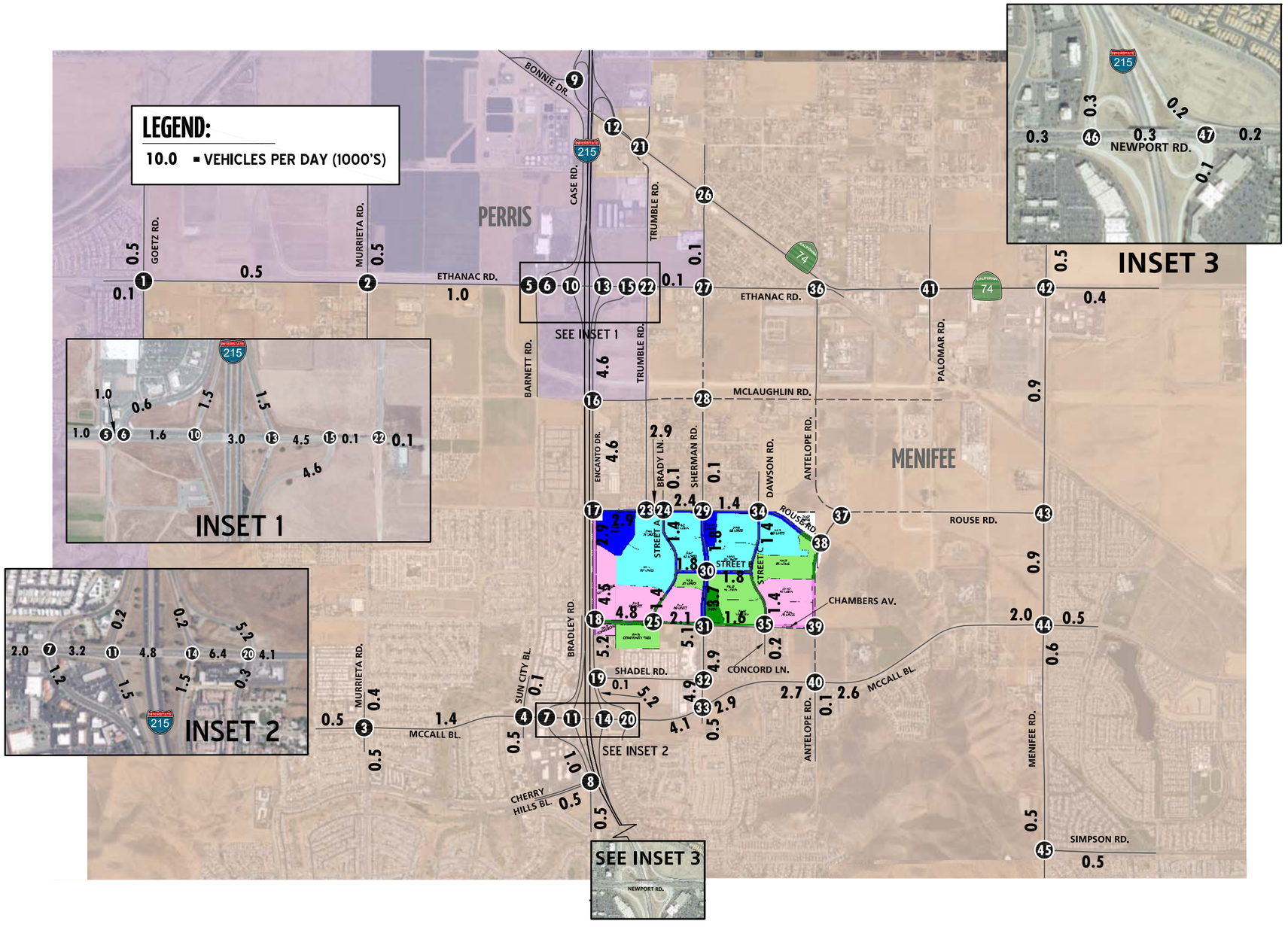


Source(s): Urban Crossroads (08-21-2019)

Figure 4.14-11

NOT TO SCALE

PROJECT PHASE 2 (2023) TRAFFIC VOLUMES

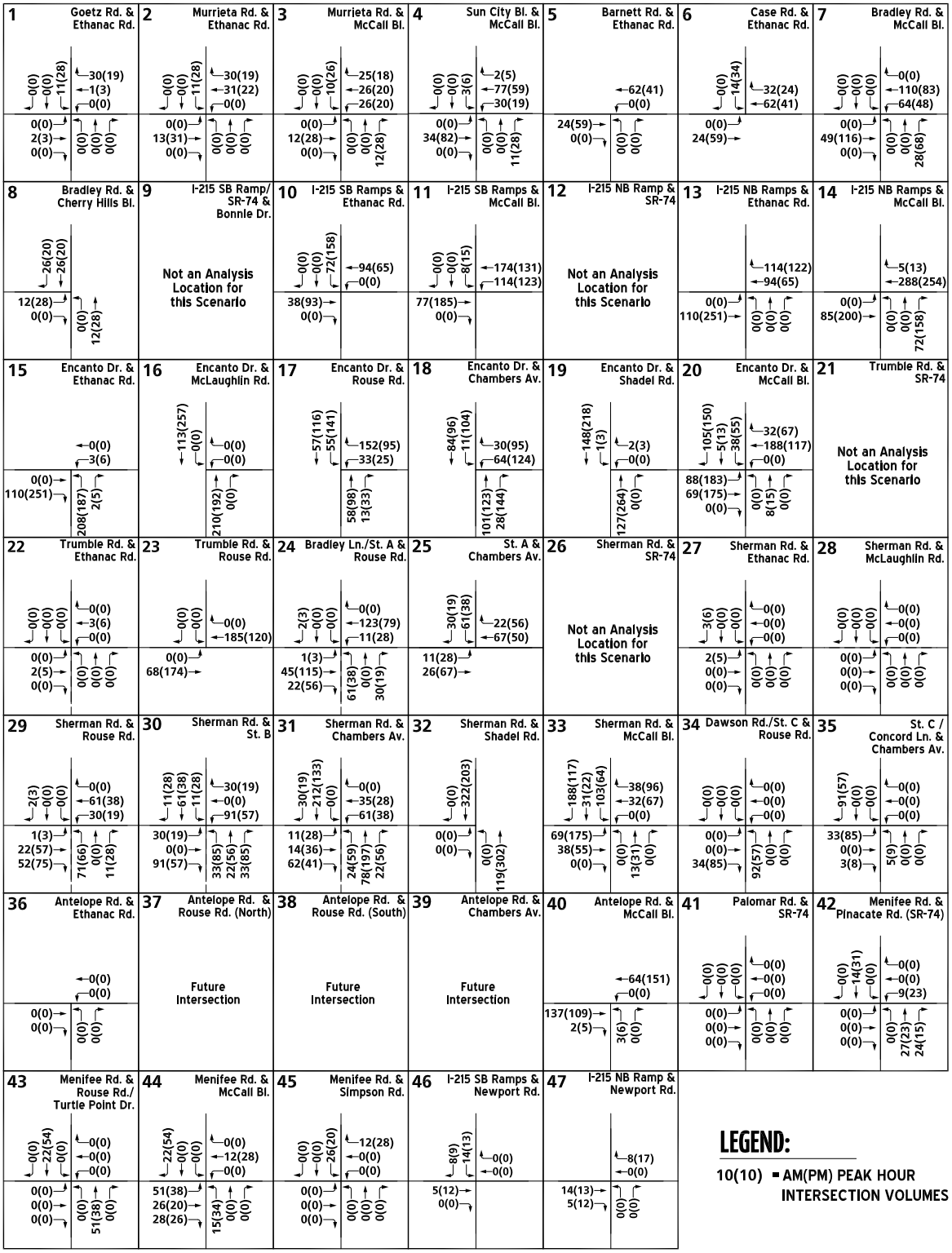


Source(s): Urban Crossroads (08-21-2019)

Figure 4.14-12

NOT TO SCALE

PROJECT BUILDOUT (2025) AVERAGE DAILY TRAFFIC

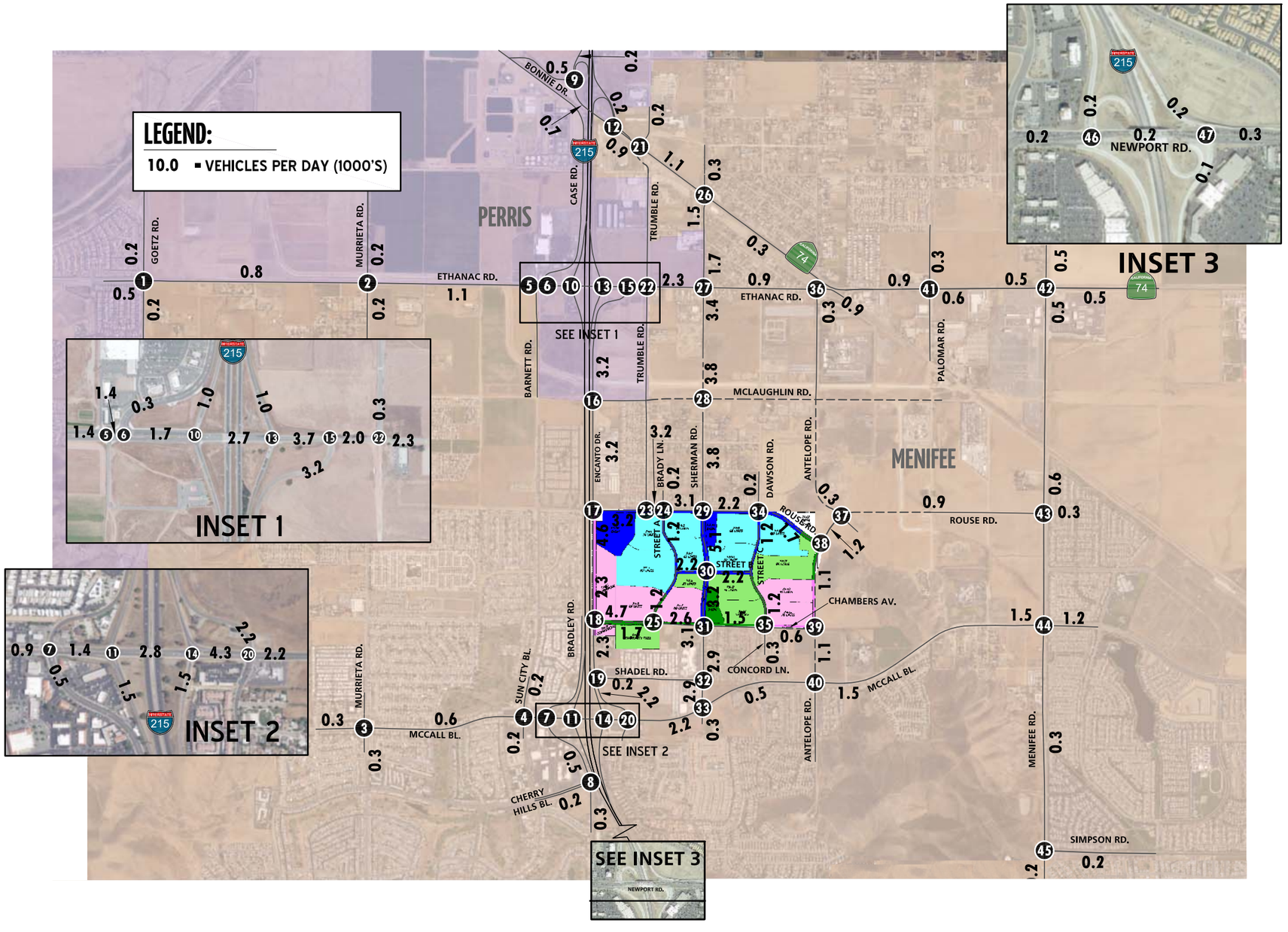


Source(s): Urban Crossroads (08-21-2019)

Figure 4.14-13

NOT TO SCALE

PROJECT BUILDOUT (2025) TRAFFIC VOLUMES

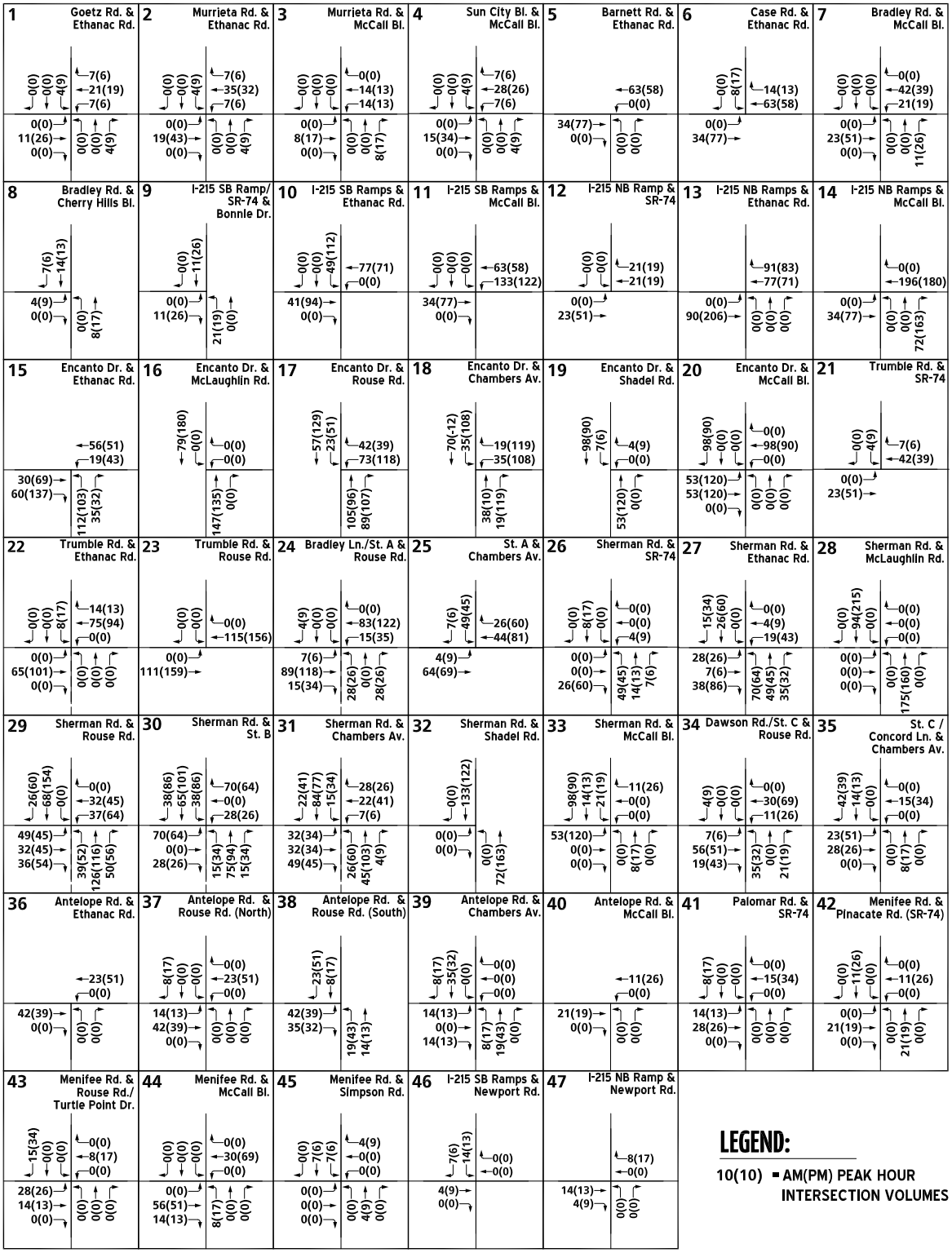


Source(s): Urban Crossroads (08-21-2019)

Figure 4.14-14

NOT TO SCALE

HORIZON YEAR (2040) PROJECT AVERAGE DAILY TRAFFIC

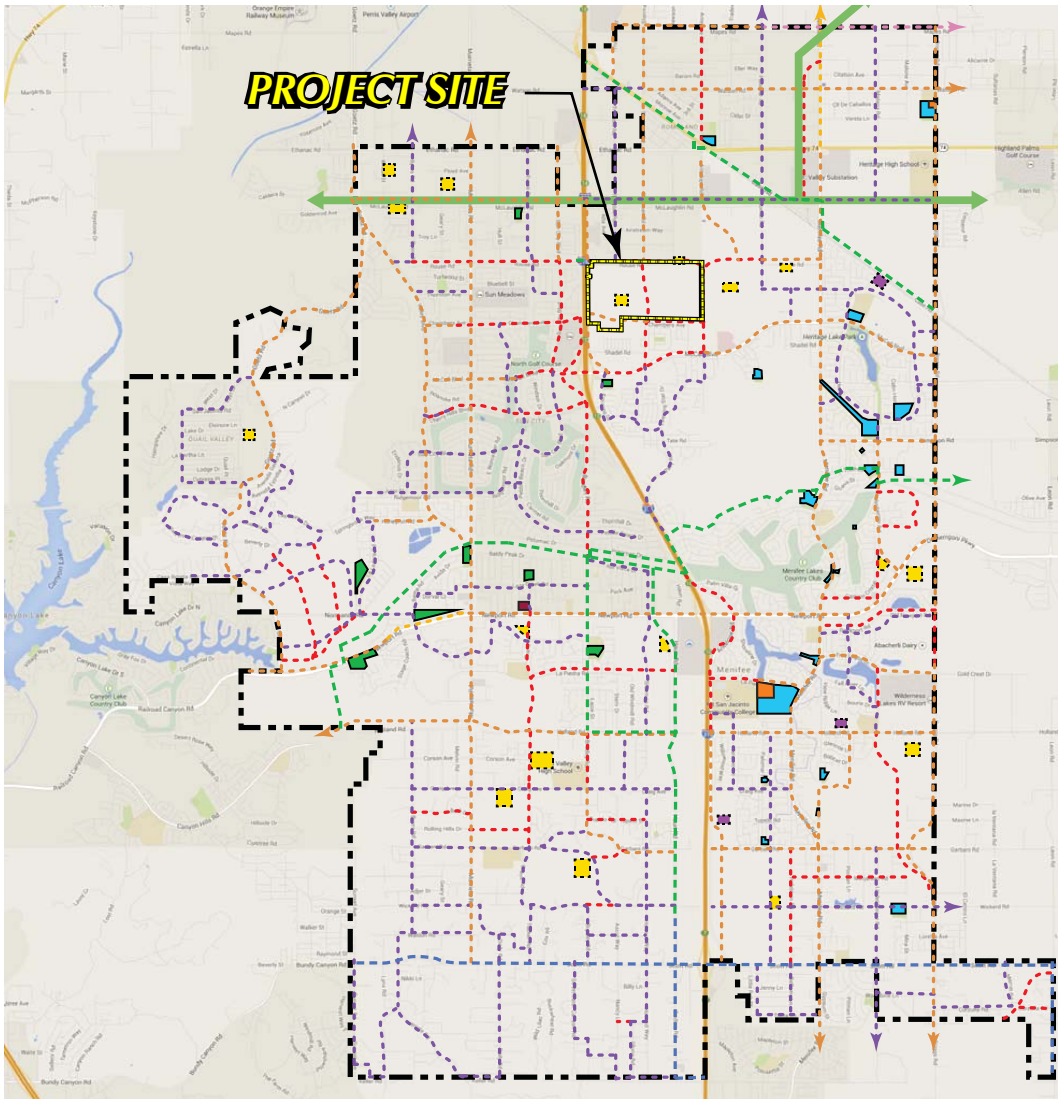


Source(s): Urban Crossroads (08-21-2019)

Figure 4.14-15

NOT TO SCALE

HORIZON YEAR (2040) PROJECT TRAFFIC VOLUMES



LEGEND

TRAILS

- Regional Trail - Class I (Includes C4 Subregional Route - Off-Road Bike Trail Class 1, C4 Community Off-Road Bike Trail, and Landscape Standards Regional Trail)
- Regional Bike Lane - Class II (Includes C4 Subregional - On-Street Bike Lane Class II)
- Community Bike Lane - Class II (Includes C4 Community On-Street NEV/Bike Lanes Class II, and Community On-Street Bike Lane, Class II)
- Community Bike Lane - Class III (Includes C4 Class III Bike Routes)
- Community Trail - Hiking, Biking & Equestrian (Includes C4 Community Hiking/Biking Trail Opportunity

TRAIL OPPORTUNITIES

- Public Utility Corridor

PARKS & FACILITIES

- City Parks
- City Facilities
- City Parks in Progress
- VWRPD Parks
- VWRPD Facilities
- VWRPD Parks in Progress

Source(s): City of Menifee Parks, Trails, Open Space and Recreation Master Plan (2016)

NOT TO SCALE

Figure 4.14-16
MENIFEE PARKS, TRAILS, OPEN SPACE, & RECREATION MASTER PLAN TRAIL RECOMMENDATIONS

4.15 TRIBAL CULTURAL RESOURCES

The analysis in this Subsection is based on a site-specific cultural resource assessment report titled "*Cultural Resources Assessment Update Fleming Ranch City of Menifee, County of Riverside, California*" (dated June 2017). The report was prepared by LSA Associates, Inc., (herein "LSA") and is included as *Technical Appendix D* to this EIR. LSA previously conducted a cultural resources assessment for the Project area in 2005, and conducted an updated cultural resources assessment in 2010. The current Cultural Resources Assessment Update is based partially on the two previous assessment reports. The conditions on the Project site have not changed since the preparation of the current Cultural Resources Assessment Update report (dated June 2017); therefore, the report reflects current conditions on-site with respect to the site's potential to contain significant cultural resources. The Pechanga Tribe identified existing cultural resources that are identified for this Project as Tribal Cultural Resources, after a 2018 finding of significant resources and sacred items in the immediate vicinity of the Project site. The Tribe's understanding of the Tribal Cultural Resources that are located within the Project are a contributing element for the overall Traditional Cultural Property (TCP) and possible archeological district.

All references used in this Subsection are included in EIR Section 7.0, *References*. Confidential information has been redacted from *Technical Appendix D* for purposes of public review. In addition, much of the written and oral communication between Native American tribes, the City of Menifee, and LSA is considered confidential in respect to places that have traditional tribal cultural significance (Gov. Code § 65352.4), and although relied upon in part to inform the preparation of this EIR Subsection, those communications are treated as confidential and are not available for public review. Under existing law, environmental documents must not include information about the location of archeological sites or sacred lands or any other information that is exempt from public disclosure pursuant to the Public Records Act (Cal. Code Regs. § 15120(d)).

4.15.1 EXISTING CONDITIONS

The Pechanga Tribe identified that the Project site lies within a TCP and potential archaeological district during consultation. The TCP has a ceremonial complex within its boundaries, and Sites CA-RIV-9288, CA-RIV-9289 and P-33-028165, which are located within the Project's boundary (discussed in further detail under Subsection 4.15.1.A below), were identified as elements of this ceremonial complex. As discussed in further detail under the discussion of Threshold a, the Pechanga Tribe identified that there is a high likelihood of finding subsurface resources within the Project boundaries, which would be elements of the ceremonial complex, and the City and the Tribe have consulted to mitigate the impacts to the TCP. Mitigation Measures, as found in EIR Subsection 4.4, *Cultural Resources*, and discussed in further detail in Threshold a below, would be applied and implemented to reduce the Project's impacts to Tribal Cultural Resources to less than significant.

A. Documented Resources On-Site

LSA conducted an updated institutional records search, an updated intensive pedestrian survey of the Project site and off-site improvement areas, and an additional field visit to identify the presence or absence of cultural resources. The records search results stated that four resources are "involved" in the Project area; however, LSA examined the site records for the four site resources, and found that only two of those resources, multicomponent resources CA-RIV-9288 and CA-RIV-9289, are located within the Project area. The other two resources noted are adjacent to and outside of the Project boundary. During the pedestrian field study, LSA examined exposed sediment profiles on the hill in the northeastern section of the Project area for cultural stratigraphy, and rodent back dirt was checked for cultural remains. In addition, rock outcrops in the same area were examined for prehistoric milling features and rock art. None, however, were observed at that time.

During the additional field visit, an additional resource site was identified (P-33-028165) within the Project area. A description of each site identified within the Project site is provided below. (LSA, 2018a, pp. 8-13)

- **Site CA-RIV-9288:** The investigation of Site CA-RIV-9288 revealed that the site comprises historic trash scatters and a prehistoric milling slick. The historical artifacts suggest that the trash scatter was dumped on occasion between 1914 and 1945. The trash is assumed to be from farming activities. The prehistoric milling slick observed within the site was assumed to be used a few times. The assemblage was scattered in the northern portion of the Project site. Components of Site CA-RIV-9288 were determined not to be associated with the two historic Homesteads formerly located on-site, and the artifacts found on-site post-date the Reynolds and Sargeant Homesteads. Subsurface investigations did not reveal any deposits of prehistoric or historic artifacts, and Phase II testing determined that Site-CA-RIV-9288 was not eligible for the California Register. LSA determined that due to a lack of unique elements, minimal research potential, and based on the criteria listed in CEQA Guidelines § 150645, the site was evaluated as not CEQA significant. LSA determined that research potential for both the prehistoric and historic elements of the site were minimal, and that no further mitigation is required for the site. (LSA, 2018a, pp. 8-13)

- **Site CA-RIV-9289:** The investigation of Site CA-RIV-9289 revealed that the site comprises historic trash scatters, a prehistoric milling slick, and a Native American ringing stone. The historical artifacts suggest that the trash scatter was dumped on occasion between 1914 and 1945. The trash is assumed to be from farming activities and other historic dumping activities. The prehistoric milling slick observed within the site was determined to be in good condition. The assemblage was scattered in the northern portion of the Project site. Components of Site CA-RIV-9288 were determined not to be associated with the two historic Homesteads formerly located on-site, and the artifacts found on-site post-date the Reynolds and Sargeant Homesteads. Subsurface investigations did not reveal any deposits of prehistoric or historic artifacts, and Phase II testing determined that Site-CA-RIV-9289 was not eligible for the California Register. LSA determined that due to a lack of unique elements, minimal research potential, and based on the criteria listed in CEQA Guidelines § 150645, the site was evaluated as not CEQA significant. LSA determined that research potential for both the prehistoric and historic elements of the site were minimal, and that no further mitigation is required for the site. (LSA, 2018a, pp. 8-13)

- **Site P-33-028165:** The investigation of Site P-33-028165 revealed that the site comprises polished, bowl-shaped carvings in a boulder, Cupules.

4.15.2 Applicable Regulatory Requirements

The following is a brief description of state regulations that apply directly to governing the protection of tribal cultural resources. Refer to EIR Subsection 4.4, for a detailed discussion of all of the applicable federal, state, and local environmental laws and related regulations governing the protection of historic, archaeological, and tribal cultural resources.

A. State Regulations

1. Traditional Tribal Cultural Places Act (Senate Bill 18, "SB 18")

Senate Bill 18 (SB 18) requires local (city and county) governments to consult with California Native American tribes to aid in the protection of traditional tribal cultural places ("cultural places") through local land use

planning. SB 18 also requires the Governor's Office of Planning and Research (OPR) to include in the General Plan Guidelines advice to local governments for how to conduct these consultations. (OPR, 2005)

The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level land use decisions are made by a local government. (OPR, 2005)

SB 18 requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code § 65300 et seq.) and specific plans (defined in Government Code § 65450 et seq.). Although SB 18 does not specifically mention consultation or notice requirements for adoption or amendment of specific plans, existing state planning law requires local governments to use the same processes for adoption and amendment of specific plans as for general plans (see Government Code § 65453). Therefore, where SB 18 requires consultation and/or notice for a general plan adoption or amendment, the requirement extends also to a specific plan adoption or amendment. (OPR, 2005)

2. Assembly Bill 52 (AB 52)

The legislature added new requirements regarding tribal cultural resources in Assembly Bill 52 (AB 52). By including tribal cultural resources early in the CEQA process, the legislature intended to ensure that local and Tribal governments, public agencies, and project proponents would have information available, early in the project planning process, to identify and address potential adverse impacts to tribal cultural resources. By taking this proactive approach, the legislature also intended to reduce the potential for delay and conflicts in the environmental review process. (OPR, 2015)

The Public Resources Code now establishes that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." (Pub. Resources Code, § 21084.2.) To help determine whether a project may have such an effect, the Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the determination of whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. (Pub. Resources Code, § 21080.3.1.) (OPR, 2015)

If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact. Public Resources Code § 20184.3 (b)(2) provides examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to tribal cultural resources. These rules apply to projects that have a notice of preparation for an environmental impact report or negative declaration or mitigated negative declaration filed on or after July 1, 2015. (OPR, 2015)
§ 21074 of the Public Resources Code defines "tribal cultural resources." In brief, in order to be considered a "tribal cultural resource," a resource must be either:

(1) listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or

(2) a resource that the lead agency chooses, in its discretion, to treat as a tribal cultural resource. (OPR, 2015)

In the latter instance, the lead agency must determine that the resource meets the criteria for listing in the state register of historic resources. In applying those criteria, a lead agency must consider the value of the resource to the tribe. (OPR, 2015)

3. State Health and Safety Code

California Health and Safety Code (HSC) § 7050.5(b) requires that excavation and disturbance activities must cease "In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery…" until the coroner can determine regarding the circumstances, manner, and cause of any death. The coroner is then required to make recommendations concerning the treatment and disposition of the human remains. Further, this section of the code makes it a misdemeanor to intentionally disturb, mutilate or remove interred human remains. § 7051 specifies that the removal of human remains from "internment or a place of storage while awaiting internment" with the intent to sell them or to dissect them with "malice or wantonness" is a public offense punishable by imprisonment in a state prison. Lastly, HSC §§ 8010-8011 establish the California Native American Graves Protection and Repatriation Act consistent with the federal law addressing the same. The Act stresses that "all California Indian human remains and cultural items are to be treated with dignity and respect." It encourages voluntary disclosure and return of remains and cultural items by publicly funded agencies and museums in California. It also outlines the need for aiding California Indian tribes, including non-federally recognized tribes, in filing repatriation claims.

4. California Code of Regulations Section 15064.5

The California Code of Regulations, Title 14, Chapter 3, § 15064.5 (the State CEQA Guidelines) establishes the procedure for determining the significance of impacts to archeological and historical resources, as well as classifying the type of resource. Cultural resources are aspects of the environment that require identification and assessment for potential significance. The evaluation of cultural resources under CEQA is based upon the definitions of resources provided in CEQA Guidelines § 15064.5, as follows:

- *A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4850 et seq.).*

- *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 an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall 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.*

- *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 an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4852) including the following:*

- *Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;*
- *Is associated with the lives of persons important in our past;*
- *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*
- *Has yielded, or may be likely to yield, information important in prehistory or history.*

- *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 an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.*

B. Local Regulations

1. City of Menifee General Plan – Open Space and Conservation Element OSC-5: Paleontological & Cultural Resources

The Open Space & Conservation Element of the City of Menifee General Plan includes the following goal and policies that relate to cultural resources. (Menifee, 2013a)

- Goal OSC-5: Archaeological, historical, and cultural resources are protected and integrated into the city's built environment.

- Policy OCS-5.1: Preserve and protect archaeological and historic resources and cultural sites, places, districts, structures, landforms, objects and native burial sites, traditional cultural landscapes and other features, consistent with state law and any laws, regulations or policies which may be adopted by the city to implement this goal and associated policies.

- Policy OCS-5.3: Preserve sacred sites identified in consultation with the appropriate Native American tribes whose ancestral territories are within the city, such as Native American burial locations, by avoiding activities that would negatively impact the sites, while maintaining the confidentiality of the location and nature of the sacred site.

- Policy OCS-5.4: Establish clear and responsible policies and best practices to identify, evaluate, and protect previously unknown archaeological, historic, and cultural resources, following applicable CEQA and NEPA procedures and in consultation with the appropriate Native American tribes who have ancestral lands within the city.

- Policy OCS-5.5: Develop clear policies regarding the preservation and avoidance of cultural resources located within the city, in consultation with the appropriate Native American tribes who have ancestral lands within the city.

- Policy OCS-5.6: Develop strong government-to-government relationships and consultation protocols with the appropriate Native American tribes with ancestral territories within the city in order to ensure

better identification, protection and preservation of cultural resources, while also developing appropriate educational programs, with tribal participation, for Menifee residents.

4.15.3 Basis for Determining Significance

Section XVII of Appendix G to the CEQA Guidelines addresses typical adverse effects to tribal cultural resources, and includes the following threshold questions to evaluate the Project's impacts on cultural resources (OPR, 2018):

a. *Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:*

   i) *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).*

   ii) *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth is subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

4.15.4 Impact Analysis

Threshold a:	***Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:***
i)	***Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?***
ii)	***A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth is subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?***

During the City's consultation with Native American Tribes having cultural affiliation to the Project site pursuant to AB 52, two tribal cultural resources were identified on the Project site, Sites P-33-028165 and CA-RIV-9289. Site P-33-028165 was found to contain numerous polished bowl-shaped carvings in a boulder, as identified as Cupules by Pechanga Tribe. CA-RIV-9289 contains a milling feature and a ringing stone. As discussed above under Subsection 4.15.1B, LSA discovered one additional archeological resource on-site, Site CA-RIV-9288. LSA concluded that this site does not comprise significant cultural resources. Per the AB 52 consultation, Pechanga Tribe identified these resources, Site P-33-028165 and CA-RIV-9289, as significant Tribal Cultural Resources. To be eligible for the Register, (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852), a resource must include 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.

No resources were identified on the Project site that meet any of the four criteria listed above to be eligible for the California Register. Furthermore, no substantial evidence was presented to or found by the City of Menifee that led to the identification of any resources on the Project site that in the City's discretion had the potential to be considered a tribal cultural resource, with exception of Site P-33-028165.

As part of the AB 52 consultation process required by State law, the City of Menifee sent notification of the Project in October 2017 to the following Native American tribes with possible traditional or cultural affiliation to the area: Agua Caliente Band of Cahuilla Indians; Pechanga Band of Luiseño Mission Indians; Rincon Band of Luiseño Indians; and the Soboba Band of Luiseño Indians. As part of the SB 18 consultation process required by State law, the City of Menifee sent notification to all individuals and groups identified on the Tribal Consultation list provided by the NAHC. In response to the AB 52 consultation invitation, the Agua Caliente Band of Cahuilla Indians responded that they defer to the Pechanga Band of Mission Indians and the Soboba Band of Luiseño Indians. The Soboba Band of Luiseño Indians requested that they be included in the mandated AB 52 consultation process and requested tribal monitoring during grading activities. The Rincon Band of Luiseño Indians requested that they be included in the mandated AB 52 consultation process and requested tribal monitoring during grading activities. The Pechanga Band of Luiseño Indians requested that they be included in the mandated AB 52 consultation process and requested tribal monitoring during grading activities. Furthermore, the Pechanga Band of Luiseño Indians requested preservation of all existing on-site cultural resources and controlled grading areas to be identified prior to final map recordation and prior to grading permit issuance. In addition, Pechanga Tribe identified the existing resources Site P-33-028165 and CA-RIV-9289, to be contributing elements to the TCP and possible archeological district. The City of Menifee responded to the Pechanga Band of Luiseño Mission Indians, Rincon Band of Luiseño Indians, and the Soboba Band of Luiseño Indians that tribal monitoring would be required during grading of the Project and that on-site cultural resources would be preserved in on-site open space areas. The Pechanga Band of Luiseño Mission Indians provided substantial evidence that the Project site contains tribal cultural resources during the consultation process.

In response to the SB 18 consultation invitation, the Pala Band of Mission Indians responded that they defer to the wishes of Tribes whose ancestral territory is closer to the Project area. The Viejas Band of Kumeyaay Indians responded that they determined the Project site had little cultural significance or ties and recommended the City contract the Tribes whose territory is closer to the Project area. The Agua Caliente Band of Cahuilla Indians noted the Project site was within the Tribe's traditional use area, but responded that they deferred to the Pechanga Band of Luiseño Indians and the Soboba Band of Luiseño Indians. The Augustine Band of Cahuilla Indians responded that they defer to the wishes of Tribes within the immediate vicinity of the Project and encouraged the contract of a Native American Monitor. The Twenty-Nine Palms Band of Mission Indians responded that they were not aware of any additional cultural resources sites in the Project area related to the Tribe, and deferred to the comments of other Tribes.

The City of Menifee completed mandatory compliance with Public Resources Code § 21074 associated with the environmental review of the proposed Project. Two tribal cultural resources were found on-site (Sites P-33-028165 and CA-RIV-9289), and impacts to these tribal cultural resources would be significant prior to mitigation; however, these tribal cultural resource would be preserved within the Project's on-site open space area pursuant to Mitigation Measure MM 4.4-7, included in Subsection 4.4 of the EIR. There is high potential that additional tribal cultural resources could be encountered during ground-disturbing construction activities. Accordingly, there is a high potential for significant impacts to occur if significant resources are discovered during the Project's construction process. Per the request of the Pechanga Band of Luiseño Mission Indians, Rincon Band of Luiseño Indians, and the Soboba Band of Luiseño Indians in correspondence associated with the AB-52 consultation process, the implementation of tribal monitoring during grading activities is required as Mitigation Measures MM 4.4-4 and MM 4.4-5 in EIR Subsection 4.4, *Cultural Resources*.

Furthermore, as discussed under EIR Subsection 4.4, the Project site contains three known historic and archeological resources, and would have the potential to unearth additional tribal cultural resources during grading. Implementation of Mitigation Measures MM 4.4-1 through MM 4.4-6, and MM 4.4-8 would ensure any tribal cultural resources that may be uncovered during grading, trenching, or other ground-disturbing activities are appropriately assessed, avoided, and recorded. Implementation of Mitigation Measure MM 4.4-9 would ensure any buried human remains that may be uncovered during grading, trenching, or other ground-disturbing activities are appropriately treated. Specifically, Mitigation Measure MM 4.4-9 implements State law and requires a contractor to immediately stop work in the vicinity of the discovery and notify the County Coroner. Implementation of Mitigation Measure MM 4.4-9 would reduce the Project's impacts to less-than-significant.

4.15.5 Cumulative Impact Analysis

This cumulative impact analysis considers development of the Project in conjunction with other development projects and planned development in the vicinity of the Project site.

As noted above under Threshold a, the Project site contains two significant tribal cultural resources. Additionally, there is a high potential that archaeological resources meeting the CEQA definition of a significant resource may be buried beneath the surface and unearthed during the Project's construction activities due to recent identification of significant cultural resources and sacred sites in the Project's near vicinity. Impacts to such resources have the potential to be significant if they are not properly identified and treated. Other developments in the region also have the potential to adversely affect resources buried underneath the surface. Therefore, the Project's potential impacts to unearthed archeological resources during the Project's construction activities would be cumulatively considerable and require mitigation. Mitigation Measures MM4.4-1 through MM 4.4-9 shall be implemented for the Project to bring the impacts to less than significant.

The analysis in Threshold a. concludes that the Project would not cause a substantial adverse change in the significance of a tribal cultural resource with implementation of mitigation measures listed in EIR Subsection 4.4, *Cultural Resources*, applied in response to the AB 52 and SB 18 consultation processes. Other cumulative developments would be subject to the provisions of AB 52 and SB 18 and would be required to apply mitigation measures as necessary to mitigate impacts. Because the Project and other cumulative developments would be required to comply with AB 52 and SB 18, and because the Project has incorporated mitigation measures to preclude impacts, cumulatively-considerable impacts would be less than significant.

4.15.6 Significance of Impacts Before Mitigation

Threshold a: Less-than-Significant Impact. Implementation of Mitigation Measures MM 4.4-1 through MM 4.4-6, and MM 4.4-8 would ensure any tribal cultural resources that may be uncovered during grading, trenching, or other ground-disturbing activities are appropriately assessed, recorded, and treated. As Site RIV-9289 and Site P-33-028165 are significant tribal cultural resources, implementation of Mitigation Measure MM 4.4-7 and MM 4.4-8 would ensure that the existing tribal cultural resources on the Project site are preserved on-site. Implementation of the required mitigation would reduce the Project's potential impacts to surface and subsurface tribal cultural resources to less-than-significant levels. In the event that human remains are discovered during Project grading or other ground-disturbing activities, the Project would be required to comply with the applicable provisions of California Health and Safety Code § 7050.5 and California Public Resources Code § 5097 et. seq. as applied to the Project as Mitigation Measure MM 4.4-9 and applicable regulatory requirements (i.e., the exemption in California Government Code 6254 (r) related to the withholding of public disclosure information related to reburial of Native American human remains or grave goods). Implementation of Mitigation Measure MM 4.4-9 and applicable regulatory requirements would reduce the Project's impacts to less-than-significant.

4.15.7 City Regulations, Design Requirements, and Mitigation

Applicable City Regulations and Design Requirements

The following are applicable regulations and design requirements within the City of Menifee. Although these requirements technically do not meet CEQA's definition for mitigation, they are imposed herein to ensure Project compliance with applicable City regulations and design requirements.

- Unless otherwise required by law, the site of any reburial of Native American human remains or associated grave goods shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, pursuant to the specific exemption set forth in California Government Code Section 6254 (r), parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code 6254 (r).

Mitigation

As discussed in the analysis under Threshold a. above, Mitigation Measures MM 4.4-1 through MM 4.4-9, which are presented in EIR Subsection 4.4, *Cultural Resources*, would apply. With implementation of the required mitigation, impacts to tribal cultural resources as a result of Project implementation would be less than significant, and no additional mitigation would be required.

4.16 Utilities and Service Systems

The Project site is located within the service boundaries of the Eastern Municipal Water District (EMWD) for water and sewer service, Southern California Edison for electricity, the Southern California Gas Company (SoCal Gas) for natural gas, Frontier Communications for telephone and fiber internet services, and Time Warner Cable for cable television. Solid waste hauling service to the Project site is provided by Waste Management of the Inland Empire under a franchise agreement with the City of Menifee. The analysis in this section is based in part upon the EMWD Urban Water Management Plan (UWMP), dated June 2016, which is herein incorporated by reference and is available for public review at EMWD, 2270 Trumble Road, Perris, California 92570. This subsection also relies on the water supply assessment (WSA) prepared for the Project by EMWD, titled "Water Supply Assessment Report Fleming Ranch Project (SP 2017-187)," dated September 20, 2017, and included as *Technical Appendix L1* to this EIR, as well as the WSA update letter prepared for the Project by EMWD, titled "Fleming Ranch Water Supply Assessment," dated July 9, 2019, and included as *Technical Appendix L2*. Information in this section also relies in part on a letter from the Riverside County Department of Waste Resources (RCDWR), dated November 2, 2017.

4.16.1 Existing Conditions

A. Water Service and Supply

The EMWD service area includes 555 square miles of Riverside County, which includes seven incorporated cities (including the City of Menifee) in addition to unincorporated areas in the County of Riverside. EMWD provides both water and sewer service to most of the areas it serves; however, in some places EMWD provides only sewer or water service, or provides wholesale water to a purveyor agency. EMWD also sells recycled water to the Rancho California Water District (RCWD) and Elsinore Valley Municipal Water District (EVMWD), and has an emergency connection with the City of Perris' North Perris Water System. (EMWD, 2016a, pp. 3-2 - 3-3)

There are four (4) sources of water supply to the EMWD: imported water from Metropolitan Water District of Southern California (MWD), local groundwater, desalinated groundwater, and recycled water. Potable imported water is treated and delivered to EMWD directly from MWD's two large filtration plants: The Henry J. Mills (Mills) Water Treatment Plant and the Robert F. Skinner (Skinner) Water Treatment Plant. The Mills Water Treatment Plant treats water from Northern California and provides it to EMWD through two connection points located in the northeast portion of EMWD's service area. The Skinner Water Treatment Plant treats a blend of Colorado River water and water from Northern California and provides it to EMWD through a connection point in the southwest portion of EMWD's service area. (EMWD, 2016a, p. 3-3)

EMWD owns and operates two (2) microfiltration plants (the Perris Water Filtration Plant and the Hemet Water Filtration Plant) that filter raw imported water delivered through MWD, removing particulate contaminants to achieve potable water standards. Raw water from MWD also is used for groundwater replenishment in the eastern part of EMWD. Untreated water from MWD used for agricultural purposes is delivered in the northeast for use by EMWD retail and wholesale accounts and in the south for RCWD agricultural accounts. (EMWD, 2016a, p. 3-3)

EMWD produces potable and brackish groundwater from two (2) management plan areas within the San Jacinto Groundwater Basin that underlie the EMWD service area: The West San Jacinto Groundwater Basin Management Plan area (West San Jacinto Basin) and the Hemet/San Jacinto Water Management Plan area (Hemet/San Jacinto Basin). The West San Jacinto Basin in which the Project site is located includes the Perris North, Perris South, San Jacinto Lower Pressure, and Menifee Management Zones, and the Lakeview portion

of the Lakeview/Hemet North Management Zone. The Hemet/San Jacinto Basin is comprised of the Hemet South, Canyon, and San Jacinto Upper Pressure Management Zones, as well as the Hemet North portion of the Lakeview/Hemet North Management Zone. EMWD produces water for potable use or blending in four (4) of the management zones: Perris North, Hemet South, San Jacinto Upper Pressure and Canyon. EMWD owns and operates two (2) desalination plants in the Project area: The Menifee Desalter and the Perris I Desalter, which treat brackish groundwater through reverse osmosis to achieve potable water standards. It should be noted that the Project site is not located within the West San Jacinto Groundwater Management Plan Area or the Hemet/San Jacinto Groundwater Management Plan Area. (EMWD, 2016a, p. 3-3)

EMWD also maintains a regional recycled water system that provides tertiary-treated recycled water to customers for agricultural, landscape irrigation, environmental, and industrial use. EMWD's recycled water system consists of four (4) regional water reclamation facilities (RWRFs) that treat municipal sewage and produce water for recycling. The four RWRFs include: The San Jacinto Valley RWRF, the Moreno Valley RWRF, the Temecula Valley RWRF, and the Perris Valley RWRF. The four RWRFs are connected via a network of pipelines and several distribution storage ponds which manage the delivery of recycled water. (EMWD, 2016a, p. 3-3)

For a more detailed description of the EMWD's complex groundwater supply, please refer to Section 4.5, *Geology and Soils*, and Section 4.8, *Hydrology and Water Quality*, in this EIR, as well as the EMWD 2015 UWMP.

Table 4.16-1, *Historic Water Consumption within the EMWD Urban Water Service Area*, depicts the recent water deliveries within the EMWD Urban Water Service Area. As shown, although the population has increased from 292,123 to 500,589 between 1999 and 2008 (or an increase of 71.3%), total water usage only increased by 40.1% from 61,906,352 gallons per day (gpd) to86,702,794 gpd, representing a reduction in the per-capita consumption rate from 212 gallons per capita per day (GPCD) in 1999 to 173 GPCD in 2008. As shown in Table 4.16-1, the average baseline GPCD during this 10-year period is 197 GPCD. Additionally, Table 4.16-2, *Total Demand Projections*, presents projected water demand within EMWD through year 2040.

Table 4.16-1 Historic Water Consumption within the EMWD Urban Water Service Area

Base Years	Service Area Population	Gross Water Use (AF)	Daily Per Capita Water Use (GPCD)
1999	292,123	69,390	212
2000	303,678	72,005	212
2001	317,457	70,059	197
2002	357,783	81,283	203
2003	364,893	86,289	211
2004	389,897	79,977	183
2005	430,314	94,677	196
2006	468,467	100,831	192
2007	486,901	104,378	191
2008	500,589	97,184	173
10-Year Average Baseline GPCD			**197**

(EMWD, 2016a, Table 5-4)

Table 4.16-2 Total Demand Projections

	2015	2020	2025	2030	2035	2040
Retail Potable and Raw Water Demand	78,937	100,500	111,500	122,900	134,000	144,500
Wholesale Potable and Raw Water Demand	21,768	50,500	54,100	57,700	61,200	64,800
Total Potable and Raw Water Demand	**100,705**	**151,000**	**165,600**	**180,600**	**195,200**	**209,300**
Retail Recycled Water Demand	44,150	45,245	48,334	50,017	51,800	53,300
Wholesale Recycled Water Demand	1,235	1,656	4,766	5,183	5,600	5,600
Total Recycled Water Demand	**45,385**	**46,901**	**53,100**	**55,200**	**57,400**	**58,900**
Total Water Demand	**146,090**	**197,901**	**218,700**	**235,800**	**252,600**	**268,200**

(EMWD, 2016a, Table ES-2)

Table 4.16-3, *Projected Water Supplies*, presents the projected water supply up to year 2040 for urban water use within the EMWD in daily per capita water use in acre feet. As shown, the EMWD forecasts being able to meet water demands from its wholesale and retail customers through the year 2040, primarily through purchasing or importing water from MWD.

Table 4.16-3 Projected Water Supplies

Supply	2015	2020	2025	2030	2035	2040
Retail						
Imported Water	56,397	81,197	89,097	100,497	111,597	122,097
Groundwater	15,252	12,303	12,303	12,303	12,303	12,303
Desalinated Groundwater	7,288	7,000	10,100	10,100	10,100	10,100
Recycled Water	44,150	45,245	48,334	50,017	51,800	53,300
Total Retail Supply	**123,087**	**145,745**	**159,834**	**172,917**	**185,800**	**197,800**
Wholesale						
Imported Water	21,768	50,500	54,100	57,700	61,200	64,800
Recycled Water	1,235	1,656	4,766	5,183	5,600	5,600
Total Wholesale Supply	**23,003**	**52,156**	**58,866**	**62,883**	**66,800**	**70,400**
Total Water Supply	**146,090**	**197,901**	**218,700**	**235,800**	**252,600**	**268,200**

(EMWD, 2016a, Table ES-3)

B. Sewer Service and Treatment

EMWD provides wastewater collection, treatment, and recycled water services throughout the Project area. Four (4) operational RWRFs are operated throughout EMWD, and include the San Jacinto Valley RWRF, the Moreno Valley RWRF, the Temecula Valley RWRF, and the Perris Valley RWRF. As shown below in Table 4.16-4, *Wastewater Treatment Capacity*, the four RWRFs have a combined capacity of72,977,944 gpd. In addition to treatment facilities, EMWD has several recycled water storage ponds throughout EMWD service area. (EMWD, 2016a, p. 6-16)

Table 4.16-4 Wastewater Treatment Capacity

Facility	Treatment Capacity (AFY)
San Jacinto Valley	15,700
Moreno Valley	17,900
Temecula Valley	20,200
Perris Valley	28,000
Total	**81,800**

(EMWD, 2016a, Table 6-7)

Collectively, the four RWRFs within EMWD collect and treat approximately 46 million gpd of wastewater, and have a capacity to treat approximately 56 million gpd (EMWD, 2017b). Sewer flows from the Project site would be treated by the Perris Valley RWRF, which has a daily capacity of 22 million gpd and typical daily flows of 13.8 million gpd (EMWD, 2016b). EMWD operates and maintains a recycled water storage tank called the Chambers Tank just east of the Project site, and maintains a recycled water pipeline connecting the Chambers Tank to the Perris Valley RWRF. EMWD also owns and maintains a sewer line in the immediate vicinity of the Project site within Rouse Road. EMWD treats all of the wastewater collected in its service area to tertiary standards and disposes of its recycled water in one of three ways: 1) customer sales; 2) discharge to Temescal Creek; or, 3) through percolation and evaporation while stored in ponds throughout EMWD. In 2015, EMWD collected and treated a total of 48,665 AF of wastewater at its four RWRFs. All of the recycled water sold by EMWD originates from wastewater collected and treated within EMWD's retail service area. Therefore, these volumes are accounted for in the 48,655 AF. (EMWD, 2016a, p. 6-19)

C. Storm Water Drainage

Under existing conditions, the Project site is tributary to the Salt Creek Channel Area Drainage Plan and generally drains from north to south. Flows originating from the Project site drain to an existing culvert at the western edge of the Project boundary, which convey flows under Encanto Road and the Interstate 215 (I-215) freeway to an existing concrete trapezoidal channel. The trapezoidal channel continues in a southwestern direction, and ultimately outlets in the regional Salt Creek Channel which then flows to Canyon Lake, San Jacinto River (Reach 1), and Lake Elsinore (K&A, 2018b, p. 3). The Salt Creek Channel is located approximately 2.0 miles to the southwest of the Project site, and is tributary to Canyon Lake located approximately 4.0 miles southwest of the Project site.

D. Solid Waste Collection and Disposal

Solid waste collection and disposal is provided by the City of Menifee through a franchise agreement with a private company, Waste Management Inc. of the Inland Empire (WMIE). Waste within the City of Menifee is sent to transfer stations and landfills managed by the RCDWR and WMIE. Solid Waste from the Project site would be taken to the Moreno Valley Transfer Station (MVTS) before being loaded into larger trucks and transferred to either the El Sobrante Landfill, Lamb Canyon Landfill, or the Badlands Landfill for disposal. The following is a description of these facilities:

- El Sobrante Landfill. The El Sobrante Landfill is located in the southeast area of the City of Corona at 10910 Dawson Canyon Road and accessed from Interstate-15 (I-15) at Temescal Canyon Road. The landfill is operated and owned by USA Waste Services of California, Inc. of which WMIE is a

subsidiary. The existing landfill encompasses 1,322 acres, of which 645 acres are permitted for refuse disposal. The landfill is currently permitted to receive 16,054 tons per day (tpd). If needed, 5,000 tpd must be reserved for waste produced within Riverside County, leaving the maximum commitment of non-Riverside County waste at 11,054 tpd. As of January 1, 2017, the landfill had a total remaining disposal capacity of 56,400,000 tons for waste produced within Riverside County. The El Sobrante Landfill is projected to reach capacity at the earliest in 2045. (RCDWR, 2017, pp. 1-2)

- Lamb Canyon Landfill. The Lamb Canyon Landfill is located between the City of Beaumont and the City of San Jacinto at 16411 Lamb Canyon Road (State Route 79), south of Interstate 10 and north of Highway 74. The landfill is owned and operated by RCDWR. The landfill encompasses approximately 1,189 acres, of which 580.5 acres encompass the current landfill permit area. Of the 580.5-acre landfill permit area, approximately 144.6 acres are permitted for waste disposal. The landfill is currently permitted to receive 5,000 tpd and had an estimated total disposal capacity of approximately 20.7 million tons. As of January 1, 2017 (beginning of day), the landfill had a total remaining capacity of approximately 10.5 million tons. The current landfill remaining disposal capacity is estimated to last, at a minimum, until approximately 2029. (RCDWR, 2017, p. 2)

- Badlands Landfill. The Badlands Landfill is located northeast of the City of Moreno Valley at 31125 Ironwood Avenue and accessed from State Highway 60 at Theodore Avenue. The landfill is owned and operated by RCDWR. The existing landfill encompasses 278 acres, of which 150 acres are permitted for refuse disposal. The landfill is currently permitted to receive 4,500 tpd. As of January 1, 2017, the landfill had a total remaining disposal capacity of approximately 7,700,000 tons. The Badlands Landfill is projected to reach capacity at the earliest in 2022. (RCDWR, 2017, p. 2)

4.16.2 Applicable Regulatory Requirements

The following is a brief description of the federal, state, and local environmental laws and related regulations related to utilities and service systems.

A. Federal Regulations

1. Applicable Water Supply Regulations

❑ Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972. Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industry, and also has set water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. (EPA, 2017e)

❑ Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the U.S. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources. The Act authorizes EPA to establish minimum standards to protect tap water and requires all owners or operators of public water systems to comply with these primary (health-related) standards. The 1996 amendments to SDWA require that EPA consider a detailed risk and cost assessment, and best available peer-reviewed science, when developing these standards. State governments, which can be approved to implement these rules for EPA, also encourage attainment of secondary standards (nuisance-related). Under the Act, EPA also establishes minimum standards for state programs to protect underground sources of drinking water from endangerment by underground injection of fluids. (EPA, 2017f)

B. State Regulations

1. Applicable Water Supply Regulations

❑ Water Conservation in Landscaping Act

The Water Conservation in Landscaping Act was established to ensure adequate water supplies are available for future uses. To promote the conservation and efficient use of water, the Act requires local agencies to adopt a water efficient landscape ordinance. When such an ordinance had not been adopted, a finding as to why (based on the climatic, geologic, or topographical conditions) such an ordinance is not necessary, must be adopted. In the absence of such an ordinance or findings, the policies and requirements contained in the "model" ordinance drafted by the State of California shall apply within the affected jurisdiction.

❑ Water Recycling in Landscaping Act

In 2000, Senate Bill 2095 (Water Recycling in Landscaping Act) was approved by Governor Davis requiring any local public or private entity that produces recycled water and determines that within 10 years it will provide recycled water within the boundaries of a local agency, to notify the local agency of that fact. In turn, local agencies are required to adopt and enforce within 180 days a specified recycled water ordinance, unless the local agency adopted a recycled water ordinance or other regulation requiring the use of recycled water in its jurisdiction prior to January 1, 2001. (DWR, 2004)

❑ Urban Water Management Planning Act

The Urban Water Management Planning Act (UWMP Act) was proposed and adopted to ensure that water planning is conducted at the local level, as the State of California recognized that two water agencies in the same region could have very different impacts from a drought. The UWMP Act requires water agencies to develop Urban Water Management Plans (UWMPs) over a 20-year planning horizon, and further required UWMPs to be updated every five years. UWMPs are exempt from compliance with CEQA. (DWR, 2016, p. 1-2)

The UWMPs provide a framework for long term water planning and inform the public of a supplier's plans for long-term resource planning that ensures adequate water supplies for existing and future demands. This part of the California Water Code (CWC) requires urban water suppliers to report, describe, and evaluate:

- Water deliveries and uses;
- Water supply sources;
- Efficient water uses;

- Demand management measures; and
- Water shortage contingency planning. (DWR, 2016, p. 1-3)

The UWMP Act has been modified over the years in response to the State's water shortages, droughts, and other factors. A significant amendment was made in 2009, after the drought of 2007-2009 and as a result of the governor's call for a statewide 20 percent reduction in urban water use by the year 2020. This was the Water Conservation Act of 2009, also known as SB X7-7. This Act required agencies to establish water use targets for 2015 and 2020 that would result in statewide savings of 20 percent by 2020. Beginning in 2016, retail water suppliers are required to comply with the water conservation requirements in SB X7-7 in order to be eligible for State water grants or loans. Retail water agencies are required to set targets and track progress toward decreasing daily per capita urban water use in their service area, which will assist the State in meeting its 20 percent reduction goal by 2020. (DWR, 2016, p. 1-2)

❑ Government Code § 66473.7(b)(2) (Senate Bill 221)

Under Senate Bill (SB) 221, approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply. SB 221 is intended as a 'fail safe' mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs before construction begins. SB 221 requires the legislative body of a city or county or the advisory agency, to the extent that it is authorized by local ordinance to approve, conditionally approve, or disapprove a tentative map, must include as a condition in any tentative map that includes a subdivision a requirement that a sufficient water supply shall be available. Proof of the availability of a sufficient water supply must be requested by the subdivision applicant or local agency, at the discretion of the local agency, and id based on written verification from the applicable public water system within 90 days of a request. SB 221 does not apply to any residential project proposed for a site that is within an urbanized area and has been previously developed for urban uses, or where the immediate contiguous properties surrounding the residential project site are, or previously have been, developed for urban uses, or housing projects that are exclusively for very low and low-income households. (DWR, 2003)

❑ California Senate Bill 610

The California Water Code (Water Code) §§ 10910 through 10915 were amended by the enactment of SB 610 in 2002. SB 610 requires an assessment of whether available water supplies are sufficient to serve the demand generated by a proposed project, as well as the reasonably foreseeable cumulative demand in the region over the next 20 years under average normal year, single dry year, and multiple dry year conditions. Under SB 610, water assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in Water Code 10912 [a]) subject to CEQA. (DWR, 2003) For the purposes of SB 610, "project" means any of the following:

(1) A proposed residential development of more than 500 dwelling units.
(2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
(3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
(4) A proposed hotel or motel, or both, having more than 500 rooms.
(5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.

(6) A mixed-use project that includes one or more of the projects specified in this subdivision.
(7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project. (DWR, 2003)

Because the Project proposes a residential development with up to 1,061 dwelling units, a WSA was required and is included in *Technical Appendix L1*. Additionally, a WSA letter update was prepared for the Project and is included in *Technical Appendix L2*.

❑ CA. Water Code § 10610 et seq. (Senate Bill 901)

Signed into law on October 16, 1995, Senate Bill (SB) 901 required every urban water supplier to identify as part of its urban water management plan, the existing and planned sources of water available to the supplier over a prescribed 5-year period. The code requires the water service purveyor to assess the projected water demand associated with a proposed project under environmental review. Later provisions of SB 901 required compliance in the event that the Project involved the adoption of a specific plan, amendment to, or revision of the land use element of a general plan or specific plan that would result in a net increase in the state population density. Upon completion of the water assessment, cities and counties may agree or disagree with the conclusions of the water service purveyors, but cannot approve projects in the face of documented water shortfalls without first making certain findings.

❑ Executive Order B-29-15

Executive Order (EO) B-29-15 ordered the State Water Resources Control Board (SWRCB) to impose restrictions to achieve a 25-percent reduction in potable urban water usage through February 28, 2016; directed the California Department of Water Resources (DWR) to lead a statewide initiative, in partnership with local agencies, to collectively replace 50 million square feet of lawns and ornamental turf with drought tolerant landscapes; and directed the California Energy Commission to implement a statewide appliance rebate program to provide monetary incentives for the replacement of inefficient household devices. (DWR, 2017a)

❑ Executive Order B-37-16

Signed on May 9, 2016, EO B-37-16 established a new water use efficiency framework for California. The order bolstered the state's drought resilience and preparedness by establishing longer-term water conservation measures that include permanent monthly water use reporting, new urban water use targets, reducing system leaks and eliminating clearly wasteful practices, strengthening urban drought contingency plans, and improving agricultural water management and drought plans. (DWR, 2017a)

❑ Executive Order B-40-17

Signed on April 7, 2017, EO B-40-17 ended the drought state of emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne, where emergency drinking water projects will continue to help address diminished groundwater supplies. It maintains water reporting requirements and prohibitions on wasteful practices. The order was built on actions taken in Executive Order B-37-16, which remains in effect. In a related action, state agencies, including the DWR, released a plan to continue making water conservation a way of life. (DWR, 2017a)

❑ Sustainable Groundwater Management Act (SGMA)

The Sustainable Groundwater Management Act (SGMA) established a new structure for managing California's groundwater resources at a local level by local agencies. SGMA required, by June 30, 2017, the

formation of locally-controlled groundwater sustainability agencies (GSAs) in the State's high- and medium-priority groundwater basins and subbasins (basins). A GSA is responsible for developing and implementing a groundwater sustainability plan (GSP) to meet the sustainability goal of the basin to ensure that it is operated within its sustainable yield, without causing undesirable results. The GSP Emergency Regulations for evaluating GSPs, the implementation of GSPs, and coordination agreements were adopted by DWR and approved by the California Water Commission on May 18, 2016. (DWR, 2017b)

2. Applicable Solid Waste Regulations

❑ California Solid Waste Integrated Waste Management Act (AB 939, 1989)

The Integrated Waste Management Act (IWMA) established an integrated waste management hierarchy to guide the California Integrated Waste Management Board (CIWMB) and local agencies in implementation, in order of priority: (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal (it should be noted that the CIWMB no longer exists, and its duties have been assumed by CalRecycle). As part of the IWMA, the CIWMB was given a purpose to mandate the reduction of disposed waste. (CalRecycle, 1997a) The IWMA also required:

- The establishment of a task force to coordinate the development of city Source Reduction and Recycling Elements (SRREs) and a countywide siting element. (CalRecycle, 1997a)

- Each city, by July 1, 1991, to prepare, adopt and submit a SRRE to the county which includes the following components: waste characterization; source reduction; recycling; composting; solid waste facility capacity; education and public information; funding; special waste (asbestos, sewage sludge, etc.); and household hazardous waste. (CalRecycle, 1997a)

- Each county, by January 1, 1991, to prepare a SRRE for its unincorporated area, with the same components described above, and a countywide siting element, specifying areas for transformation or disposal sites to provide capacity for solid waste generated in the jurisdiction which cannot be reduced or recycled for a 15-year period.

- Each county to prepare, adopt, and submit to the Board an Integrated Waste Management Plan (IWMP), which includes all of the elements described above. (CalRecycle, 1997a)

- Each city or county plan to include an implementation schedule which shows: diversion of 25 percent of all solid waste from landfill or transformation facilities by January 1, 1995 through source reduction, recycling, and composting activities; and, diversion of 50 percent of all solid waste by January 1, 2000 through source reduction, recycling, and composting activities. (CalRecycle, 1997a)

- The CIWMB to review the implementation of each SRRE at least once every two years. (CalRecycle, 1997a)

- The IWMA required the CIWMB, in conjunction with an inspection conducted by a Lead Enforcement Agency (LEA), to conduct at least one inspection per year of each solid waste facility in the state. (CalRecycle, 1997a)

Additionally, the IWMA established a comprehensive statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities. (CalRecycle, 1997a)

❑ Waste Reuse and Recycling Act (AB 1327)

The Waste Reuse and Recycling Act (WRRA) required the CIWMB to approve a model ordinance for adoption by any local government for the transfer, receipt, storage, and loading of recyclable materials in development projects by March 1, 1993. The WRRA also required local agencies to adopt a local ordinance by September 1, 1993 or allow the model ordinance to take effect. The WRRA requires all development projects that are commercial, industrial, institutional, or marina in nature and where solid waste is collected and loaded, to provide an adequate area for collecting and loading recyclable materials over the lifetime of the project. The area is required to be provided before building permits are issued. (CalRecycle, 1997b)

❑ Mandatory Commercial Recycling Program (AB 341)

Assembly Bill (AB) 341 (Chapter 476, Statutes of 2011 [Chesbro, AB 341]) directed CalRecycle to develop and adopt regulations for mandatory commercial recycling. CalRecycle initiated formal rulemaking with a 45-day comment period beginning Oct. 28, 2011. The final regulation was approved by the Office of Administrative Law on May 7, 2012. AB-341 was designed to help meet California's recycling goal of 75% by the year 2020. AB 341 requires all commercial businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place. In addition, multi-family apartments with five or more units are also required to form a recycling program. (CalRecycle, 2017c)

❑ 2016 California Green Building Standards Code (CAL Green; Part 11 of Title 24, California Code of Regulations)

CALGreen became effective January 1, 2017, and is applicable to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout the State of California (including residential structures and elementary schools). § 5.408.3 of CALGreen requires that 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on-site until the storage site is developed.

3. Applicable Energy Conservation Regulations

❑ California Energy Efficiency Standards for Residential and Nonresidential Buildings (24 CA. Code Regs. 6)

The Building Energy Efficiency Standards were first adopted in 1976 and have been updated periodically since then as directed by statute. In 1975 the Department of Housing and Community Development adopted rudimentary energy conservation standards under their State Housing Law authority that were a precursor to the first generation of the Standards. However, the Warren-Alquist Act was passed one year earlier with explicit direction to the Energy Commission (formally titled the State Energy Resources Conservation and Development Commission) to adopt and implement the Standards. The Energy Commission's statute created separate authority and specific direction regarding what the Standards are to address, what criteria are to be met in developing the Standards, and what implementation tools, aids, and technical assistance are to be provided. (CEC, 2015)

The Standards contain energy and water efficiency requirements (and indoor air quality requirements) for newly constructed buildings, additions to existing buildings, and alterations to existing buildings. Public Resources Code Sections 25402 subdivisions (a)-(b) and 25402.1 emphasize the importance of building design and construction flexibility by requiring the Energy Commission to establish performance standards, in the form of an "energy budget" in terms of the energy consumption per square foot of floor space. For this reason, the Standards include both a prescriptive option, allowing builders to comply by using methods known to be

efficient, and a performance option, allowing builders complete freedom in their designs provided the building achieves the same overall efficiency as an equivalent building using the prescriptive option. Reference Appendices are adopted along with the Standards that contain data and other information that helps builders comply with the Standards. (CEC, 2015)

The 2016 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The most significant efficiency improvements to the residential Standards include improvements for attics, walls, water heating, and lighting. The most significant efficiency improvements to the nonresidential Standards include alignment with the ASHRAE 90.1 2013 national standards. New efficiency requirements for elevators and direct digital controls are included in the nonresidential Standards. The 2016 Standards also include changes made throughout all of its sections to improve the clarity, consistency, and readability of the regulatory language. (CEC, 2015)

Public Resources Code Section 25402.1 also requires the Energy Commission to support the performance standards with compliance tools for builders and building designers. The Alternative Calculation Method (ACM) Approval Manual adopted by regulation as an appendix of the Standards establishes requirements for input, output, and calculational uniformity in the computer programs used to demonstrate compliance with the Standards. From this, the Energy Commission develops and makes publicly available free, public domain building modeling software in order to enable compliance based on modeling of building efficiency and performance. The ACM Approval Manual also includes provisions for private firms seeking to develop compliance software for approval by the Energy Commission, which further encourages flexibility and innovation. (CEC, 2015)

❑ California Solar Rights and Solar Shade Control Acts

The Solar Rights Act sets parameters for establishing solar easements, prohibits ordinances and private covenants which restrict solar systems, and requires communities to consider passive solar and natural heating and cooling opportunities in new construction. This Act is applicable to all California cities and counties. California's solar access laws appear in the state's Civil, Government, Health and Safety, and Public Resources Codes. California Pub Res Code § 25980 sets forth the Solar Shade Control Act, which encourages the use of trees and other natural shading except in cases where the shading may interfere with the use of active and passive solar systems.

❑ Alternative Fuels Plan

On September 24, 2009, the California Air Resources Board (CARB) adopted amendments to the "Pavley" regulations that reduce greenhouse gas (GHG) emissions in new passenger vehicles from 2009 through 2016. These amendments are part of California's commitment toward a nation-wide program to reduce new passenger vehicle GHGs from 2012 through 2016. CARB's September amendments will cement California's enforcement of the Pavley rule starting in 2009 while providing vehicle manufacturers with new compliance flexibility. The amendments will also prepare California to harmonize its rules with the federal rules for passenger vehicles. (CARB, 2017a)

The U.S. EPA granted California the authority to implement GHG emission reduction standards for new passenger cars, pickup trucks, and sport utility vehicles On June 30, 2009. The first California request to implement GHG standards for passenger vehicles, known as a waiver request, was made in December 2005, and was denied by the U.S. EPA in March 2008. That decision was based on a finding that California's request

to reduce GHG emissions from passenger vehicles did not meet the Clean Air Act requirement of showing that the waiver was needed to meet "compelling and extraordinary conditions." (CARB, 2017a)

The ARB's Board originally approved regulations to reduce GHGs from passenger vehicles in September 2004, with the regulations to take effect in 2009. These regulations were authorized by the 2002 legislation Assembly Bill 1493 (Pavley). (CARB, 2017a)

The regulations had been threatened by automaker lawsuits and were stalled by the U.S. EPA's delay in reviewing and then initially denying California's waiver request. The parties involved entered a May 19, 2009 agreement to resolve these issues. With the granting of the waiver on June 30, 2009, it is expected that the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016, all while improving fuel efficiency and reducing motorists' costs. (CARB, 2017a)

The CARB has adopted a new approach to passenger vehicles – cars and light trucks – by combining the control of smog-causing pollutants and greenhouse gas emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California. (CARB, 2017a)

4.16.3 Basis for Determining Significance

Section XIX of Appendix G to the CEQA Guidelines addresses typical adverse effects to utilities and service systems, and includes the following threshold questions to evaluate the Project's impacts on utilities and service systems (OPR, 2018):

a. *Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;*

b. *Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years;*

c. *Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;*

d. *Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or*

e. *Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.*

4.16.4 IMPACT ANALYSIS

Threshold a:	***Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?***

A. Proposed Water Service Facilities

The Project site is not connected to EMWD's potable water service network under existing conditions. As shown previously on Figure 3-10, *Potable Water Plan*, potable water service would be provided to the Project site via three planned connection points to the existing 12-inch pipeline in the Chambers Avenue right-of-way (ROW) and three planned connection points to the existing 12-inch pipeline in the Rouse Road ROW. Lateral connections to the existing 18-inch pipeline in Encanto Drive are proposed to serve the proposed commercial areas. In addition to these connection points, and in order to provide adequate looping for the Project, a new 12-inch pipeline is proposed along the eastern edge of the Project site within the ROWs of Antelope Road and Rouse Road. This pipeline would connect to the existing pipeline in the Chambers Avenue ROW, run northerly within the Antelope Road ROW, run westerly within the Rouse Road ROW, and ultimately would connect to the existing 12-inch pipeline located within the Rouse Road ROW. A series of water lines would be provided within the internal access roadways within each Planning Area. Proposed on-site facilities would be sized in accordance with EMWD criteria to meet the appropriate domestic and fire flow requirements for the Project's proposed land uses. Multiple connections to these proposed water lines, as well as the installation of new potable water lines interior to the Project site, would ensure that water service to the site would meet the demands of the proposed development. The Project also would install non-potable water lines on-site which would connect to an 8- and 12-inch proposed non-potable water line within Chambers Avenue.

Construction-related activities associated with trenching for and installing potable water and non-potable water lines on-site and off-site would result in physical impacts to the environment; these impacts are inherent in the Project's construction phase and are evaluated throughout this EIR accordingly. There would be no significant environmental effects specifically related to the installation of water facilities during the Project's construction. In instances where significant impacts have been identified for the Project's construction phase for which feasible mitigation is available, mitigation measures are recommended in each applicable subsection of this EIR to reduce environmental impacts to the maximum feasible extent. The installation of water lines to serve the Project would not result in any significant physical effects on the environment that are not already identified and disclosed as part of this EIR. Accordingly, additional mitigation measures beyond those identified throughout this EIR would not be required.

As documented in *Technical Appendix L1* and *Technical Appendix L2*, and described in detail under the analysis of Threshold b, EMWD calculated the Project would generate a demand for 561,000 gpd of potable water. The land use considered for the Project area in the 2015 UWMP demand projection was a mix of retail, business park/light industrial, and rural residential land uses. EMWD determined that the land uses proposed by the Project are consistent with the land uses considered for the Project area in the 2015 UWMP. Based on a review of existing and anticipated future water supplies and demands, EMWD has determined that adequate water supplies and adequate water treatment facilities are available to service proposed development (see *Technical Appendix L1* and *Technical Appendix L2*). Accordingly, sufficient water supplies and water treatment facilities are available to serve the Project and implementation of the Project would not require relocation, construction of new water treatment facilities, or the expansion of existing facilities. The Project's effect on EMWD's regional water network would be less than significant. (EMWD, 2017a, p. 19)

B. Proposed Wastewater Service Facilities

As shown on Figure 3-12, *Sewer Plan*, a 15-inch sewer line is proposed within the Rouse Road ROW near the northwestern corner of the Project site, which would convey flows west along Rouse Road, and then north within the Encanto Road ROW where it would connect to an existing 15-inch mainline located approximately 1,250 feet north of the Project site. A series of smaller 8-, 10-, and 12-inch sewer lines would be constructed within internal roadways to provide sewer service to each of the Planning Areas. Wastewater generated from the Project site would be treated at the EMWD's Perris Valley RWRF.

As shown in Table 4.16-4, Perris Valley RWRF has an existing capacity to treat 25 million gpd, and treated 13,806 AF (approximately 4,495,718,140 gallons per year or 12,317,036 gpd) in 2015 (EMWD, 2016a, Table 6-8). Therefore, remaining existing capacity of the Perris Valley RWRF is estimated to be approximately 12,682,964 gpd (equal to the difference between the existing treatment capacity of 25,000,000 gpd and the 12,317,036 gpd of wastewater treated at the facility in 2015). As shown in Table 4.16-5, *Project Wastewater Generation*, the Project would generate a maximum 405,520 gpd of wastewater requiring treatment at Perris Valley RWRF.

Table 4.16-5 Project Wastewater Generation

LAND USE	UNITS/ACREAGE	POPULATION	WASTEWATER GENERATION RATE[1]	TOTAL WASTEWATER GENERATED
Medium Density Residential	1,061 du	3.5 persons per household	100 gpd per capita	371,350 gpd
Commercial	20.1 acres	--	1,700 gpd	34,170 gpd
			Total:	**405,520 gpd**

1. Based on the sewer generation factors provided by EMWD, *Sanitary Sewer System Planning & Design*, Table 1, *EMWD – System Design and Loading Criteria*.

(EMWD, 2006, Table 1)

Therefore, using the existing available 2015 capacity for Perris Valley RWRF, the treatment plant would have a remaining available capacity for sewer treatment of approximately 12.3 million gpd after implementation of the Project (equal to the difference between the existing remaining treatment capacity [12.7 million gpd] and the wastewater demand generated by the Project [405,520 gpd]). Thus, the existing Perris Valley RWRF facility has adequate capacity to serve the Project. Since there is adequate capacity to serve the Project, the Project would not result in or require the need for expanded wastewater treatment facilities. Accordingly, Project impacts to wastewater services would be less than significant.

C. Proposed Stormwater Facilities

As described in EIR Section 3.0, *Project Description*, and EIR Section 4.8, *Hydrology and Water Quality*, the Project proposes on-site water quality/detention basins (total of 3) and drainage facilities. Impacts associated with these on- and off-site improvements are evaluated throughout this EIR, and mitigation is identified where necessary to reduce impacts to a level below significance. Therefore, the construction of storm water drainage facilities needed to serve the Project would not result in any impacts to the environment beyond what is evaluated, disclosed, and mitigated by other sections of this EIR. Refer to EIR Subsection 4.9, *Hydrology and Water Quality*, for a more detailed analysis of the environmental impacts associated with the construction and operation of the Project's proposed drainage facilities. Additional mitigation would not be required.

D. Proposed Electric Power, Natural Gas, and Telecommunications

Construction of the Project would require connections to existing electricity, natural gas, and telecommunication facilities. The Project area already is served by these utilities, and it is anticipated that proposed improvements to provide service to the Project site would occur within existing improved rights-of-way off-site, or on-site within areas already planned for impact and development by the Project. The proposed connections to these utilities are inherent to the Project's construction phase, which has been evaluated throughout this EIR. Where significant construction-related impacts are identified, feasible mitigation measures are identified to reduce impacts to the maximum feasible extent. There are no components of the Project's proposed utility connections that would result in significant environmental effects not already addressed by this EIR. Accordingly, impacts would be less than significant.

Threshold b: ***Would the Project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?***

EMWD is responsible for supplying the region with its potable and non-potable water needs. In June of 2016, the EMWD Board of Directors adopted the 2015 UWMP. This plan provides information on EMWD's projected supplies and demands in five-year increments through the year 2040, and reports EMWD's progress on water use efficiency targets as defined in the Water Conservation Act of 2009. The 2015 UWMP shows that the majority of EMWD's existing and future planned demand is to be met through imported water delivered by MWD. Demand for EMWD shown in the 2015 UWMP is projected across the District as a whole and is not project specific. The 2015 UWMP relies heavily on information and assurances contained within MWD's 2015 Urban Water Management Plan (UWMP-MWD) when determining supply reliability. The 2015 UWMP-MWD is attached as Appendix B to the Project's WSA (*Technical Appendix L1*). (EMWD, 2017a, p. 3)

To assess the ultimate effect of the Project's water demands and service needs, the EMWD has prepared a WSA and update letter for the Project (included as *Technical Appendix L1* and *Technical Appendix L2*, respectively, to this EIR), in accordance with Senate Bill 610 (SB 610) and Senate Bill 221 (SB 221). SB 610 requires the preparation of a water supply assessment report for projects that propose to construct the equivalent of 500 or more residential dwelling units. SB 221 requires affirmative written verifications of sufficient water supply. Provided below is a summary of EMWD's water supplies and water demand projections based on the UWMP and the Project-specific WSA.

Population Projection

In 2015, EMWD updated the population projections from its 2010 UWMP using information from the District's Database of Proposed Projects and the 2015 Empire Economics Absorption Study. EMWD's prior UWMP used the Riverside County Center for Demographic Research (RCCDR) 2010 Projection, which considers land use and land agency information to develop future population projections, which was adopted by the Western Riverside Council of Governments. (EMWD, 2017a, p. 4)

Consistent with the significant percentage of undeveloped land within EMWD's service area, growth is anticipated to continue throughout the 2015 UWMP's 25-year planning horizon, as shown in Table 4.16-6, *Projected Population within the EMWD (2020-2040)*. Currently, approximately 40 percent of the District's service area is built out. As population and the associated water demands increase, EMWD will increase the amount of water imported via MWD. Alternatively, local supply projects may eventually offset some of the imported water increases. (EMWD, 2017a, p. 4).

Table 4.16-6 Projected Population within the EMWD (2020-2040)

	2020	2025	2030	2035	2040
EMWD – Retail Service Area	617,100	699,800	784,100	864,200	939,100
City of Hemet Water Department	26,900	27,900	28,900	29,800	30,800
City of Perris / North Perris Water System	13,100	13,800	14,500	15,100	15,800
City of San Jacinto Water Department	16,100	18,500	20,800	23,100	25,500
Lake Hemet Municipal Water District	47,200	51,400	55,500	59,400	63,700
Nuevo Water Company	2,600	3,000	3,400	3,900	4,300
Other (Murrieta Division, etc.)	5,000	6,200	7,600	8,700	10,100
Rancho California Water District	128,500	146,500	160,400	174,400	185,300
Total	**856,500**	**967,100**	**1,075,200**	**1,178,600**	**1,274,600**

(1) Data Sources: American Community Survey, Empire Economics, EMWD, RCCDR, United States Census.

(EMWD, 2017a, Table 1)

Overview of Supplies

EMWD has four sources of water supply: imported water purchased from MWD, local potable groundwater, local desalinated groundwater, and recycled water. On average from 2010 through 2015, EMWD's water supply portfolio averaged approximately 57 percent imported water, 10 percent groundwater, 4 percent desalinated groundwater, and 29 percent recycled water. These figures include water that was indirectly served as wholesale water. It should be noted that the average proportion of imported water in EMWD's water supply portfolio was affected by sizeable reductions in 2015 (relative to prior years) due to the mandatory water use restrictions enacted by the State Water Resources Control Board in response to severe statewide drought conditions. (EMWD, 2017a, p. 4)

As future development increases the water demands within EMWD's service area, it is anticipated that the majority of the new demands will be met through additional imported water from MWD. Imported supply sources will be supplemented by local supply projects increasing the desalination of brackish groundwater and use of recycled water. EMWD also plans to continue its efforts to enhance water use efficiency within its service area. Table 4.16-3 (previously presented) shows EMWD's projected water supplies for both retail and wholesale service throughout the planning horizon set within its UWMP under the assumption that new demands will primarily be met with increases in imported water. These estimates do not account for all potential new local supply projects under development by EMWD or by agencies to which EMWD provides wholesale service. (EMWD, 2017a, p. 7)

EMWD's water supply reliability is primarily established through MWD, of which EMWD is a member agency. In the 2015 UWMP-MWD, the reliability of water delivery through the State Water Project (SWP) and the Colorado River Aqueduct (CRA) was assessed by MWD. MWD determined that its water sources will continue to provide a reliable supply to its member agencies during normal, single-dry, and multiple-dry years during the UWMP planning horizon. Unprecedented shortages are addressed in the Water Shortage Contingency Analysis and Catastrophic Supply Interruption Planning portions of the UWMP-MWD. (EMWD, 2017a, p. 7)

EMWD Projected Demands

EMWD's primary retail customers for potable/raw water can be divided into residential, commercial, industrial, institutional, and landscape sectors. The residential sector is EMWD's largest customer segment; however, each sector plays a role in the growth and development of EMWD's service area. The historic and projected customer distribution and water use by the various potable/raw retail customer types are shown in Table 4.16-7, *Retail Potable/Raw Water Deliveries by Customer Type (2005-2040)*. EMWD also provides wholesale water service to a number of sub-agencies, serves recycled water, and imports water for recharge purposes. Total demands are shown in Table 4.16-8, *Summary of System Water Demands (2005-2040)*. (EMWD, 2017a, pp. 16-17)

Table 4.16-7 Retail Potable/Raw Water Deliveries by Customer Type (2005-2040)

	Actual Deliveries - AF			Projected Deliveries – AF [2]				
Use Type[1]	2005	2010	2015	2020	2025	2030	2035	2040
Single Family	62,300	54,000	45,700	64,800	72,900	81,100	89,000	96,800
Multi-Family	5,500	6,100	5,800	8,300	9,300	10,300	11,400	12,300
Commercial	3,900	4,200	4,600	6,500	7,300	8,100	8,900	9,700
Industrial	400	400	300	400	400	500	500	600
Institutional	2,900	2,300	2,000	3,000	3,300	3,700	4,100	4,400
Landscape[3]	7,500	8,900	7,700	7,500	7,500	7,500	7,500	7,300
Agriculture (Potable)	2,400	1,800	1,900	1,900	1,900	1,900	1,900	1,900
Agriculture (Raw)	100	500	900	1,000	1,000	1,000	1,000	1,000
Total	**85,000**	**78,200**	**68,900**	**93,400**	**103,600**	**114,100**	**124,300**	**134,000**

(1) Figures do not include system losses.
(2) Passive water savings due to restrictions outlined in the Administrative Code are included in the demand projections.
(3) Landscape demands remain constant or decrease over time as landscape accounts are offset by conversion to the recycled water system.

(EMWD, 2017a, Table 5)

Table 4.16-8 Summary of System Water Demands (2005-2040)

	Actual Demands - AF			Projected Demands - AF				
Category	2005	2010	2015	2020	2025	2030	2035	2040
Retail Demands	85,000	78,200	68,900	93,400	103,600	114,100	124,300	134,000
Wholesale Demands	29,300	27,100	21,700	50,500	54,100	57,700	61,200	64,800
Other Water Uses[1]	47,300	36,600	55,200	54,000	61,000	64,000	67,100	69,400
Total	**161,600**	**141,900**	**145,800**	**197,900**	**218,700**	**235,800**	**252,600**	**268,200**

(1) Includes retail and wholesale recycled water demands.

(EMWD, 2017a, Table 8)

Project Water Demands

Under existing conditions, the Project site is planned for "Fleming Ranch Specific Plan (SP)" land uses by the City of Menifee General Plan, although no Specific Plan has been adopted for the site. Development of the site has been previously assumed by the EMWD in its projects of future water supply and demand to include a mix of retail, business park/light industrial, and rural residential land uses. EMWD determined that the land uses proposed by the Project (development of residential, commercial, and recreational land uses) are consistent with the land uses considered for the Project area in the 2015 UWMP (EMWD, 2017a, p. 19; EMWD, 2019). Therefore, the Project would not to result in water needs and service demands above what has already been anticipated during long-range planning efforts. Nonetheless, the Project's water demands and service needs are discussed below.

Table 4.16-9, *Project Demand Estimate*, depicts the estimated annual demand for the Project. Demand for the Project site was estimated based on average annual demand from similar land uses and is utilized by the EMWD for water supply planning. As shown, the Project would generate a demand for 561,000gpd of potable water and would generate an annual demand of 204.78 million gallons (MG). (EMWD, 2017a, pp. 19-20; EMWD, 2019)

Table 4.16-9 Project Demand Estimate

Land Use Category	Base Unit	Project Size (units)	Flow Factor (gpd/unit)	Average Day Demand (gpd)	Annual Demand (MG)	Annual Demand (AF)
Medium Density Residential	DU	1,061	440	466,840	170.41	522.93
Commercial Office/Retail	acre	20.1	2,220	44,220	16.14	49.53
Open Space Recreation	acre	22.7	2,200	49,940	18.23	55.94
Open Space Conservation	acre	6.3	0	0	0	0
			Total	**561,000**	**204.78**	**628.4**

(EMWD, 2017a; EMWD, 2019)

The land use considered for the Project site in the 2015 UWMP demand projection was a mix that was predominantly medium high density residential, along with sections planned as commercial retail, business park/light industrial, and rural residential. The EMWD determined that the Project's proposed land uses are consistent with the UWMP buildout assumptions and the Project's water demand is therefore anticipated to be within the limits of projected demand accounted for in the 2015 UWMP. It should be noted that following EMWD's 2017 WSA for the Project, revisions to the Project occurred that slightly increased the water usage estimate assumed by the 2017 WSA due to the addition of a community recreation center. EMWD issued a WSA update letter dated July 9, 2019 acknowledging the revisions to the Project plans. EMWD determined that the revised water demand would be negligible from a water supply perspective and that the updated Project would continue to be consistent with the land use and water demands considered in the 2015 UWMP. (EMWD, 2017a, p. 20; EMWD, 2019)

Evaluation of Supply and Demand

EMWD's 2015 UWMP includes estimates of EMWD's demand during average, single and multiple dry years. The estimates for EMWD's retail system are documented in Table 10, Table 11, and Table 12 of the Project's WSA (*Technical Appendix L1*), and are taken directly from the 2015 UWMP document. Similar estimates for EMWD's wholesale system are shown in Table 13, Table 14, and Table 15 of the WSA. More details on this analysis can be found in Section 7.6 (Supply and Demand Assessment) of the 2015 UWMP. (EMWD, 2017a, p. 20)

EMWD's 2015 UWMP discusses the supply reliability for EMWD during dry years. It is anticipated that the majority of water for future development would be supplied by imported water from MWD during single dry years. Typically, MWD does not place imported water limits on a member agency, but predicts the future water demand based on regional growth information. The 2015 UWMP - MWD shows that MWD would have the ability to meet all of its member agencies' project supplemental demand through 2040, even under a repeat of historic drought scenarios. (EMWD, 2017a, p. 22)

EMWD maintains a Water Shortage Contingency Plan (WSCP) that aims to reduce demand during water shortage using significant penalties for wasteful water use. EMWD's WSCP details demand reductions for several stages of shortage through a 50 percent or greater reduction. Additional information about contingency planning is included in Chapter 8 of EMWD's 2015 UWMP. The WSCP was last updated on January 20, 2016, and is located in Title 5, Article 10 of the EMWD Administrative Code, which is available on EMWD's website (www.emwd.org). At the time the WSA for the Project was prepared, the EMWD was in Stage 2 of the WSCP in response to improved statewide water supply conditions and the declared end of the drought emergency. (EMWD, 2017a, p. 22)

Water Supply Assessment

- ❑ Potable Water

From a facilities perspective, the Project would be required to construct off-site and on-site water facilities needed to distribute water throughout the Project area. Prior to construction, the developer would be required to contact EMWD staff to develop a plan of service and determine if any revisions are required to the master plan. Impacts associated with the construction of potable water facilities to serve the Project have been evaluated throughout this EIR under appropriate subject headings (e.g., biology), and determined that physical impacts from buildout of the Project would be less than significant, or would be reduced to less-than-significant levels with mitigation. (EMWD, 2017a, p. 22)

With respect to water supplies, the Project would be required to fund conservation to offset demand not considered in the 2015 UWMP. The remaining Project demand would be served using imported water from MWD, supplemented with new local supply projects during multiple-dry years, if needed. Allocation from MWD may result in water supplies being made available at a significantly higher cost depending on circumstances. (EMWD, 2017a, pp. 22-23)

Recycled Water

The Project site is located within the EMWD service area for recycled water. EMWD policy recognizes recycled water as the preferred source of supply for all non-potable water demands, including irrigation of recreation areas, greenbelts, open space common areas, commercial landscaping, and supply for aesthetic impoundment or other water features (EMWD, 2017a, p. 23). In conformance with EMWD policy, recycled water would be used to irrigate common landscaped areas, paseos/neighborhood park system, the community

park/community center, and private recreation center throughout the Project area. Recycled water also would be used to irrigate landscaped monument areas at major intersections, as well as landscaped parkways along a majority of the proposed primary roadways on-site. The use of recycled water on the Project site was not included in the Project's water calculations by EMWD. Thus, the use of recycled water for the irrigation of common landscaped areas, paseos/neighborhood park system, the community park/community center, and private recreation center throughout the Project site would serve to further reduce the amount of water required by the Project than the 561,000 gpd anticipated for the Project site by the EMWD.

The nearest existing recycled water supply source pipeline (and recycled water storage tank) is located east of the SP area, running north-south approximately 700 feet off-site. As shown previous in EIR Figure 3-11, the Project proposes to construct an extension of the eight-inch recycled water pipeline system, that would connect to the existing off-site 12-inch line at the intersection of Antelope Road and Chambers Avenue. A 12-inch recycled water line also would be constructed within Sherman Road, between Rouse Road and Chambers Avenue. Eight-inch recycled water lines also would be constructed within B Street and C Street, with an eight-inch line connecting to the 12-inch line in Chambers Avenue and extending from A Street to the eastern edge of Planning Area 17. The proposed recycled water lines would feed a network of pipes within the Project site.

Conclusion

EMWD relies on MWD to meet the needs of its growing population. MWD stated in the 2015 UWMP - MWD that with the addition of all water supplies, existing and planned, MWD has the ability to meet all of its member agencies' projected supplemental demand through 2040, even under a repeat of historic multiple-year drought scenarios.

In the event that the lead agency determines adequate water supply exists for the Project, the developer would be required to meet with EMWD staff to develop a plan of service. The plan of service would detail water, wastewater, and recycled water requirements to serve the Project. An agreement developed prior to construction would determine additional funding required to reduce existing customer demand on imported supplies through the expansion of local resources. The reduction of existing customer demand on imported water supplies would free up allocated imported water to be used to serve the Project under multiple dry year conditions. The amount of funding would be determined by the EMWD and may take the form of a new component of connection fees or a separate charge. The estimated cost of desalinated water is between $1,400 and $1,700 per AF. These costs are expected to increase over time. (EMWD, 2017a, p. 24)

Based on a review of existing and anticipated future water supplies and demands, presently available information, and the assurance that MWD is engaged in identifying solutions that, when combined with the rest of its supply portfolio, will ensure a reliable long-term water supply for its member agencies, EMWD has determined that adequate water supplies are available to service proposed development as part of its existing and future demands. (EMWD, 2017a, p. 23; EMWD, 2019). Accordingly, sufficient water supplies are available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Furthermore, the use of recycled water on-site would serve to further reduce the Project's water demand. The Project's effect on EMWD's regional water network would be less than significant.

Threshold c: ***Would the Project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?***

Wastewater generated by the Project would be treated by the EMWD Perris Valley RWRF. As shown in Table 4.16-4, Perris Valley RWRF has an existing capacity to treat 25 million gpd, and treated 13,806 AF (approximately 4,495,718,140 gallons per year or 12,317,036 gpd) in 2015 (EMWD, 2016a, Table 6-8). Therefore, remaining existing capacity of the Perris Valley RWRF is estimated to be approximately 12,682,964 gpd (equal to the difference between the existing treatment capacity of 25,000,000 gpd and the 12,317,036 gpd of wastewater treated at the facility in 2015). As shown in Table 4.16-5, the Project would generate a maximum 405,520 gpd of wastewater requiring treatment at Perris Valley RWRF. Therefore, using the existing available 2015 capacity for Perris Valley RWRF, the treatment plant would have a remaining available capacity for sewer treatment of approximately 12.3 million gpd after implementation of the Project (equal to the difference between the existing remaining treatment capacity [12.7 million gpd] and the wastewater demand generated by the Project [405,520 gpd]). Thus, the existing Perris Valley RWRF facility is adequate to serve the Project. Since there is adequate capacity to serve the Project, the Project would not result in or require the need for expanded wastewater treatment facilities. Accordingly, Project impacts to wastewater services would be less than significant.

Threshold d: ***Would the Project generate solid waste in excess of State or local standards, or in excess of the capacity or local infrastructure, or otherwise impair the attainment of solid waste reduction goals?***

Solid waste generated by the Project would be disposed of at either the El Sobrante Landfill, Lamb Canyon Landfill, or the Badlands Landfill. The El Sobrante Landfill is permitted to receive 16,054 tpd, and as of 2016 received an average of 2,760 tpd of Riverside County waste. The Lamb Canyon Landfill is permitted to receive 5,000 tpd, and as of 2016 received 1,667 tpd. The Badlands Landfill is permitted to receive 4,500 tpd, and as of 2016 received an average of approximately 2,527 tpd. The Project has the potential to exceed the capacity of landfills during both construction and operation. Each is discussed below. (RCDWR, 2017, pp. 1-2)

❑ Solid Waste Impacts During Construction

Table 4.16-10, *Estimated Construction Solid Waste Generation*, provides an estimate of the amount of construction debris that would be generated by the Project during each phase of construction, based on residential and commercial/non-residential construction waste generation factors provided by the U.S. Environmental Protection Agency. Table 4.16-10 does not account for the construction of proposed non-residential and non-commercial facilities that are proposed for each phase (i.e., the proposed community park, drainage facilities, etc.), with the exception of the construction of the proposed community center, which is included in Table 4.16-10. Proposed infrastructure facilities (i.e., roads and utilities) would produce nominal amounts of construction waste that would not substantially exceed the solid waste totals (by phase) listed in Table 4.16-10.

Table 4.16-10 Estimated Construction Solid Waste Generation

Phase	Land Use	Construction Rate[1]	Estimated Average Dwelling Unit Size	Solid Waste Generation Rate	Total	
					LBS/Day	Tons/Day
Phase 1	Residential	0.54dwelling units/day	5,625 s.f.[2]	4.39 lbs/s.f.	13,335	6.67
Phase 2	Residential	0.53 dwelling units/day	6,000 s,f,[2]	4.39 lbs/s.f.	13,960	6.98
	Community Center	21.4 s.f./day	10,000 s.f. [2]	4.34 lbs/s.f.	93	0.05
Phase 3	Residential	2.11 dwelling units/day	6,000 s.f.[2]	4.39 lbs/s.f.	55,577	27.79
	Commercial/Non-Residential	1,442 s.f./day	225,000 s.f.	4.34 lbs/s.f.	6,258	3.13

1. Based on information presented in EIR Subsection 3.3.8, *Construction Details*. Estimated duration of each Phase 1 (December 7, 2019 to December 31, 2022) would consist of 926 working days, Phase 2 (January 2, 2023 to July 14, 2024) would consist of a total of 468 working days, and Phase 3 (July 15, 2024 to November 15, 2025) would consist of a total of 156 working days.
2. Estimated average dwelling unit size based on size of lots and maximum lot coverage proposed within SP 2017-187. In order to provide "worst-case" estimates, the maximum lot coverage of 65% for single-story homes was applied because this represented the greatest maximum lot coverage allowed by SP 2017-187.
3. Source: U.S. Environmental Protection Agency. Estimating 2003 Building-Related Construction and Demolition Materials Amounts. Available online at: https://www.epa.gov/smm/estimating-2003-building-related-construction-and-demolition-materials-amounts. Accessed: October 16, 2017

As presented in Table 4.16-10, the Project would generate approximately 6.67 tons of construction waste per day during Phase 1, 7.03 tons of construction waste per day during Phase 2, and 30.92 tons of construction waste per day during Phase 3. Solid waste generated by the Project would be transported to the MVTS located at 17700 Indian Street, Moreno Valley. Construction waste during Phase 1 of the Project would represent approximately 0.33 percent of the permitted daily capacity (2,000 tpd) at the MVTS. Phase 2 of the Project would generate construction waste equal to approximately 0.35 percent of the permitted daily capacity at the MVTS. Phase 3 of the Project would generate construction waste equal to approximately 1.55 percent of the permitted daily capacity at the MVTS. Given the estimated volume of solid waste generated by the Project on a daily basis during construction, it is anticipated that the MVTS would have sufficient capacity to accept the construction debris to be disposed by the Project.

Waste from the MVTS may be disposed at either the El Sobrante Landfill, Lamb Canyon Landfill, or the Badlands Landfill. The El Sobrante Landfill has a permitted daily disposal capacity of 16,054 tpd. Construction of Phases 1 through 3 of the Project would generate between 0.04 and 0.19 percent of the permitted daily disposal capacity at the El Sobrante Landfill. The Lamb Canyon Landfill is permitted a daily disposal capacity of 5,000 tpd. Construction of Phases 1 through 3 of the Project would generate between 0.13 and 0.62 percent of the daily permitted disposal capacity at the Lamb Canyon Landfill. The Badlands Landfill has a permitted daily disposal capacity of 4,500 tpd. In the event that Project waste would be disposed at the Badlands Landfill, construction debris from the Project site would comprise between 0.15 and 0.69 percent of the permitted daily disposal capacity. Given the estimated solid waste quantity generated by the Project on a daily basis during construction, it is anticipated that the MVTS, El Sobrante Landfill, Lamb Canyon Landfill, and Badlands Landfill would have sufficient daily capacity to accept the construction waste generated by the Project.

❑ Solid Waste Impacts During Operation

As shown in Table 4.16-11, *Project Solid Waste Generation*, buildout and occupancy of the Project is estimated to produce approximately 2,469 tons of solid waste per year, which represents approximately 6.9 tons per day.

Table 4.16-11 Project Solid Waste Generation

LAND USE	UNITS/SQUARE FOOTAGE	SOLID WASTE GENERATION RATE	AVERAGE SOLID WASTE PER DAY	TOTAL SOLID WASTE GENERATED PER YEAR
Residential	1,061 du	10 lbs/du/day	5.3 tons/day	1,935 tons/yr
Commercial	225,000 sf	0.013 lbs/day	1.5 tons/day	534 tons/yr
		Totals:	**6.9 tons/day**	**2,469 tons/yr**

du = dwelling units; sf = square feet, yr = year
(Menifee, 2013b, p. 5.7-13)

Per the Riverside Countywide Integrated Waste Management Plan (CIWMP) which applies to the Project, up to 50 percent of its solid waste would need to be diverted from area landfills. In conformance with the CIWMP, the Project Applicant is required to work with future contract refuse haulers to implement recycling and waste reduction programs for solid wastes. Solid waste generated by the Project would be transported to a local solid waste transfer facility, the MVTS. At full buildout, waste generated by the Project would represent approximately 0.3 percent of the permitted daily capacity at the MVTS (2,000 tpd). Given the estimated volume of solid waste generated by the Project on a daily basis during the buildout condition, it is anticipated that the MVTS would have sufficient capacity to accept solid waste to be disposed by the Project. As noted above, the CIWMP would require that up to 50 percent of the solid waste be diverted from area landfills, which would further ensure the Project's solid waste generation does not exceed available landfill capacity.

Waste from the MVTS would be ultimately disposed at either the El Sobrante Landfill, Lamb Canyon Landfill, and/or Badlands Landfill. The El Sobrante Landfill has a permitted disposal capacity of 16,054 tpd, the Lamb Canyon Landfill has a permitted disposal capacity of 5,000 tpd, and the Badlands Landfill has a permitted disposal capacity of 4,500 tpd. In the buildout condition, the Project would generate 0.04 percent of the permitted daily disposal capacity at the El Sobrante Landfill, 0.1 percent of the daily disposal capacity at the Lamb Canyon Landfill, and 0.2 percent of the daily disposal capacity at the Badlands Landfill. Because the Project would generate a relatively small amount of solid waste per day, as compared to the permitted daily capacities for the El Sobrante Landfill, Lamb Canyon Landfill, and Badlands Landfill, it is anticipated that these regional landfill facilities would have sufficient daily capacity to accept solid waste generated by the Project.

❑ Summary of Project Solid Waste Impacts

As indicated above, regional solid waste facilities would have adequate capacity to handle solid waste generated by the Project's construction and operational phases. Accordingly, impacts would be less than significant.

Threshold e: ***Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?***

The Project would be required to comply with City and County waste reduction programs pursuant to the State's Integrated Waste Management Act and the Riverside County CIWMP (which applies to land uses

within the City of Menifee). Project-generated solid waste would be conveyed to one of several landfills operated or managed by the RCDWR and WMIE. These existing landfills are required to comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Compliance with federal, state, and local statutes would reduce the amount of solid waste generated by the Project and diverted to landfills, which in turn will aid in the extension of the life of affected disposal sites. The Project would comply with all applicable solid waste statutes and regulations; as such, impacts would be less than significant.

4.16.5 Cumulative Impact Analysis

This cumulative impact analysis considers development of the Project in conjunction with other development projects and planned development in the vicinity of the Project site, including buildout of the City of Menifee General Plan Land Use Plan. This study area was selected because utilities and service systems are provided to all of the existing and planned developments in the City of Menifee by the same service providers.

Water Treatment Facilities

Existing and future development within EMWD's service area would create a demand for additional water supplies. The 2015 UWMP prepared by EMWD estimates by the Year 2040, retail population within the EMWD service area will increase to 939,100 and wholesale population will increase to 335,500 (EMWD, 2016a, p. 3-6). Population projections driving future demand for water treatment services in the EMWD service area were prepared based on EMWD's proposed development projects and land uses within EMWD's borders as well as current demographic information such as household size (EMWD, 2016a, p. 3-6). According to the WSA and update letter prepared by EMWD for the Project (see *Technical Appendix L1* and *Technical Appendix L2*), the water demand estimated for the Project is within the limit of growth anticipated by the UWMP. Additionally, the implementation of existing water conservation measures and recycling programs in the EMWD service area would reduce the need for increased water supply. Additionally, EMWD has established a Water Shortage Contingency Plan (detailed in EMWD's 2015 UWMP) to reduce water demand during a water supply shortage, including a reduction in water supplies due to legal, environmental and/or climatic conditions. The Water Shortage Contingency Plan provides several prohibitions and consumptive reduction methods that would reduce demand up to 50% under the most extreme deficiencies (EMWD, 2016a, p. 8-1). Because EMWD is projected to have adequate water supply for projected growth through at least the Year 2040 in normal, dry, and multiple-dry years, cumulatively-considerable effects to water supply would not result from construction or operation of the Project.

Wastewater Treatment Facilities

Under long-term (cumulative) conditions, the EMWD anticipates future increases in the demand for wastewater treatment services throughout the EMWD service area. Population projections driving future demand for wastewater treatment services in the EMWD service area were prepared based on EMWD's proposed development projects and land uses within EMWD's borders as well as current demographic information such as household size (EMWD, 2016a, p. 3-6). Therefore, it is reasonable to conclude the UWMP accounts for all growth including recently approved projects. As discussed within the analysis under Threshold a, based on the existing capacity of the Perris Valley RWRF, the plant would have sufficient capacity to serve regional development including the Project. The Project would not directly result in the need for expanded wastewater treatment facilities, as the Perris Valley RWRF has sufficient existing capacity to handle wastewater generated by the Project. Rather, the Project's incremental contribution to wastewater generation may contribute to an ultimate need for expanding the Perris Valley RWRF and/or the construction of additional wastewater treatment facilities. Moreover, it is possible that as other developments in the region are proposed, the EMWD may opt to construct new wastewater treatment facilities to serve those developments, and such

facilities may or may not serve wastewater generated by the Project. Although the Project has the potential to cumulatively contribute to the demand for new/expanded wastewater treatment facilities, the construction of which could significantly impact the environment, it is too speculative for evaluation in the absence of a proposed expansion or development plan (CEQA Guidelines § 15145). Therefore, the Project's cumulative impacts to wastewater treatment facilities are evaluated as less than significant.

Storm Water Drainage Facilities

Cumulative impacts associated with the provision of storm water drainage facilities are evaluated throughout the appropriate issue areas in this EIR. In all cases, where cumulatively significant impacts associated with any Project component are identified, mitigation measures have been imposed to reduce such impacts to the maximum feasible extent. Accordingly, impacts associated with the provision of stormwater drainage facilities to serve the Project would be less-than-cumulatively considerable.

Water Supplies

Implementation of the Project would cause a less-than-significant impact to water supplies because sufficient water supplies are available from the EMWD through the year 2040 to service the Project and other cumulative developments, as planned by the EMWD UWMP. The Project's impact to water supplies would therefore be less-than-cumulatively considerable.

Wastewater Treatment Capacity

Implementation of the Project would cause a less-than-significant impact due to wastewater treatment capacity because adequate capacity exists or is planned to meet the EMWD's future wastewater needs, including the needs of the Project and other cumulative developments wastewater needs. Accordingly, the Project's impacts on wastewater treatment facilities would be less-than-cumulatively-considerable.

Landfill Capacity

As previously discussed in the analysis provided under Threshold d, solid waste generated by construction and operation of the Project would represent nominal proportions of the daily disposal capacity at the potential transfer station (MVTS) and landfills (El Sobrante Landfill, Lamb Canyon Landfill, and/or Badlands Landfill). The transfer station and landfills are currently projected to remain open until as far into the future as 2045 (El Sobrante Landfill) and have sufficient daily capacity to handle solid waste generated by the Project and other cumulative developments both during construction and long-term operation. The Project would not directly result in the need for expanded solid waste disposal facilities, as the MVTS, El Sobrante Landfill, Lamb Canyon Landfill, and Badlands Landfill have sufficient existing capacity to handle solid waste generated by the Project. Rather, the Project's incremental contribution to solid waste generation may contribute to an ultimate need for expanding the solid waste disposal facilities that would serve the Project and/or the construction of additional solid waste disposal facilities. Moreover, it is possible that as other developments in the region are proposed, the RCDWR and WMIE may opt to construct new solid waste disposal facilities to serve those developments, and such facilities may or may not receive solid waste generated by the Project. Although the Project has the potential to cumulatively contribute to the demand for new/expanded solid waste disposal facilities, the construction of which could significantly impact the environment, it is too speculative for evaluation in the absence of a proposed expansion or development plan (CEQA Guidelines § 15145). Therefore, the Project's cumulative impacts to solid waste disposal facilities are evaluated as less than significant.

Solid Waste Regulations

The Project would adhere to regulations set forth by local and state regulations (including AB 341 and AB 939) during both construction and long-term operations. Other cumulative developments would also be required to comply with such regulations. As such, the Project as well as other cumulative developments in the area would not result in cumulative impacts with respect to compliance with federal, state, and local statutes and regulations related to solid wastes. Impacts would be less-than-cumulatively-considerable.

4.16.6 Significance of Impacts Before Mitigation

Threshold a: Less-than-Significant Impact. Water and wastewater would be conveyed to the site through a combination of existing and proposed water, recycled water, and sewer lines within the EMWD service area. Improvements proposed by the Project would take place in existing roadways during the Project's construction phase. The installation of water, recycled water, and sewer lines as well as stormwater drainage facilities to serve the Project would not result in any significant physical effects on the environment that are not already identified and disclosed as part of this EIR. The Project would not require the installation of any additional water facilities that could result in significant impact other than what is discussed throughout the respective issue areas of this EIR. Construction of the proposed storm drainage improvements is an integral component of the Project's construction phase, impacts for which have been evaluated throughout this EIR. In each case, impacts are found to be less than significant, or would be reduced to less than significant levels with the incorporation of mitigation. The installation of local water, recycled water, and sewer lines, as well as stormwater drainage facilities to service the Project would result in a less-than-significant impact.

Threshold b: Less-than-Significant Impact. Potable water supplies would be provided to the Project site from the EMWD. As documented in the WSA and WSA Update Letter (*Technical Appendix L1* and *Technical Appendix L2*, respectively), and the EMWD UWMP, there are sufficient water supplies available to service the Project during normal and dry water conditions. The Project would not cause an impact due to insufficient water supplies. Thus, a less-than-significant impact would occur.

Threshold c: Less-than-Significant Impact. Wastewater would be collected on the Project site by the on-site sewer system installed during the Project's construction. As shown in the EMWD UWMP, the Perris Valley RWRF has sufficient capacity for the Project's wastewater flows in addition to existing commitments. Thus, a less-than-significant would occur.

Threshold d: Less-than-Significant Impact. There is adequate capacity available at the El Sobrante Landfill, Lamb Canyon Landfill, and Badlands Landfill to accept the Project's solid wastes during both construction and long-term operation. In addition, the Project would be required to comply with the Riverside County CIWMP as noted below as a City Regulation and Design Requirement. Landfill capacity would not be exceeded as a result of the Project. Thus, a less-than-significant impact would occur.

Threshold e: Less-than-Significant Impact. The Project would comply with all applicable federal, state, and local statutes and regulations related to solid waste disposal, reduction, and, recycling as required by City the Regulations and Design Requirements. The Project would not conflict with any applicable solid waste regulations. Thus, a less-than-significant impact would occur.

4.16.7 City Regulations, Design Requirements, and Mitigation

Regulatory Requirements

The following are applicable regulations to the Project. Although these requirements technically do not meet CEQA's definition for mitigation, they are imposed herein to ensure Project compliance with applicable regulations.

CRDR 4.16-1 The Project is required to comply with the Riverside Countywide Integrated Waste Management Plan (CIWMP). The CIWMP requires up to 50 percent of its solid waste needs to be diverted from area landfills. In conformance with the CIWMP, the Project Applicant is required to work with future contract refuse haulers to implement recycling and waste reduction programs for solid wastes. The CIWMP outlines goals, policies, and programs that comply with the provisions of AB 939 and its diversion mandates.

CRDR 4.16-2 The Project is required to comply with the provisions of the California Solid Waste Integrated Waste Management Act, (AB 939, 1989) which mandates a reduction of disposed waste throughout California. Compliance with AB 939 would ensure waste on the Project site is reduced.

CRDR 4.16-3 The Project is required to comply with the provisions of the California Solid Waste Reuse and Recycling Act (AB 1327) which developed a model ordinance for adoption of recyclable materials in development projects. This Act requires all development projects that are commercial, industrial, institutional, or marina in nature and where solid waste is collected and loaded, to provide an adequate area for collecting and loading recyclable materials over the lifetime of the project. The area is required to be provided before building permits are issued. Compliance with AB 1327 would ensure that adequate area for collecting and loading recyclable materials is provided on the Project site, which would reduce solid waste.

CRDR 4.16-4 The Project is required to comply with the provisions of the Mandatory Commercial Recycling Program (AB 341): AB 341 made a legislative declaration that it is the policy goal of the state that not less than 75% of solid waste generated be source reduced, recycled, or composted by the year 2020, and required the Department of Resources Recycling and Recovery, by January 1, 2014, to provide a report to the Legislature that provides strategies to achieve that policy goal and also includes other specified information and recommendations. Compliance with AB 341 would require at least 75% of solid waste generated on the Project site be source reduced, recycled, or composted which would reduce solid waste.

Mitigation

Impacts to Utilities and Service Systems as a result of Project implementation would be less than significant, and mitigation is not required.

4.17 WILDFIRE

This Subsection is based on information contained in the City of Menifee General Plan EIR (Menifee, 2013b), and Google Earth (Google Earth, 2016).

4.17.1 EXISTING CONDITIONS

A. Wildfire Hazards

According to the City of Menifee General Plan EIR, the northeastern portion of the Project site is located within a "High Fire Hazard Severity Zone," while the remaining portions of the site are not identified as being subject to wildland fires. Additionally, lands to the east and southeast of the Project site are located within a "Moderate Fire Hazard Severity Zone," "High Fire Hazard Severity Zone," and "Very High Fire Hazard Severity Zone" (Menifee, 2013b, Figure 5.8-3).

B. Fire Protection and Emergency Services

Fire protection services for the Project site are provided by the Riverside County Fire Department (RCFD). The RCFD provides a full range of fire services within the County and contracting cities. The level of service provided is dependent on response times, travel distance, and staffing workload levels established in the Riverside County Fire Protection and Emergency Medical Aid Plan. The Fire Protection and Emergency Medical Aid Plan contains four fire response categories that are used to determine the response times/travel distances for primary and secondary fire stations. The response categories are based on the amount of community build-out presumed in the Fire Protection and Emergency Medical Aid Plan. The Fire Department assumes in any given region that three or more fire engines respond to any reported fire.

The fire station that would serve the Project as the first responder is Station 7 (Sun City), which is located approximately 1.4 roadway miles from the Project site. In January 2018 and following release of the Project's Notice of Preparation (NOP) (November 2017), Station 7 was relocated to a new site just south of the Bradley Road and Cherry Hills Boulevard in the City of Menifee. The Sun City Fire Station is staffed full-time, 24 hours per day, seven days per week, with a minimum 3-person crew, including paramedics, operating "Type-1" firefighting apparatus. The current minimum staffing levels of three persons per Type 1 Fire engine responding unit and two persons per Paramedic Squad responding unit to meet existing demands. (RCFD, 2017) According to the City of Menifee General Plan, the northeastern portion of the Project site is located within a "High Fire Hazard Severity Zone," while the rest of the Project site is not located within a Fire Hazard Zone (Menifee, 2013b, Figure 5.8-3).

4.17.2 APPLICABLE ENVIRONMENTAL REGULATIONS

This section summarizes the overall regulatory framework governing wildfire management.

A. Federal Regulations

1. Healthy Forests Restoration Act of 2003

On August 22, 2002, President Bush established the Healthy Forests Initiative, directing the Departments of Agriculture and the Interior, and the Council on Environmental Quality, to improve regulatory processes to ensure more timely decisions, greater efficiency, and better results in reducing the risk of catastrophic wildland fires. On June 5, 2003, the Departments of Agriculture and the Interior adopted two new categorical exclusions from documentation in an environmental assessment or environmental impact statement: an exclusion for

hazardous-fuel reduction and another for rehabilitation of resources and infrastructure damaged by wildfire (68 FR 33814).

This act also defines "communities at risk" as those "wildland urban interface communities within the vicinity of federal lands that are at high risk from wildfire." For California, CalFire has expanded this definition to include all communities (regardless of distance from federal lands) for which a significant threat to human life or property exists as a result of a wildland fire event. According to the 2010 California Strategic Fire Plan (page E-1), factors used to determine at-risk communities include: high fuel hazard, probability of a fire and proximity of intermingles wildland fuels, and urban environments near fire threats.

B. State Regulations

1. Public Ressources Code (PRC) Sections 4290-4299

These sections establish minimum statewide fire safety provisions pertaining to: roads for fire equipment access; signs identifying streets, roads, and buildings; minimum private water supply reserves for emergency fire use; and fire fuel breaks and greenbelts. With certain exceptions, all new construction after July 1, 1991, in potential wildland fire areas, is required to meet these statewide standards. The state requirements, however, do not supersede more restrictive local regulations.

As defined by CalFire, wildland areas defined as State Responsibility Areas (SRAs) may contain substantial wildfire risks and hazards. They consist of lands exclusive of cities, and federal lands regardless of ownership. The primary financial responsibility for preventing and suppressing fires within wildlands belongs to the State of California. However, it is not the State of California's responsibility to provide fire protection services to buildings or structures located within the wildlands unless CalFire has entered into a cooperative agreement with a local agency for those purposes pursuant to PRC Section 4142. As such, wildland areas require disclosure of these fire hazards in real estate transactions, and owners of properties in wildland areas are subject to PRC Section 4291 maintenance requirements. The law requires CalFire every five years (1991, 1996, 2001, etc.) to provide maps identifying the boundaries of lands classified as SRAs to the Riverside County Assessor.

2. California Government Code (CGC) Section 51178

This section specifies that the Director of CalFire, in cooperation with local fire authorities, shall identify areas that are Very High Fire Hazard Severity Zones (VHFHSZ) in Local Responsibility Areas (LRAs), based on consistent statewide criteria, and the expected severity of fire hazard. Per CGC § 51178, a local agency may, at its discretion, exclude from the requirements of § 51182 an area within its jurisdiction that has been identified as a VHFHSZ, if it provides substantial evidence in the record that the requirements of § 51182 are not necessary for effective fire protection within the area. Alternatively, local agencies may include areas not identified as VHFHSZ by CalFire, following a finding supported by substantial evidence in the record that the requirements of § 51182 are necessary for effective fire protection within the new area. According to § 51182, such changes made by a local agency shall be final, and shall not be rebuttable by CalFire.

3. California Code of Regulations (CCR) Title 14 – Natural Resources

These regulations constitute the basic wildland fire protection standards of the California Board of Forestry. They were prepared and adopted to establish minimum wildfire protection standards in conjunction with building, construction, and development within SRAs. Among other things, Title 14 requires the design, and construction of structures, subdivisions, and developments in an SRA provide for basic emergency access and perimeter wildfire protection measures (fire fuel modification zones, etc.).

4. CCR Title 24, Parts 2 and 9 – Fire Codes

Part 2 of Title 24 of the CCR refers to the California Building Code, which contains complete regulations and general construction building standards of state adopting agencies, including administrative, fire and life safety, and field inspection provisions. Part 2 was updated in 2008 to reflect changes in the base document from the Uniform Building Code to the International Building Code. Part 9 refers to the California Fire Code, which contains other fire safety-related building standards. In particular, Chapter 7A, "Materials and Construction Methods for Exterior Wildfire Exposure," in the 2010 California Building Code addresses fire safety standards for new construction. In addition, Section 701A.3.2, "New Buildings Located in Any Fire Hazard Severity Zone," states:

> "*New buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, any Local Agency Very-High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter.*"

C. Local Ordinances and Requirements

1. Riverside County Fire Department Strategic Plan

The County of Riverside has developed a strategic fire plan that details the department's goals and strategies for proactively coordinating fire facility, service, and equipment needs for 2009-2029. It incorporates CalFire's management plan for several sub-zones within Riverside County. The plan is aimed at ensuring that existing and future development maintain adequate service levels throughout Riverside County.

2. City of Menifee Ordinance No. 2017-232 (Municipal Code Chapter 8.02)

City of Menifee Municipal Code Ordinance 2017-232 establishes the program for the adoption and administration of development impact fees (DIF) and is contained in Chapter 8.02 of the City of Menifee Municipal Code. Chapter 8.02 requires development applicants pay established fire protection mitigation fees that shall be deposited into a specific account for public fire facilities in the City. The funds are to be used solely for the financing of fire facilities or to reimburse the City for public facilities funded or constructed in whole or in part by the City. The Riverside County standard for the establishment of a new fire station is the development of 2,000 dwelling units, or 3.5 million square feet of commercial or industrial uses. The City of Menifee currently requires new development proponents to pay mitigation fees to help offset the cost of providing new fire facilities.

3. Riverside County Ordinance No. 695 – Abatement of Hazardous Vegetation (As Adopted by the City of Menifee)

Under this ordinance, the RCFD distributes hazard abatement notices, roughly 30,000 each year, requiring property owners to reduce the fuels around their property. These notices order property owners to reduce fuels (e.g., flammable grass, brush, etc.) around their property. Requirements for hazard reduction around improved parcels (i.e., those with structures) are set forth in Ordinance No. 787. A minimum 30-foot clearance is required around all structures; it may be extended up to 100 feet in areas with severe fire hazards. On unimproved parcels, the property owner is required to disc or mow 100 feet around the property perimeter. Again, this may be increased (or decreased) from the initial 100-foot width based on visual inspection by the Fire Chief or Chief's designee. The County of Riverside also requires new development within high fire hazard areas to include a fuel modification program for its Wildland Urban Interface, subject to approval by the

Riverside County Fire Department. Lastly, this ordinance also allows the Fire Chief or designee entry onto any real property to inspect when there is reasonable cause that hazardous vegetation exists.

4.17.3 Basis for Determining Significance

The proposed Project would result in a significant impact related to wildfire hazards if the Project were located in or near state responsibility areas or lands classified as very high fire hazard severity zones, and the Project would:

a. *Substantially impair an adopted emergency plan or emergency evacuation plan;*

b. *Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;*

c. *Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or*

d. *Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.*

The above-listed thresholds are derived directly from Section XX of Appendix G to the CEQA Guidelines and address typical adverse effects associated with wildfire hazards. (OPR, 2018)

4.17.4 Impact Analysis

Threshold a:	***Would the Project substantially impair an adopted emergency plan or emergency evacuation plan?***

The Project site is not identified as an emergency access route on any local or regional plans, and there are no adopted emergency response plans or emergency evacuation plans that identify the Project site as part of any emergency response. Additionally, the Project is located in the northern portion of the City of Menifee, which generally contains local streets adjacent to the Project site that would provide multiple pathways for emergency responders. Notwithstanding, due to temporary lane closures that may occur during the Project's construction phase, Project-related construction activities may conflict with emergency access routes and access to nearby uses during frontage improvements to Encanto Drive, Rouse Road, Chambers Avenue, Sherman Road, and Antelope Road. Project-related construction traffic would be required to comply with a temporary traffic control plan that meets the applicable requirements of the California Manual on Uniform Traffic Control Devices. Although it is anticipated a less-than-significant impact would occur with the requirement to implement a temporary traffic control plan during construction, out of an abundance of caution, a significant impact is identified. Accordingly, near-term impacts to emergency access would be significant prior to mitigation.

Implementation of EIR Mitigation Measure 4.14-1, presented earlier in EIR Subsection 4.14, *Transportation*, requires the preparation and implementation of a temporary traffic control plan. Implementation of the required temporary traffic control plan would reduce the Project's near-term impacts to emergency access to less-than-significant levels.

Threshold b:	***Due to slope, prevailing winds, and other factors, would the Project exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?***

The Project site features relatively level topography with a small knoll present in the northeastern portion of the site. With development of the Project, the site would contain up to 1,061 residential homes, freeway-oriented commercial uses on 20.1 acres, a community park/community center, a private recreation center, paseos/neighborhood parks, conserved open space, and detention/water quality basins. Proposed buildings would be constructed in accordance with relevant fire codes, and the property would contain irrigated landscaped elements that would have a low potential for causing or exacerbating wildfire risks. Although there is a potential for major fire events in the local area, the potential for Project residents to be exposed to excessive pollutant concentrations from wildfires is no different from much of the Southern California region. Additionally, there are no components of the Project that would have the potential to result in or contribute to the uncontrolled spread of a wildfire; on the contrary, development of the Project site as proposed would reduce the risk of wildfire hazards in the local area. As such, impacts would be less than significant.

Threshold c:	***Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?***

The Project proposes to construct frontage improvements to Encanto Drive, Rouse Road, Chambers Avenue, Sherman Road, and Antelope Road. Additionally, the Project proposes to construct local connections to infrastructure for water, sewer, electricity, natural gas, and telecommunications. Additionally, the Project does not propose nor require any fuel modification zones to address fire hazards. Proposed improvements to Encanto Drive, Rouse Road, Chambers Avenue, Sherman Road, and Antelope Road would reduce fire risks in the local area, while all of the Project's infrastructure connections would occur within improved roadway rights-of-way within the immediate Project vicinity. There are no components of the Project's proposed infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. As such, impacts would be less than significant.

Threshold d:	***Would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?***

The northeastern portion of the Project site, consisting of a small knoll is located within a "High Fire Hazard Severity Zone," while the rest of the Project site is not located within a Fire Hazard Zone (Menifee, 2013b, Figure 5.8-3). According to soils mapping data published by the United States Department of Agriculture's Natural Resources Conservation Service, the soils on this knoll consist of rocky and find sandy loam that have a moderate potential for damage by fire (NRCS, 2019). The Project would be surrounded by improved roadways. Antelope Road and Rouse Road, located adjacent to the knoll, would provide in excess of 100 feet of buffer area within the right-of-way (ROW), while Chambers Avenue, would provide a 104-foot buffer consisting of 94 feet of improved ROW and a 10-foot landscape buffer. Additionally, the Project site would include irrigated landscaped parkways which would reduce the site's potential for fire hazards. A buffer distance of 100 feet as provided by these roads and irrigated landscaped parkways would reduce the site's potential for fire hazards to below a level of significance. Furthermore, the Project would be developed in a manner consistent with the jurisdictional requirements for fire protection, and would generally decrease the fire hazard in the local area. Therefore, impacts regarding exposing people or structures to significant risk

including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes, would be less than significant.

4.17.5 Cumulative Impact Analysis

This cumulative impact analysis considers development of the proposed Project in conjunction with other development projects in the immediate local area of the Project site.

As discussed under Threshold a, the Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route. Notwithstanding, the Project may result in temporary impacts to emergency access during frontage improvements to Encanto Drive, Rouse Road, Chambers Avenue, Sherman Road, and Antelope Road. However, this impact only would occur adjacent to the Project site and is not expected to occur in conjunction with other development in the local area; thus, cumulatively-considerable impacts would be less than significant.

As indicated under the analysis of Threshold b, implementation of the Project as proposed would reduce the risk of wildfire hazards in the local area. There are no components of the Project that would result in the exposure of future Project occupants to substantial pollutant concentrations beyond what can be expected for any development in the Southern California region. Thus, impacts would be less-than-cumulatively considerable.

The Project does not propose any infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. The Project's proposed frontage improvements to Encanto Drive, Rouse Road, Chambers Avenue, Sherman Road, and Antelope Road would reduce the fire risk in the local area, while the Project does not require any fuel modification zones. Impacts would be less-than-cumulatively considerable.

As discussed under Threshold d, the Project site would not be subject to landslide or flooding hazards as a result of wildfires. There are no components of the Project that would increase or otherwise contribute to the exposure of other off-site properties to flooding or landslide hazards from wildfires. Impacts would be less-than-cumulatively considerable.

4.17.6 Significance of Impacts Before Mitigation

Threshold a: Significant Direct Impact. The Project has the potential to adversely affect emergency access in the local area during the construction of frontage improvements along Encanto Drive, Rouse Road, Chambers Avenue, Sherman Road, and Antelope Road. Impacts would be potentially significant prior to mitigation.

Threshold b: Less-than-Significant Impact. The Project would not exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Impacts would be less than significant.

Threshold c: Less-than-Significant Impact. The Project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment, and impacts would be less than significant.

Threshold d: Less-than-Significant Impact. The Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes, and impacts would be less than significant.

4.17.7 City Regulations, Design Requirements, and Mitigation

Applicable City Regulations and Design Requirements

The following are applicable regulations and design requirements within the City of Menifee. Although these requirements technically do not meet CEQA's definition for mitigation, they are applied herein to ensure Project compliance with applicable City regulations and design requirements.

CRDR 4.17-1 The Project would be required to conform to all mandatory local, state, and federal laws, ordinances, and standards relating to fire safety. Among other items, these requirements include conformance with the Uniform Building Code Section 1503, which requires that all buildings be constructed with fire retardant roofing material.

CRDR 4.17-2 The Project would be required to adhere to City of Menifee Municipal Code Chapter 8.02, which requires payment of a development impact fee (DIF) to assist the City in providing for fire protection facilities, including fire stations. Payment of the DIF fee would ensure that funds are available for capital improvements, such as land/equipment purchases and fire station construction.

Mitigation

Mitigation Measure 4.14-1, presented earlier in EIR Subsection 4.14, *Transportation*, shall apply and was previously identified to require that construction contractors comply with temporary traffic control plan that conforms to the applicable requirements of the California Manual on Uniform Traffic Control Devices. No additional mitigation measures are required.

4.17.8 Significance of Impacts After Mitigation

Threshold a: Less-than Significant with Mitigation Incorporated. Implementation of EIR Mitigation Measure 4.14-1, presented earlier in EIR Subsection 4.14, *Transportation*, requires the preparation and implementation of a temporary traffic control plan. Implementation of the required temporary traffic control plan would reduce the Project's near-term impacts to emergency access to less-than-significant levels.

5.0 OTHER CEQA CONSIDERATIONS

5.1 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

The CEQA Guidelines require that an EIR disclose the significant environmental effects of a project which cannot be avoided if the proposed project is implemented (CEQA Guidelines § 15126(b)). As described in detail in Section 4.0 of this EIR, the Project is anticipated to result in six impacts to the environment that cannot be reduced to below a level of significance after the implementation of relevant standard conditions of approval, compliance with applicable laws and regulations, and application of feasible mitigation measures. The significant environmental effects of the Project that cannot be feasibly mitigated are as follows:

- Air Quality: Significant and Unavoidable Direct and Cumulatively-Considerable Impact (Thresholds a and b). Implementation of Regulatory Requirements CRDR 4.2-1 through CRDR 4.2-5, Design Requirements CRDR 4.2-6 and CRDR 4.2-7, and Mitigation Measures MM 4.2-1 through MM 4.2-3, would reduce the Project's operational exceedances of the SCAQMD Regional Thresholds for CO, PM_{10}, and $PM_{2.5}$. Implementation of CRDRs and Mitigation Measures would reduce, but would not eliminate, the Project's operational exceedances of the SCAQMD Regional Thresholds for VOCs and NO_X. No feasible mitigation measures or CRDRs beyond those already identified exist that would reduce emissions of NO_X and VOCs to levels that are less than significant. It is important to note that the majority of VOC emissions are derived from consumer products. For analytical purposes, consumer products include cleaning supplies, kitchen aerosols, cosmetics and toiletries. As such, the Project cannot meaningfully control consumer products via mitigation; thus, VOC emissions are considered significant and unavoidable as no feasible mitigation measure exists that would reduce this impact to less-than-significant levels. Additionally, a majority of the Project's NO_X emissions are derived from vehicle usage. Since the Project does not have regulatory authority to control tailpipe emissions, no feasible mitigation measures exist that would reduce NO_X emissions to levels that are less than significant. Accordingly, the following impacts associated with Project operations would remain significant and unavoidable: a) the Project's direct and cumulatively-considerable impact due to a violation of the applicable air quality standards for VOCs and NO_X, and b) the Project's emissions of VOCs and NO_X that would contribute to the region's non-attainment status under both state and federal designations for ozone.

- Greenhouse Gas Emissions (Thresholds a and b): Significant and Unavoidable Cumulatively-Considerable Impact. Implementation of the required Design Requirements (CRDRs), regulatory requirements, and Project-specific mitigation measures would reduce the Project's Service Population Ratio to 8.32 Metric Tons of Carbon Dioxide Equivalent ($MTCO_2e$) per Service Population, which would exceed the threshold of 3.84 $MTCO_2e$ per Service Population. No other feasible mitigation measures are available to reduce the Project's impacts to less that significant. Thus, the Project's cumulatively-considerable impacts due to GHG emissions would be significant and unavoidable.

- Transportation (Threshold a): Significant and Unavoidable Cumulatively-Considerable Impact. Table S-1, *Summary of Significant and Unavoidable Impacts to Transportation Facilities*, provides a summary of the significance of the Project's impacts to transportation following implementation of the City Regulations and Design Requirements, and Mitigation Measures MM 4.14-2 through MM 4.14-65 for each phase of the Project. As shown, the Project would result in a number of cumulatively-considerable impacts to transportation facilities that cannot be reduced to less than significant levels.

It should be noted that aside from facilities under the jurisdiction of Caltrans, all of the Project's significant and unavoidable impacts to traffic are due to the fact that it cannot be assured that facilities to be constructed from DIF fees, TUMF fees, and/or Project fair-share payments would be in place at the time of Project occupancy. No other feasible mitigation measures are available to reduce the Project's impacts to less that significant. Thus, the Project's impacts due to a conflict with an applicable plan, ordinance, or policy measuring of effectiveness for the performance of the circulation system at the facilities listed in Table 5-1, *Summary of Project Impacts to Transportation Facilities*, would remain significant and unavoidable.

Table 5-1 Summary of Project Impacts to Transportation Facilities

#	Facility	CMP Facility?	Existing plus Project (E+P)	Opening Year Cumulative (2020)	Opening Year Cumulative (2023)	Opening Year Cumulative (2025)	Horizon Year (2040)
Intersections							
1	Goetz Rd. / Ethanac Rd.	No	--	--	--	C*	C*
2	Murrieta Rd. / Ethanac Rd.	No	--	--	C*	C*	C*
3	Murrieta Rd. / McCall Bl.	No	--	--	--	--	C*
4	Sun City Bl. / McCall Bl.	No	--	--	--	--	C*
5	Barnett Rd. / Ethanac Rd.	No	--	--	--	--	C*
6	Case Rd. / Ethanac Rd.	No	--	--	--	--	C*
7	Bradley Rd. / McCall Bl.	No	--	C	C	C	C*
8	Bradley Rd. / Cherry Hills Bl.	No	--	--	--	D	--
9	I-215 SB Ramps / Bonnie Dr.	Yes	--	--	--	--	C*
10	I-215 SB Ramps / Ethanac Rd.	Yes	--	D*	C*	C*	C*
11	I-215 SB Ramps / McCall Bl.	Yes	--	C*	D*	D*	C*
12	I-215 NB Ramps / SR-74	Yes	--	--	--	--	C*
13	I-215 NB Ramps / Ethanac Rd.	Yes	--	D*	C*	C*	C*
14	I-215 NB Ramps / McCall Bl.	Yes	--	--	--	D	C*
15	Encanto Dr. / Ethanac Rd.	No	D	C*	C*	C*	C*
16	Encanto Dr. / McLaughlin Rd.	No	--	--	--	D	C*
17	Encanto Dr. / Rouse Rd.	No	--	--	--	--	C*
18	Encanto Dr. / Chambers Av. – Future Intersection	No	--	--	--	--	C*
19	Encanto Dr. / Shadel Rd.	No	--	--	--	D	C*
20	Encanto Dr. / McCall Bl.	No	--	--	D	D	C*
21	Trumble Rd. / SR-74	No	--	--	--	--	C*
22	Trumble Rd. / Ethanac Rd.	No	--	--	--	--	--
26	Sherman Rd. / SR-74	No	--	--	--	--	C*
27	Sherman Rd. / Ethanac Rd.	No	--	--	--	--	C*
28	Sherman Rd. / McLaughlin Rd.	No	--	--	--	--	C*

#	Facility	CMP Facility?	Existing plus Project (E+P)	Opening Year Cumulative (2020)	Opening Year Cumulative (2023)	Opening Year Cumulative (2025)	Horizon Year (2040)
29	Sherman Rd. / Rouse Rd.	No	--	--	--	--	C*
30	Sherman Rd. / St. B	No	--	--	--	--	--
31	Sherman Rd. / Chambers Av.	No	--	--	--	--	C*
32	Sherman Rd. / Shadel Rd.	No	--	--	--	--	--
33	Sherman Rd. / McCall Bl.	No	--	C*	C*	D	C*
34	Dawson Rd./Street C & Rouse Rd.	No	--	--	--	--	--
35	Street C/Concord Ln. & Chambers Av.	No	--	--	--	--	--
36	Antelope Rd. / Ethanac Rd.	No	--	--	--	--	C*
37	Antelope Rd. / Rouse Rd. (North)	No	--	--	--	--	C*
38	Antelope Rd. / Rouse Rd. (South)	No	--	--	--	--	C*
39	Antelope Rd. / Chambers Av.	No	--	--	--	--	C*
40	Antelope Rd. / McCall Bl.	No	--	C*	C*	C*	C*
41	Palomar Rd. / SR-74	No	--	--	--	--	D*
42	Menifee Rd. / SR-74	Yes	C*	--	C*	C*	C*
43	Menifee Rd. / Rouse Rd./Turtle Point Dr.	No	--	--	--	--	C*
44	Menifee Rd. / McCall Bl.	No	--	C*	C*	C*	C*
Roadway Segments							
1	SR-74, Bonnie Dr. to I-215 NB Ramps	Yes	--	--	--	--	C*
2	SR-74, I-215 NB Ramps to Trumble Rd.	Yes	--	--	--	--	C*
3	Ethanac Rd., Goetz Rd. to Murrieta Rd.	No	--	--	--	--	C*
4	Ethanac Rd., Murrieta Rd. to Barnett Rd.	No	--	--	--	--	C*
5	Ethanac Rd., Case Rd. to I-215 Freeway	No	--	--	D*	C*	C*
6	Ethanac Rd., I-215 Freeway to Encanto Dr.	No	C*	C*	C*	C*	C*
7	Ethanac Rd., Encanto Dr. to Trumble Rd.	No	C*	C*	C*	C*	C*
8	Ethanac Rd., Trumble Rd. to Sherman Rd.	No	--	--	C*	C*	C*
9	Ethanac Rd., Sherman Rd. to Antelope Rd.	No	--	C*	D*	C*	C*
10	SR-74, Antelope Rd. to Palomar Rd.	Yes	--	--	--	--	C*
15	Rouse Rd., Antelope Rd. (N) to Menifee Rd.	No	--	--	--	--	C*
20	McCall Bl., Sun City Bl. to Bradley Rd.	No	--	--	--	D*	C*

#	Facility	CMP Facility?	Existing plus Project (E+P)	Opening Year Cumulative (2020)	Opening Year Cumulative (2023)	Opening Year Cumulative (2025)	Horizon Year (2040)
21	McCall Bl., Bradley Rd. to the I-215 Freeway	No	D*	C*	C*	C*	C*
22	McCall Bl., I-215 Freeway to Encanto Dr.	No	D*	C*	C*	C*	C*
23	McCall Bl., Encanto Dr. to Sherman Rd.	No	--	D*	D*	C*	C*
24	McCall Bl., Sherman Rd. to Antelope Rd.	No	--	--	D*	C*	C*
25	McCall Bl., Antelope Rd. to Menifee Rd.	No	C*	C*	C*	C*	C*
27	Encanto Dr., Ethanac Rd. to McLaughlin Rd.	No	--	--	--	D*	C*
28	Encanto Dr., McLaughlin Rd. to Rouse Rd.	No	--	--	--	D*	D*
29	Ethanac Rd., Murrieta Rd. to Barnett Rd.	No	--	--	--	--	C*
30	Encanto Dr., Chambers Dr. to Shadel Rd.	No	--	--	--	D*	C*
31	Encanto Dr., Shadel Rd. to McCall Bl.	No	--	--	--	D	C*
32	Sherman Rd., SR-74 to Ethnac Rd.	No	--	--	--	D*	C*
33	Sherman Rd., Ethanac Rd. to McLaughlin Rd.	No	--	C*	C*	C*	C*
34	Sherman Rd., McLaughlin Rd. to Rouse Rd.	No	--	--	--	--	C*
42	Menifee Rd., SR-74 to Biscayne Av.	No	--	--	--	--	C*
43	Menifee Rd., Biscayne Av. To Rouse Rd.	No	D*	C*	C*	C*	C*
44	Menifee Rd., Rouse Rd. to McCall Bl.	No	--	--	--	--	C*
Intersections That Meet Traffic Signal Warrants							
8	Bradley Rd. / Cherry Hills Bl.	No	--	--	--	D	--
15	Encanto Dr. / Ethanac Rd.	No	D	C	C	C	C
27	Sherman Rd. / Ethanac Rd.	No	--	--	--	--	C*
28	Sherman Rd. / McLaughlin Rd.	No	--	--	--	--	C*
29	Sherman Rd. / Rouse Rd.	No	--	--	--	--	C*
31	Sherman Rd. / Chambers Av.	No	--	--	--	--	C
36	Antelope Rd. / Ethanac Rd.	No	--	--	--	--	C*
37	Antelope Rd. / Rouse Rd. (North)	No	--	--	--	--	C*
38	Antelope Rd. / Rouse Rd. (South)	No	--	--	--	--	C*
40	Antelope Rd. / McCall Bl.	No	--	C*	C*	C*	C*

#	FACILITY	CMP FACILITY?	EXISTING PLUS PROJECT (E+P)	OPENING YEAR CUMULATIVE (2020)	OPENING YEAR CUMULATIVE (2023)	OPENING YEAR CUMULATIVE (2025)	HORIZON YEAR (2040)
FREEWAY SEGMENTS							
1	I-215 Freeway Southbound, Case Rd. to Ethanac Rd.	Yes	--	C±	C±	C±	
2	I-215 Freeway Southbound, Ethanac Rd. to McCall Bl.	Yes	--	C±	C±	C±	C±
3	I-215 Freeway Southbound, McCall Bl. to Newport Rd.	Yes	--	C±	C±	C±	D±
FREEWAY JUNCTION MERGE/DIVERGE LOCATIONS							
1	I-215 Freeway Southbound, Off-Ramp at Ethanac Road	Yes	C±	C±	C±	C±	C±
2	I-215 Freeway Southbound, On-Ramp at Ethanac Rd.	Yes	--	C±	C±	C*	
3	I-215 Freeway Southbound, Off-Ramp at McCall Boulevard	Yes	C±	C*	C±	C*	C±
4	I-215 Freeway Southbound, On-Ramp at McCall Bl.	Yes	--	C±	C±	C±	C±
6	I-215 Freeway Northbound, Off-Ramp at Ethanac Rd.	Yes	--	--	--	--	C±
8	I-215 Freeway Northbound, Off-Ramp at McCall Bl.	Yes	--	--	--	C±	C±

Notes: "D" = Direct Impact; "C" = Cumulatively-Considerable Impact; "--" = No Impact/Less-than-Significant Impact.

* = Although mitigation is proposed in the form of fair-share contributions or fee payments to TUMF or DIF, the timing of required improvements is unknown; thus, it cannot be assured that the required improvements would be in place prior to the development phase shown above, and impacts would therefore be significant and unavoidable.

± = At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the City of Menifee (or other neighboring jurisdictions) on the SHS roadway segments and impacts would therefore be significant and unavoidable.

5.2 Significant Irreversible Environmental Impacts Which Would be Involved in the Proposed Action Should it be Implemented

The CEQA Guidelines require EIRs to address any significant irreversible environmental changes that would be involved in the proposed action should it be implemented (CEQA Guidelines § 15126.2(c)). An environmental change would fall into this category if: a) the project would involve a large commitment of non-renewable resources; b) the primary and secondary impacts of the project would generally commit future generations to similar uses; c) the project involves uses in which irreversible damage could result from any potential environmental accidents; or d) the proposed consumption of resources is not justified (e.g., the project results in the wasteful use of energy).

Determining whether the Project may result in significant irreversible environmental changes requires a determination of whether key non-renewable resources would be degraded or destroyed in such a way that there would be little possibility of restoring them. Natural resources in the form of construction materials and energy resources would be used in the construction of the Project, but development of the Project site as proposed would have no measurable adverse effect on the availability of such resources, including resources that may be non-renewable (e.g., fossil fuels). Construction and operation of the Project would not involve the use of large sums or sources of non-renewable energy. Additionally, the Project is required by law to comply with the California Building Standards Code (CALGreen), compliance with which reduces a building operation's energy volume that is produced by fossil fuels. The Project would be subject to regulations to reduce the Project's reliance on non-renewable energy sources. The Project also would be subject to the Energy Independence and Security Act of 2007, which contains provisions designed to increase energy efficiency and availability of renewable energy. The Project also would be subject to California Energy Code, or Title 24, which contains measures to reduce natural gas and electrical demand, thus requiring less non-renewable energy resources. The Project would avoid the inefficient, wasteful, and unnecessary consumption of energy during Project construction, operation, maintenance, and/or removal. With mandatory compliance to the energy efficiency regulations and mitigation measures, the Project would not involve the use of large sums or sources of non-renewable energy.

EIR Subsection 4.8, *Hazards and Hazardous Materials*, provides an analysis of the Project's potential to transport or handle hazardous materials which, if released into the environment, could result in irreversible damage to the environment. As concluded in the analysis, compliance with federal, state, and local regulation related to hazardous materials would be required of all contractors working on the property during the Project's construction and of all the residents that occupy the Project's buildings. As such, construction and long-term operation of the Project would not have the potential to cause significant irreversible damage to the environment, including damage that may result from upset or accident conditions.

5.3 Growth Inducing Impacts of the Proposed Project

CEQA requires a discussion of the ways in which the Project would be growth inducing. The CEQA Guidelines identify a project as growth inducing if it would foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment (CEQA Guidelines § 5126.2(d)). New employees and new residential developments represent direct forms of growth. These direct forms of growth have a secondary effect of expanding the size of local markets and including additional economic activity in the area.

A project could indirectly induce growth at the local level by increasing the demand for additional goods and services associated with an increase in population or employment and thus reducing or removing the barriers

to growth. This typically occurs in suburban or rural environments where population or employment growth results in increased demand for service and commodity markets responding to the new population of residents or employees. Economic growth would likely take place as a result of the Project's operation as a residential and commercial development. The Project's construction-related employees and operational-related residents and employees would purchase goods and services in the region, but any secondary increase in employment associated with meeting these goods and services needs would be marginal, accommodated by existing goods and service providers, and highly unlikely to result in any new physical impacts to the environment. Therefore, while the Project would create economic opportunities by introducing new residents to the Project site, this change would not induce substantial new growth in the region.

Under CEQA, growth inducement is not considered necessarily detrimental, beneficial, or of significance to the environment. Typically, growth-inducing potential of a project would be considered significant if it fosters growth or a concentration of population in excess of what is assumed in pertinent master plans, land use plans, or in projections made by regional planning agencies such as SCAG. Significant growth impacts also could occur if a project provides infrastructure or service capacity to accommodate growth beyond the levels currently permitted by local or regional plans and policies. In general, growth induced by a project is considered a significant impact if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth significantly affects the environment is some other way.

The area surrounding the Project site is primarily characterized by low density residential uses, medium density residential uses, commercial uses, a school site, and undeveloped land within City of Menifee. Development of the Project site with a residential and commercial land uses would not directly induce surrounding properties to develop, because areas abutting the Project site to the north and south are already developed with residential and commercial uses, while areas to the east already are entitled for development per existing approved tract maps. All remaining parcels surrounding the Project site are either developed, or planned for residential, commercial, economic development corridor, or open space uses. Accordingly, the growth-inducing impacts of the Project would be less than significant. The Project is not expected to induce growth of land uses changes on the other parcels in the vicinity, as other lands surrounding the site are either already developed or planned to be developed consistent with their General Plan land use designations.

Furthermore, the Project's improvements to the public infrastructure, including roads, drainage infrastructure, and other utility improvements are consistent with the City of Menifee's General Plan and would not indirectly induce substantial population growth in the local area. Upgraded water and sewer facilities proposed by the Project would be sized to serve future uses on-site, and would not indirectly induce growth in the surrounding area by removing obstacles to development. As noted above, a majority of the Project's vicinity has been built out, thus the water and sewer improvements would not be growth inducing.

In summary, the Project would have no potentially significant growth inducing impacts.

5.4 EFFECTS FOUND NOT TO BE SIGNIFICANT DURING THE INITIAL STUDY PROCESS

CEQA Guidelines §15128 requires that an EIR:

> *"…contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR."*

An Initial Study was prepared for the Project, which is included as *Technical Appendix A* to this EIR. Through the Initial Study process, the City of Menifee determined that the Project could potentially cause adverse effects, thereby requiring preparation of an EIR. The Initial Study concluded that the Project would have no potential to cause significant effects to the following environmental issue areas: Agricultural and Forest Resources, Mineral Resources, and Population and Housing. Therefore, these issue areas are not required to be discussed in Section 4.0, *Environmental Analysis*, of this EIR. A brief summary of the three issues found not to be significant is presented below, with a more detailed analysis provided in the Project's Initial Study contained in *Technical Appendix A.*

5.4.1 Agriculture and Forest Resources

Threshold a:	***Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?***

According to the California Department of Conservation (CDC), the majority of the Project site is classified as "Farmland of Local Importance," while the knoll located in the northeast part of the site is classified as "Other Lands." "Farmland of Local Importance" is either currently producing crops, has the capability of production, or is used for the production of confined livestock. "Farmland of Local Importance" is land other than "Prime Farmland," "Farmland of Statewide Importance," or "Unique Farmland." This land may be important to the local economy due to its productivity or value. Lands classified as "Other Lands" include areas that are not included in any of the other mapping categories, such as roadways, rural residential uses, etc. There are no portions of the Project site or surrounding area that are classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance ("Farmland"). (CDC, 2016a) Therefore, the Project does not have the potential to directly or indirectly convert Farmland to non-agricultural use, and no impact would occur.

Threshold b:	***Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract?***

Under existing conditions, the Project site is zoned for C P S and R¬¬ 1 uses, neither of which comprise zoning for agricultural use. No areas surrounding the Project site are zoned for agricultural use. Additionally, according to mapping information available from the CDC, the Project site and surrounding areas are not subject to Williamson Act contracts (CDC, 2016b).. Therefore, the Project has not potential to conflict with existing zoning for agricultural use or with an existing Williamson Act contract. As such, no impact would occur.

Threshold c:	***Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?***

The Project site is not designated as forest land, timberland, or Timberland Production, nor is it surrounded by forest land, timberland, or Timberland Production land. The Project site and surrounding areas are zoned for residential and commercial land uses. Accordingly, the Project would not have the potential to conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). As such, no impact would occur.

Threshold d:	***Would the Project result in the loss of forest land or conversion of forest land to non-forest use?***

The Project site and surrounding areas are not part of a forest. The Project site is located in a portion of City of Menifee that is developed and developing, with medium-density residential developments that contain only ornamental and shade trees. (Google Earth, 2016) Accordingly, the Project would not have the potential to result in the loss of forest land or the conversion of forest land to non-forest use. As such, no impact would occur.

Threshold e:	***Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?***

As indicated under the discussion and analysis of Threshold 4.1.2.a), there are no "Farmland" designations applied to land within the Project site or surrounding areas. Dry land farming activities historically occurred on-site; however, operations ceased in 2016. Aside from the elimination of historic dryland farming area on-site, the Project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use. (CDC, 2016a; Google Earth, 2016). Additionally, there are no forest lands in the Project vicinity, and conversion of forest land to non-forest use would not occur. As such, impacts would be less than significant.

5.4.2 Mineral Resources

Threshold a:	***Would the Project result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?***

According to mapping available from the CDC, the Project site is located within Mineral Resources Zone 3, which is defined as "areas containing mineral deposits the significance of which cannot be evaluated from available data" (CDC, n.d., Plate 7.24). Accordingly, implementation of the Project would not result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state, and no impact would occur.

Threshold b:	***Would the Project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?***

The City of Menifee General Plan does not identify any locally important mineral resources recovery sites. There are no other land use plans applicable to the Project area that identify the Project site or surrounding areas as a locally important mineral resource recovery site. Accordingly, no impact would occur.

5.4.3 Population and Housing

Threshold a:	***Would the Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?***

Implementation of the Project would provide up to 1,061 residential units which would potentially result in the addition of up to 2,971 new residents to the area. Exhibit LU-4, Land Use Buildout Summary, of the City of Menifee General Plan identifies the estimated future population for the City. As shown, the General Plan assumes that the Project site would be developed with up to 1,588 dwelling units, resulting in a future

population of approximately 4,108 persons. Thus, the Project would not exceed the population growth assumptions contained in the City's General Plan. Likewise, Exhibit LU-4 indicates the Project site would be developed with up to 231,476 s.f. of non-residential uses (commercial and non-commercial uses). The Project proposes to provide for a total of 225,000 s.f. of commercial retail space; thus, the Project also would not exceed the future employment forecasts based on the City's adopted General Plan. Moreover, the SCAG also produces future population and employment estimates, but such estimates are based on input from local jurisdictions, including local general plans; thus, because the Project would not exceed the growth forecasts of the City of Menifee General Plan, the Project also would not exceed the growth forecasts produced by SCAG, and impacts would be less than significant.

Additionally, the Project would install infrastructural improvements such as paved roads and access to improved and expanded water and sewer lines which could indirectly induce growth in the local area. However, off-site improvements would merely upgrade existing facilities as needed to support development of the site, and would not accommodate any new growth in the area beyond what is already accommodated by existing facilities. Additionally, the majority of surrounding properties are either developed with residential and commercial uses, are entitled for development, or are under construction, and there is no component of the Project that would increase the rate of development on surrounding lands. Thus, the potential for the Project to induce substantial unplanned population growth would be less than significant.

Threshold b: ***Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?***

Under existing conditions, no housing units are located on the Project site. As such, implementation of the Project would not displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere. Additionally, development of the Project would increase the number of available housing units in City of Menifee. Accordingly, no impact would occur.

6.0 ALTERNATIVES

CEQA Guidelines § 15126.6(a) describes the scope of analysis that is required when evaluating alternatives to proposed projects, as follows:

> "An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selection of a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason."

As discussed in EIR Section 4.0, *Environmental Analysis*, the Project would result in significant adverse environmental effects that cannot be mitigated to below levels of significance after the implementation of Project design features, mandatory regulatory requirements, and feasible mitigation measures. The unavoidable significant impacts are:

- Air Quality: Significant and Unavoidable Direct and Cumulatively-Considerable Impact (Thresholds a and b). Implementation of Regulatory Requirements CRDR 4.2-1 through CRDR 4.2-5, Design Requirements CRDR 4.2-6 and CRDR 4.2-7, and Mitigation Measures MM 4.2-1 through MM 4.2-3, would reduce the Project's operational exceedances of the SCAQMD Regional Thresholds for CO, PM_{10}, and $PM_{2.5}$. Implementation of CRDRs and Mitigation Measures would reduce, but would not eliminate, the Project's operational exceedances of the SCAQMD Regional Thresholds for VOCs and NO_X. No feasible mitigation measures or CRDRs beyond those already identified exist that would reduce emissions of NO_X and VOCs to levels that are less than significant. It is important to note that the majority of VOC emissions are derived from consumer products. For analytical purposes, consumer products include cleaning supplies, kitchen aerosols, cosmetics and toiletries. As such, the Project cannot meaningfully control consumer products via mitigation; thus, VOC emissions are considered significant and unavoidable as no feasible mitigation measure exists that would reduce this impact to less-than-significant levels. Additionally, a majority of the Project's NO_X emissions are derived from vehicle usage. Since the Project does not have regulatory authority to control tailpipe emissions, no feasible mitigation measures exist that would reduce NO_X emissions to levels that are less than significant. Accordingly, the following impacts associated with Project operations would remain significant and unavoidable: a) the Project's direct and cumulatively-considerable impact due to a violation of the applicable air quality standards for VOCs and NO_X, and b) the Project's emissions of VOCs and NO_X that would contribute to the region's non-attainment status under both state and federal designations for ozone.

- Greenhouse Gas Emissions (Thresholds a and b): Significant and Unavoidable Cumulatively-Considerable Impact. Implementation of the required Design Requirements (CRDRs), regulatory requirements, and Project-specific mitigation measures would reduce the Project's Service Population Ratio to 8.32 Metric Tons of Carbon Dioxide Equivalent ($MTCO_2e$) per Service Population, which would exceed the threshold of 3.84 $MTCO_2e$ per Service Population. No other feasible mitigation

measures are available to reduce the Project's impacts to less that significant. Thus, the Project's cumulatively-considerable impacts due to GHG emissions would be significant and unavoidable.

- Transportation: Significant and Unavoidable Cumulatively-Considerable Impact. Table 6-1, *Summary of Significant and Unavoidable Impacts to Transportation Facilities*, provides a summary of the significance of the Project's impacts to transportation following implementation of the City Regulations and Design Requirements and Mitigation Measures MM 4.14-2 through MM 4.14-65 for each phase of the Project. As shown, the Project would result in a number of cumulatively-considerable impacts to transportation facilities that cannot be reduced to less than significant levels. It should be noted that aside from facilities under the jurisdiction of Caltrans, all of the Project's significant and unavoidable impacts to traffic are due to the fact that it cannot be assured that facilities to be constructed from DIF fees, TUMF fees, and/or Project fair-share payments would be in place at the time of Project occupancy. No other feasible mitigation measures are available to reduce the Project's impacts to less that significant. Thus, the Project's impacts due to a conflict with an applicable plan, ordinance, or policy measuring of effectiveness for the performance of the circulation system at the facilities listed in Table 6-1 would remain significant and unavoidable.

Table 6-1 Summary of Significant and Unavoidable Impacts to Transportation Facilities

#	FACILITY	CMP FACILITY?	EXISTING PLUS PROJECT (E+P)	OPENING YEAR CUMULATIVE (2020)	OPENING YEAR CUMULATIVE (2023)	OPENING YEAR CUMULATIVE (2025)	HORIZON YEAR (2040)
INTERSECTIONS							
1	Goetz Rd. / Ethanac Rd.	No	--	--	--	C*	C*
2	Murrieta Rd. / Ethanac Rd.	No	--	--	C*	C*	C*
3	Murrieta Rd. / McCall Bl.	No	--	--	--	--	C*
4	Sun City Bl. / McCall Bl.	No	--	--	--	--	C*
5	Barnett Rd. / Ethanac Rd.	No	--	--	--	--	C*
6	Case Rd. / Ethanac Rd.	No	--	--	--	--	C*
7	Bradley Rd. / McCall Bl.	No	--	C	C	C	C*
8	Bradley Rd. / Cherry Hills Bl.	No	--	--	--	D	--
9	I-215 SB Ramps / Bonnie Dr.	Yes	--	--	--	--	C*
10	I-215 SB Ramps / Ethanac Rd.	Yes	--	D*	C*	C*	C*
11	I-215 SB Ramps / McCall Bl.†	Yes	--	C*	D*	D*	C*
12	I-215 NB Ramps / SR-74	Yes	--	--	--	--	C*
13	I-215 NB Ramps / Ethanac Rd.†	Yes	--	D*	C*	C*	C*
14	I-215 NB Ramps / McCall Bl.	Yes	--	--	--	D	C*
15	Encanto Dr. / Ethanac Rd.	No	D	C*	C*	C*	C*
16	Encanto Dr. / McLaughlin Rd.	No	--	--	--	D	C*
17	Encanto Dr. / Rouse Rd.	No	--	--	--	--	C*
18	Encanto Dr. / Chambers Av. – Future Intersection	No	--	--	--	--	C*
19	Encanto Dr. / Shadel Rd.	No	--	--	--	D	C*
20	Encanto Dr. / McCall Bl.	No	--	--	D	D	C*
21	Trumble Rd. / SR-74	No	--	--	--	--	C*
22	Trumble Rd. / Ethanac Rd.	No	--	--	--	--	--
26	Sherman Rd. / SR-74	No	--	--	--	--	C*
27	Sherman Rd. / Ethanac Rd.	No	--	--	--	--	C*
28	Sherman Rd. / McLaughlin Rd.	No	--	--	--	--	C*

#	Facility	CMP Facility?	Existing plus Project (E+P)	Opening Year Cumulative (2020)	Opening Year Cumulative (2023)	Opening Year Cumulative (2025)	Horizon Year (2040)
29	Sherman Rd. / Rouse Rd.	No	--	--	--	--	C*
30	Sherman Rd. / St. B	No	--	--	--	--	--
31	Sherman Rd. / Chambers Av.	No	--	--	--	--	C*
32	Sherman Rd. / Shadel Rd.	No	--	--	--	--	--
33	Sherman Rd. / McCall Bl.	No	--	C*	C*	D	C*
34	Dawson Rd./Street C & Rouse Rd.	No	--	--	--	--	--
35	Street C/Concord Ln. & Chambers Av.	No	--	--	--	--	--
36	Antelope Rd. / Ethanac Rd.	No	--	--	--	--	C*
37	Antelope Rd. / Rouse Rd. (North)	No	--	--	--	--	C*
38	Antelope Rd. / Rouse Rd. (South)	No	--	--	--	--	C*
39	Antelope Rd. / Chambers Av.	No	--	--	--	--	C*
40	Antelope Rd. / McCall Bl.	No	--	C*	C*	C*	C*
41	Palomar Rd. / SR-74	No	--	--	--	--	D*
42	Menifee Rd. / SR-74	Yes	C*	--	C*	C*	C*
43	Menifee Rd. / Rouse Rd./Turtle Point Dr.	No	--	--	--	--	C*
44	Menifee Rd. / McCall Bl.	No	--	C*	C*	C*	C*
Roadway Segments							
1	SR-74, Bonnie Dr. to I-215 NB Ramps	Yes	--	--	--	--	C*
2	SR-74, I-215 NB Ramps to Trumble Rd.	Yes	--	--	--	--	C*
3	Ethanac Rd., Goetz Rd. to Murrieta Rd.	No	--	--	--	--	C*
4	Ethanac Rd., Murrieta Rd. to Barnett Rd.	No	--	--	--	--	C*
5	Ethanac Rd., Case Rd. to I-215 Freeway	No	--	--	D*	C*	C*
6	Ethanac Rd., I-215 Freeway to Encanto Dr.	No	C*	C*	C*	C*	C*
7	Ethanac Rd., Encanto Dr. to Trumble Rd.	No	C*	C*	C*	C*	C*
8	Ethanac Rd., Trumble Rd. to Sherman Rd.	No	--	--	C*	C*	C*
9	Ethanac Rd., Sherman Rd. to Antelope Rd.	No	--	C*	D*	C*	C*
10	SR-74, Antelope Rd. to Palomar Rd.	Yes	--	--	--	--	C*
15	Rouse Rd., Antelope Rd. (N) to Menifee Rd.	No	--	--	--	--	C*
20	McCall Bl., Sun City Bl. to Bradley Rd.	No	--	--	--	D*	C*

#	Facility	CMP Facility?	Existing plus Project (E+P)	Opening Year Cumulative (2020)	Opening Year Cumulative (2023)	Opening Year Cumulative (2025)	Horizon Year (2040)
21	McCall Bl., Bradley Rd. to the I-215 Freeway	No	D*	C*	C*	C*	C*
22	McCall Bl., I-215 Freeway to Encanto Dr.	No	D*	C*	C*	C*	C*
23	McCall Bl., Encanto Dr. to Sherman Rd.	No	--	D*	D*	C*	C*
24	McCall Bl., Sherman Rd. to Antelope Rd.	No	--	--	D*	C*	C*
25	McCall Bl., Antelope Rd. to Menifee Rd.	No	C*	C*	C*	C*	C*
27	Encanto Dr., Ethanac Rd. to McLaughlin Rd.	No	--	--	--	D*	C*
28	Encanto Dr., McLaughlin Rd. to Rouse Rd.	No	--	--	--	D*	D*
29	Ethanac Rd., Murrieta Rd. to Barnett Rd.	No	--	--	--	--	C*
30	Encanto Dr., Chambers Dr. to Shadel Rd.	No	--	--	--	D*	C*
31	Encanto Dr., Shadel Rd. to McCall Bl.	No	--	--	--	D	C*
32	Sherman Rd., SR-74 to Ethnac Rd.	No	--	--	--	D*	C*
33	Sherman Rd., Ethanac Rd. to McLaughlin Rd.	No	--	C*	C*	C*	C*
34	Sherman Rd., McLaughlin Rd. to Rouse Rd.	No	--	--	--	--	C*
42	Menifee Rd., SR-74 to Biscayne Av.	No	--	--	--	--	C*
43	Menifee Rd., Biscayne Av. To Rouse Rd.	No	D*	C*	C*	C*	C*
44	Menifee Rd., Rouse Rd. to McCall Bl.	No	--	--	--	--	C*
Intersections That Meet Traffic Signal Warrants							
8	Bradley Rd. / Cherry Hills Bl.	No	--	--	--	D	--
15	Encanto Dr. / Ethanac Rd.	No	D	C	C	C	C
27	Sherman Rd. / Ethanac Rd.	No	--	--	--	--	C*
28	Sherman Rd. / McLaughlin Rd.	No	--	--	--	--	C*
29	Sherman Rd. / Rouse Rd.	No	--	--	--	--	C*
31	Sherman Rd. / Chambers Av.	No	--	--	--	--	C
36	Antelope Rd. / Ethanac Rd.	No	--	--	--	--	C*
37	Antelope Rd. / Rouse Rd. (North)	No	--	--	--	--	C*
38	Antelope Rd. / Rouse Rd. (South)	No	--	--	--	--	C*
40	Antelope Rd. / McCall Bl.	No	--	C*	C*	C*	C*

#	FACILITY	CMP FACILITY?	EXISTING PLUS PROJECT (E+P)	OPENING YEAR CUMULATIVE (2020)	OPENING YEAR CUMULATIVE (2023)	OPENING YEAR CUMULATIVE (2025)	HORIZON YEAR (2040)
FREEWAY SEGMENTS							
1	I-215 Freeway Southbound, Case Rd. to Ethanac Rd.	Yes	--	C±	C±	C±	
2	I-215 Freeway Southbound, Ethanac Rd. to McCall Bl.	Yes	--	C±	C±	C±	C±
3	I-215 Freeway Southbound, McCall Bl. to Newport Rd.	Yes	--	C±	C±	C±	D±
FREEWAY JUNCTION MERGE/DIVERGE LOCATIONS							
1	I-215 Freeway Southbound, Off-Ramp at Ethanac Road	Yes	C±	C±	C±	C±	C±
2	I-215 Freeway Southbound, On-Ramp at Ethanac Rd.	Yes	--	C±	C±	C*	
3	I-215 Freeway Southbound, Off-Ramp at McCall Boulevard	Yes	C±	C*	C±	C*	C±
4	I-215 Freeway Southbound, On-Ramp at McCall Bl.	Yes	--	C±	C±	C±	C±
6	I-215 Freeway Northbound, Off-Ramp at Ethanac Rd.	Yes	--	--	--	--	C±
8	I-215 Freeway Northbound, Off-Ramp at McCall Bl	Yes	--	--	--	C±	C±

Notes: "D" = Direct Impact; "C" = Cumulatively-Considerable Impact; "--" = No Impact/Less-than-Significant Impact.

* = Although mitigation is proposed in the form of fair-share contributions or fee payments to TUMF or DIF, the timing of required improvements is unknown; thus, it cannot be assured that the required improvements would be in place prior to the development phase shown above, and impacts would therefore be significant and unavoidable.

± = At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the City of Menifee (or other neighboring jurisdictions) on the SHS roadway segments and impacts would therefore be significant and unavoidable.

6.1 ALTERNATIVES UNDER CONSIDERATION

CEQA Guidelines § 15126.6(e) requires that an alternative be included that describes what would reasonably be expected to occur on the property in the foreseeable future if the Project were not approved, based on current plans and consistent with available infrastructure and community services (i.e., "no project" alternative). For development projects that include a revision to an existing land use plan, the "no project" alternative is considered to be the continuation of the existing land use plan into the future. For projects other than a land use plan (for example, a development project on an identifiable property), the "no project" alternative is considered to be a circumstance under which the project does not proceed (CEQA Guidelines § 15126.6(e)(3)(A-B). For the alternatives analysis in this EIR, the potential scenario where the Project does not proceed is considered to be the "No Project Alternative"

The following scenarios are identified by the City of Menifee as potential alternatives to implementation of the Project. The Reduced Project Alternative (RPA) is considered the Environmentally Superior Alternative pursuant to CEQA Guidelines § 15126.6.

6.1.1 NO PROJECT/NO DEVELOPMENT ALTERNATIVE

The No Project/No Development Alternative (herein, "NDA") considers no development/disturbance on the Project site beyond that which occurs under existing conditions. As such, the approximately 331.0-acre Project site would continue to consist of vacant land that has been subject to regular discing as part of on-going fire abatement activities. The small knoll with natural vegetation and rock outcroppings in the northeastern portion of the site would remain, as would the unimproved dirt segment of Antelope Road along the Project's eastern boundary. Under this Alternative, no improvements would be made to the Project site and none of the Project's roadway, drainage, utility, and other infrastructure improvements would occur. This Alternative was selected by the Lead Agency to compare the environmental effects of the Project with an alternative that would leave the Project site in its existing condition (as previously depicted on Figure 2-4, *Aerial Photograph*).

6.1.2 NO PROJECT/GENERAL PLAN LAND USE ALTERNATIVE

The No Project/General Plan Land Use Alternative (herein, "GPLUA") considers development of the Project site in accordance with the site's existing General Plan land use designations. Under existing conditions, the City of Menifee General Plan designates the Project site as "Specific Plan (SP)"; specifically, Exhibit LU-2, "Land Use Map," from the Menifee General Plan shows the Project site designated as "Fleming Ranch SP" (Menifee, 2013a, Exhibit LU-2). According to Exhibit LU-4, "Land Use Buildout Summary," from the Menifee General Plan, the Fleming Ranch SP designation assumes the Project site would be developed with up to 1,588 dwelling units, up to 71,176 s.f. commercial retail uses, and up to 160,300 s.f. of commercial (non-retail) uses (Menifee, 2013a, Exhibit LU-4). This Alternative assumes that the 160,300 s.f. of commercial (non-retail) uses would include 108,311 s.f. of commercial office uses and 51,989 s.f. of light industrial uses. This Alternative would also develop the Project site with an 11.7-acre elementary school site; 47.6 acres of open space, and 38.4 acres of roadways in accordance with the uses shown in Menifee General Plan Exhibit LU-4, "Land Use Buildout Summary" for the Fleming Ranch SP (Menifee, 2013a, Exhibit LU-4). This Alternative was selected by the Lead Agency to compare the environmental effects of the Project with an alternative that would develop the Project site in accordance with the General Plan land use designation (SP) planned for the Project site under existing conditions. Refer to Figure 2-6, *Existing General Plan Land Use Designations*, for an illustration of the existing land use designations applicable to the Project site pursuant to the Menifee General Plan.

6.1.3 Reduced Project Alternative

The Reduced Project Alternative (herein, "RPA") would develop the Project site with a reduced number of dwelling units and commercial square footage in order to reduce the Project's significant and unavoidable impacts to air quality, greenhouse gases, and transportation. The RPA would develop the Project site with 720 dwelling units (a reduction in the number of dwelling units proposed by the Project [1,061 dwelling units] by approximately one-third) and 180,000 s.f. of freeway-oriented commercial land uses (a reduction in the square footage of freeway-oriented commercial land uses proposed by the Project [225,000 s.f.] by approximately 20%). As with the Project, the RPA would include 26.4 acres of water quality/detention basins, 7.9 acres of paseo/neighborhood parks, a 12.9-acre community park/community center, a 1.9-acre private recreation center, 6.3 acres of open space, and 38.6 acres of roadways. This Alternative was selected by the Lead Agency to compare the environmental effects of the Project against an alternative that would reduce the Project's significant and unavoidable air quality, greenhouse gas, and transportation impacts by reducing the total number of dwelling units and commercial square footage on the Project site.

6.2 Alternatives Considered and Rejected

An EIR is required to identify any alternatives that were considered by the Lead Agency but were rejected as infeasible. Among the factors described by CEQA Guidelines § 15126.6 in determining whether to exclude alternatives from detailed consideration in the EIR are: a) failure to meet most of the basic project objectives, b) infeasibility, or c) inability to avoid significant environmental impacts. With respect to the feasibility of potential alternatives to the Project, CEQA Guidelines § 15126.6(f)(1) notes:

> *"Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries…and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site…"*

In determining an appropriate range of alternatives to be evaluated in this EIR, a number of possible alternatives were initially considered and, for a variety of reasons, rejected. Alternatives were rejected because either: 1) they could not accomplish the basic objectives of the Project, 2) they would not have resulted in a reduction of significant adverse environmental impacts, or 3) they were considered infeasible to construct or operate. A summary of the alternatives that were considered but rejected are described below.

6.2.1 Alternative Sites

CEQA does not require that an analysis of alternative sites always be included in an EIR. However, if the surrounding circumstances make it reasonable to consider an alternative site then this alternative should be considered and analyzed in the EIR. In making the decision to include or exclude analysis of an alternative site, the *"key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR"* (CEQA Guidelines § 15126.6(f)(2)).

Based on a review of aerial photography, the City of Menifee General Plan Land Use Map and a list of approved/pending development proposals within the City of Menifee, nearby portions of unincorporated Riverside County, and the City of Perris that are included in the Project's Traffic Impact Analysis (EIR *Technical Appendix K*; refer to EIR Table 4.0-1 for a list of cumulative developments), there are no other available, undeveloped properties of similar size (i.e., approximately 331.0 acres) and physical characteristics

that are zoned for residential development. Additionally, other undeveloped properties are not under current control of the Project Applicant, which is an additional hinderance to development.

If alternative sites located within the City of Menifee not zoned for residential development are considered, there would not be any site that would allow for a master-planned residential community of the size and scope of the Project that would result in a substantial reduction of environmental impacts without creating new equivalent or more severe impacts to the environment. Development of the Project in an alternate location would have similar impacts as would occur with implementation of the Project at its proposed location, with the potential for greater impacts. The Project's significant and unavoidable impacts, as listed above, are primarily the result of Project-generated traffic, which in turn are a result of the Project design itself, and not necessarily the physical setting or characteristics of the Project site; thus, implementing the Project at alternatives sites would not substantially reduce the Project's impacts due to air quality emissions, greenhouse gas emissions, and transportation. On the contrary, it is likely that any alternate site location would be situated at greater distance to major transportation facilities, as the Project site is located immediately adjacent to the I-215 and would have direct access to the I-215 via Encanto Drive and McCall Boulevard. As such, developing the Project at an alternate site location likely would increase the Project's traffic-related impacts, which in turn would exacerbate the Project's significant and unavoidable impacts due to air quality and GHG emissions. Therefore, development of the Project site as proposed by the Project would result in less environmental impacts in the local area than would result from the development of another property.

For these reasons, an alternative sites analysis is not required for the Project.

6.3 ALTERNATIVE ANALYSIS

The following discussion compares the impacts of each alternative considered by the Lead Agency with the impacts of the Project, as detailed in EIR Subsection 4.0, *Environmental Analysis*. A conclusion is provided for each impact as to whether the alternative results in one of the following (1) reduction or elimination of the Project's impact, (2) greater impact(s) than would occur under the Project, (3) the same impact as the Project, or (4) a new impact in addition to the Project's impacts. Table 6-2, *Alternative to the Project – Comparison of Environmental Impacts*, compares the environmental hazard and resource impacts of the alternatives with those of the Project and identifies the ability of the alternative to meet the basic objectives of the Project. As described in EIR Subsection 3.1, the Project's basic objectives are:

A. To efficiently develop an underutilized property with a complementary mix of land uses, including residential, commercial, recreational, and open space land uses.

B. Establish a master-planned community in a manner that is sensitive to the environment as well as visually and functionally compatible with surrounding existing and proposed land uses.

C. To develop a mixed-use community with a design that takes topographic, geologic, hydrologic, and environmental opportunities and constraints into consideration to minimize alterations to natural landforms, where practical.

D. To increase the available housing supply within the region by providing detached single-family homes in traditional subdivision layouts that will be marketable within the evolving economic profile of the City of Menifee and surrounding communities.

E. To provide a system of public and community facilities, including a public community park/community center, paseos/neighborhood parks, bike lanes, and trails to support development in an efficient and timely manner and meet the needs of project residents and residents of surrounding communities.

F. To require project design elements such as architecture, landscaping, color, paving, walls, fencing, signage, entry treatments, and other similar design features that would ensure the community is developed in a manner that is aesthetically pleasing.

G. To establish development phasing that results in logical coordinated growth.

H. To provide public benefits such as community recreation facilities, as well as long-term planning certainty for the City of Menifee and the Project Applicant.

I. To establish a land use plan that is consistent with the provisions of the March Air Reserve Base Airport Comprehensive Land Use Plan Compatibility Zone policies related to maximum building height and residential density.

6.3.1 No Project/No Development Alternative (NDA)

The No Project/No Development Alternative (NDA) considers no development/disturbance on the Project site beyond that which occurs under existing conditions. As such, the approximately 331.0-acre Project site would continue to consist of vacant land that has been subject to regular discing as part of on-going fire abatement activities. The small knoll with natural vegetation and rock outcroppings in the northeastern portion of the site would remain, as would the unimproved dirt segment of Antelope Road along the Project's eastern boundary. Under this Alternative, no improvements would be made to the Project site and none of the Project's roadway, utility, and other infrastructure improvements would occur. This Alternative was selected by the Lead Agency to compare the environmental effects of the Project with an alternative that would leave the Project site in its existing condition (as previously depicted on Figure 2-4, *Aerial Photograph*).

A. Aesthetics

Under existing conditions, the site contains undeveloped and vacant land that has been subject to regular discing as part of on-going fire abatement activities. The Project site does not afford any prominent vistas or views open to the public. Under the NDA, the visual character and quality of the site would be maintained in its existing condition, and no homes, commercial buildings, parks, or associated infrastructure would be introduced on the site. The Project site is not located within the viewshed of any officially designated scenic highways, and would not be visually prominent from any County Eligible facilities. The NDA would result in no impacts to scenic resources or scenic vistas, and would preserve the existing visual character or quality of the site in its existing condition. Impacts under this alternative would be reduced in comparison to the Project's less-than-significant impacts. While the Project would result in less-than-significant impacts due to the creation of a new source of light or glare that could adversely affect day or nighttime views in the area, the No Development/No Project Alternative would not introduce any new sources of light and thus would result in reduced impacts due to lighting. Accordingly, any potential impacts associated with aesthetics would be avoided under this Alternative and reduced in comparison to the Project's less-than-significant impacts.

B. Air Quality

The NDA would result in no short-term construction activities or long-term operational activities that have the potential to result in the emissions of air pollutants or odors. Under the NDA, there would be no impacts due to emissions of criteria pollutants, exposure of sensitive receptors to substantial pollutant concentration, the creation of objectionable odors, or due to a conflict with the Regional Air Quality Strategy (RAQS). All of the Project's short- and long-term air quality effects would be avoided under the alternative, including the Project's significant and unavoidable impacts due to operational emissions of VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$. Thus, implementation of the NDA would avoid all air quality impacts associated with the Project.

C. Biological Resources

The NDA would leave the property in its existing condition; no grading would occur under this alternative and there would be no potential impacts to special status plants, animals, or sensitive vegetation communities on the Project site and potential off-site improvement area. Although mitigation is identified in EIR Subsection 4.3 that would reduce the Project's direct, indirect, and cumulatively considerable impacts to biological resources to below a level of significance, implementation of the NDA would avoid impacts to biological resource associated with the Project and would require no mitigation.

D. Cultural Resources

The NDA would leave the property in its existing condition; no grading would occur under this alternative and there would be no potential impacts to subsurface archeological resources that may exist beneath the ground surface. Therefore, selection of this alternative would avoid all site disturbances on the property and the Project's less-than-significant impacts to cultural resources would not occur.

E. Energy

The NDA would not involve any use of energy for construction or long-term operation. Thus, the NDA would avoid the Project's less-than-significant impacts due to wasteful, inefficient, or unnecessary consumption of energy resources. Neither the Project nor the NDA would conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would be similar.

F. Geology and Soils

Under the NDA, no grading and/or earthmoving activities would occur and no habitable structures would be constructed on the Project site. Therefore, there would be no potential to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, and/or seismic-related ground failure. Under this Alternative, on-or off-site landslide, lateral spreading, subsidence, liquefaction, collapse, soil instability, or expansive soils could occur as a result of natural forces; however, because no development would occur, there would be no structures located on a geologic unit or soil that is unstable. Since no grading activities would occur under the NDA and no cut and fill slopes would be created, hazards associated with unstable soils would not occur under the NDA. No substantial changes to the site topography would occur under this Alternative, since it does not propose to alter the site from its current condition.

Under the NDA, because no development would occur, soil erosion and the loss of topsoil due to natural forces (wind and rain) would continue in the absence of regulations such as a NPDES, a stormwater pollution prevention plan (SWPPP) for construction activities, and SCAQMD Rule 403, *Fugitive Dust*, which would regulate the Project so that potential impacts associated with soil erosion and the loss of topsoil would be

mitigated. Accordingly, any potential impacts associated with geology and soils, with the exception of soil erosion and the loss of topsoil that would occur as a result of natural processes, would be avoided under the NDA. Impacts associated with soil erosion and the loss of topsoil would be slightly increased under the NDA.

The majority of the Project area contains Old Alluvial Fan Deposits and Very Old Alluvial Fan Deposits, both of which have "High" paleontological sensitivity. Because the NDA would not involve the construction of any new uses, there is no potential for impacting paleontological resources. Thus, impacts under this Alternative would be reduced in comparison to the Project.

G. Greenhouse Gas Emissions

As noted in EIR Subsection 4.7, *Greenhouse Gas Emissions*, an individual project such as the Project does not have the potential to result in direct and significant GCC-related effects in the absence of cumulative sources of GHGs. Under the NDA, no development would occur on the Project site; therefore, there would be no new potential sources of cumulative near-term or long-term GHG emissions. Accordingly, because no development would occur under this Alternative, the Project's significant and unavoidable impacts associated with the generation of GHG emissions would be avoided under this Alternative. In addition, because no development would occur under this Alternative, no conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, would be occur under this Alternative, thereby avoiding the Project's significant unavoidable impact due to a conflict with the provisions of SB 32. Impacts would be reduced in comparison to the Project.

H. Hazards and Hazardous Materials

Because no development would occur under the NDA, no potential impacts associated with the routine transport, use, or disposal of hazardous materials or foreseeable upset or accident conditions involving the release of hazardous materials into the environment, would occur. Because no development would occur under this Alternative, there is no potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The Project site is not listed on any list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; therefore, neither the Project nor the NDA have the potential to result in impacts associated with hazardous materials sites. Neither the Project nor the NDA would be inconsistent with an Airport Master Plan. No private airstrips currently operate within two miles of the Project site; therefore, neither the Project nor the NDA would result in a safety hazard for residents or workers in the Project area. The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route; therefore, neither the Project nor the NDA would impair with implementation of an adopted emergency response plan or emergency evacuation plan. The northeastern portion of the Project site is located within a "High Fire Hazard Severity Zone," while the rest of the Project site is not located within a Fire Hazard Zone. The Project would reduce impacts to less than significant levels through improved roadway buffers, and developing the site in accordance with fire protection requirements. Because the NDA does not propose to construct any residences or other structures at the Project site, it would reduce the Project's less-than-significant impacts due to the exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires. Accordingly, the Project's less-than-significant impacts associated with hazards and hazardous materials would be avoided under this Alternative.

I. Hydrology and Water Quality

Under the NDA, no new development would occur on-site. There are no conditions associated with the site's existing conditions that would violate water quality standards or waste discharge requirements. The NDA also would not result in a demand for groundwater resources, nor would it interfere with groundwater recharge.

Although the NDA would not result in substantial alterations to the Project site's existing drainage patterns, in the absence of improvements to the drainage conditions that occur under existing conditions along the western Project boundary and within the Encanto Drive right of way, the area still would be subject to flooding events that could, in turn, result in increased siltation impacts; thus, impacts associated with siltation and flooding would increase under the NDA in comparison to the Project.

The Project proposes three (3) water quality/detention basins that have been designed to attenuate the 100-year flood condition such that runoff from the Project site and other areas tributary to the Project's discharge point (i.e., the existing 5-foot by 10-foot Caltrans RCB culvert located along the westerly Project site boundary) would no longer create flood hazard conditions, as occurs under existing conditions. The NDA proposes no improvements to the Project site or surrounding areas, and under the NDA impacts associated exceeding the capacity of a storm water drain drainage system would remain significant. Thus, impacts associated with exceeding the capacity of existing drainage systems would be increased under the NDA as compared to the Project.

Neither the Project nor the NDA would result in the construction of housing or structures within a mapped flood hazard area. Thus, impacts associated with housing or structures in flood plains would not occur under the NDA or the Project.

Under the NDA, no structures would be constructed on-site. Thus, the Project's less-than-significant impact due to the placement of people or structures in places subject to risk of loss, injury or death involving flooding as a result of the failure of a levee or dam would be avoided under this alternative.

Neither the Project nor the NDA would expose people or structures to hazards associated with seiches, tsunamis, or mudflow. Thus, impacts would be the same under the Project and the NDA.

J. Land Use and Planning

The NDA would result in no grading or development of the property, and would have no potential to physically divide an existing community. The Project's less-than-significant impacts due to the physical division of an established community would be avoided under the NDA.

Although the NDA would not create any land use conflicts with residential, commercial, recreational, and open space land uses that surround the site, the NDA would not implement the City of Menifee General Plan land use designations for the site. However, neither the Project nor the NDA would conflict with any applicable land use plan, policy, or regulation adopted for the purpose of reducing or mitigating an environmental effect, and impacts would be similar under the NDA and the Project.

K. Noise

The NDA would result in no construction on-site and, therefore, would not generate any near-term noise associated with construction. Additionally, because the property would not be developed and no new traffic trips would be generated under the NDA, the NDA would not contribute to an incremental increase in area-

wide noise levels. Also, there would be no sources of stationary noise introduced on the site. Although noise impacts associated with the Project would be reduced to below a level of significance through compliance with the mitigation measures specified in EIR Subsection 4.11, selection of the NDA would avoid the Project's construction and operational noise impacts.

L. Public Services

The NDA would not result in the introduction of any developed land uses to the site and therefore would not result in the need for additional police, fire protection, library services, or school services. Therefore, selection of this alternative would avoid the Project's less-than-significant impacts to public services.

M. Recreation

The NDA would not result in development of the Project site and, therefore, would not result in an increase in population or the need for additional park facilities. Although the Project would dedicate park land on-site which would reduce the Project's impacts due to recreation to below a level of significance, implementation of the NDA would result in no net increase in demand for recreational facilities and would therefore avoid impacts to recreation associated with the Project.

N. Transportation

Under the NDA, no new development would occur on the property and no additional traffic would be generated. Thus, the NDA would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, and would therefore avoid all of the Project's cumulatively-considerable and unavoidable impacts to study area intersections, road segments, traffic signal warrants, freeway segments, and freeway merge/diverge locations. Additionally, the NDA would avoid the Project's cumulatively-considerable and unavoidable impacts to intersections, roadway segments, freeway segments, and merge/diverge locations. Impacts associated with a conflict with policies, plans, or programs for alternative modes of transportation also would not occur under the NDA, and would be slightly reduced in comparison to the Project.

The NDA would not involve any improvements, and thus would avoid the Project's less-than-significant impacts due to hazards from design features or incompatible uses.

The NDA would not involve construction activities, and thus would not result in impacts to emergency access routes. Thus, the NDA would avoid the Project's less-than-significant impact, following mitigation, to existing evacuation routes during construction. However, it should also be noted that under the NDA, no improvements to Encanto Drive, Sherman Road, Antelope Road, Chambers Avenue, or Rouse Road would occur, as they would under the Project. Thus, under the NDA, impacts associated with emergency evacuation routes would be increased in comparison to the Project under long-term conditions.

O. Tribal Cultural Resources

The NDA would leave the property in its existing condition; no grading would occur under this alternative and there would be no potential impacts to subsurface archeological resources that may exist beneath the ground surface. Therefore, selection of this alternative would avoid all site disturbances on the property and the Project's less-than-significant impacts to tribal cultural resources would not occur.

P. Utilities and Service Systems

No additional domestic water, sewer, or storm water drainage facilities would be needed under the NDA, and there would be no change in the demand for domestic water or waste water treatment services as compared to existing conditions. Also, the NDA would not result in an increased demand for solid waste collection and disposal. Neither the Project nor the NDA would result in significant direct or cumulatively-considerable impacts to utilities and service systems. Nonetheless, selection of the NDA would avoid all of the Project's less-than-significant impacts to utilities and service systems.

Q. Wildfire

Because no development would occur under the NDA, the NDA would avoid the Project's significant but mitigable impact to emergency access during frontage improvements along Encanto Drive, Rouse Road, Chambers Avenue, Sherman Road, and Antelope Road.

Under existing conditions, the majority of Project site is not identified as being subject to wildfires, while the northeastern corner is identified as a "high fire hazard severity zone". Under the Project, the site would consist of non-flammable surfaces, frontage improvements, and irrigated landscaping, thereby reducing the site's potential wildfire susceptibility. Because natural vegetation would remain on site under the NDA, impacts due to wildfire risks would be increased under the NDA as compared to the Project.

Neither the Project nor the NDA would require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. As such, impacts would be less than significant and similar under both the NDA and Project.

The northeastern portion of the Project site, consisting of a small knoll is located within a "High Fire Hazard Severity Zone," while the rest of the Project site is not located within a Fire Hazard Zone The Project would provide buffer distance of 100 feet as provided by roadways surrounding the Project site and irrigated landscaped parkways would reduce the site's potential for fire hazards to below a level of significance. However, because the NDA would not introduce any structures on site, impacts would be reduced under the NDA in comparison to the Project.

R. Conclusion

Implementation of the NDA would result in no physical environmental impacts beyond those that have historically occurred on the undeveloped property. Almost all effects of the Project would be avoided or lessened by the selection of this Alternative, although a few new impacts, such as flooding impacts, would be increased under this Alternative. Because this Alternative would avoid almost all of the Project's impacts, it warrants consideration as the "environmentally superior alternative." However, pursuant to CEQA Guidelines § 15126.6(e)(2), if a no project alternative is identified at the "environmentally superior alternative" then the EIR shall also identify an environmentally superior alternative among the other alternatives. Accordingly, the RPA, as described in Subsection 6.1.3, is identified as the environmentally superior alternative.

The NDA would fail to meet all of the Project's objectives. This alternative would fail to make efficient use of an underutilized property and would not provide a complementary mix of land uses, including single-family residential, commercial, recreational, or open space. Furthermore, the NDA would fail to establish a master-planned community in a manner that is sensitive to the environmental as well as visually and functionally compatible with surrounding existing and proposed land uses. The NDA effectively takes topographic,

geologic, hydrologic, and environmental opportunities and constraints into consideration to minimize alterations to natural landforms in a manner that is generally as effective as the Project. The NDA would not increase the available housing supply within the region and would not provide any homes in the area. The NDA would not provide a system of public or community facilities, including a public community park/community center, paseos/neighborhood parks, bike lanes, and trails to support development in an efficient and timely manner and meet the needs of project residents and residents of surrounding communities. Furthermore, the NDA would not achieve the following goals: ensure the community is developed in a manner that is aesthetically pleasing, establish development phasing; or provide public benefits and long-term planning considerations because no residential community would be constructed. The NDA would fail to establish a land use plan that is consistent with the provisions of the March Air Reserve Base Airport Comprehensive Land Use Plan Compatibility Zone policies related to maximum building height and residential density. However, the NDA would be consistent with the provisions of the Airport Comprehensive Land Use Plan Compatibility Zone policies because no structures would be located on the site.

6.3.2 No Project/General Plan Land Use Alternative (GPLUA)

The No Project/General Plan Land Use Alternative (GPLUA) considers development of the Project site in accordance with the site's existing General Plan land use designations. Under existing conditions, the City of Menifee General Plan designates the Project site as "Specific Plan (SP)"; specifically, Exhibit LU-2, "Land Use Map," from the Menifee General Plan shows the Project site designated as "Fleming Ranch SP" (Menifee, 2013a, Exhibit LU-2). According to Exhibit LU-4, "Land Use Buildout Summary," from the Menifee General Plan, the Fleming Ranch SP designation assumes the Project site would be developed with up to 1,588 dwelling units, up to 71,176 s.f. commercial retail uses, and up to 160,300 s.f. of commercial (non-retail) uses (Menifee, 2013a, Exhibit LU-4). This Alternative assumes that the 160,300 s.f. of commercial (non-retail) uses would include 108,311 s.f. of commercial office uses and 51,989 s.f. of light industrial uses. This Alternative would also develop the Project site with an 11.7-acre elementary school site, 47.6 acres of open space, and 38.4 acres of roadways in accordance with the uses shown in Menifee General Plan Exhibit LU-4, "Land Use Buildout Summary" for the Fleming Ranch SP (Menifee, 2013a, Exhibit LU-4). This Alternative was selected by the Lead Agency to compare the environmental effects of the Project with an alternative that would develop the Project site in accordance with the General Plan land use assumptions. Refer to Figure 2-6, *Existing General Plan Land Use Designations*, for an illustration of the existing land use designations applicable to the Project site pursuant to the Menifee General Plan.

A. Aesthetics

Under existing conditions, the Project site does not afford any prominent vistas or views open to the public. As such, development of the Project site with the GPLUA would result in similar less-than-significant impacts as the Project with respect to effects to scenic vistas.

Under the GPLUA, the visual character and quality of the site would be changed from relatively flat, undeveloped land historically utilized for dryland farming, to that of a master-planned residential community. The Project and the GPLUA would be required to comply with the design guidelines required of the adopted specific plan, which would ensure that future development on-site is aesthetically pleasing and not offensive.

The Project site is not located within the viewshed of any officially designated scenic highways, and would not be visually prominent from any County Eligible facilities. Therefore, the GPLUA would result in similar less-than-significant impacts to scenic resources or scenic vistas as compared to the Project.

As with the Project, the GPLUA's potential to create a new source of light or glare that would not adversely affect day or nighttime views in the area assuming mandatory compliance with the lighting provisions provided in City of Menifee Municipal Code Chapter 6.01. Therefore, the GPLUA would result in similar impacts as compared to the Project related to the creation of a new source of light or glare that would adversely affect day or nighttime views in the area.

B. Air Quality

Construction characteristics associated with the GPLUA would be similar to the Project. Additionally, the total physical disturbance area would be identical to the Project; thus, air quality impacts associated with the construction of the GPLUA would be similar to the Project, though slightly increased due to the increased number of homes, non-residential square footage, and elementary school on the site under the GPLUA. Grading would be required over the same area of the Project site (i.e., approximately 331.0 acres of physical impacts); thus, near-term grading-related air quality and odor impacts would be similar to the Project. Additionally, during construction, neither the GPLUA nor the Project would result in significant impacts due to the exposure of sensitive receptors to substantial pollutant concentrations. Regardless, due to the increase in the number of dwelling units, commercial square footage, and addition of a school site at the Project site under the GPLUA, air quality impacts during construction under the GPLUA would be slightly increased in comparison to the Project.

Under long-term operating conditions, the primary source of air quality pollutants from both the Project and the GPLUA would occur as a result of vehicular traffic. Due to the increase in number of dwelling units as well as non-residential land area, the GPLUA would result in increased vehicle trips in comparison to the Project and therefore increased vehicular-related air quality pollutant emissions as compared to the Project. Thus, the GPLUA would exacerbate the Project's significant and unavoidable impacts due to operational emissions of VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$.

Additionally, due to increased operational-related emissions, the GLPUA would result in an increased impact due to a conflict with the 2016 SCAQMD AQMP, as compared to the Project.

Both the Project and the GPLUA have the potential to expose sensitive receptors to substantial pollutant concentrations during construction, and would be required to implement construction mitigation measures to reduce impacts localized emission impacts to less-than-significant levels.

Odor impacts under both the GPLUA and Project would be similar, as the operation of residential and/or commercial land uses would not result in the generation of substantial amounts of odor. Construction-level odors would occur but would be less than significant under both the Project and the GPLUA.

In conclusion, the GPLUA would result in increased impacts overall to air quality as compared to the Project.

C. Biological Resources

The GPLUA would have a similar development footprint compared to the Project and would involve similar limits of physical disturbance that could impact sensitive plant and animal species. Thus, the Project and the GPLUA would result in direct and cumulatively-considerable impacts due to the removal of burrowing owl habitat, which requires mitigation to ensure impacts do not occur to nesting burrowing owls. Additionally, the Project and the GPLUA also have the potential to impact active native bird nests protected by the MBTA if vegetation is removed during the nesting season (February 1 to August 31). With mitigation, impacts would be reduced to less-than-significant levels under both the Project and GPLUA.

The Project and the No Project/ General Plan Land Use Alternative would similarly impact 0.68 acre of ACOE, RWQCB, and CDFW jurisdictional waters and MSHCP unvegetated riverine features on-site. Additionally, the Project may have the potential to impact 0.02 acre of ACOE/RWQCB jurisdiction associated with potential off-site improvements. As such, both development scenarios would trigger the need for a DBESP (under the Western Riverside County MSHCP) requiring a minimum 3:1 ratio through off-site mitigation, targeting in-lieu fee mitigation with a local Resource Conservation District (RCD), or other approved mitigation bank; a Section 404 Permit from the U.S. Army Corps of Engineers (ACOE); a Section 401 Permit from the Regional Water Quality Control Board (RWQCB); and a Section 1602 Streambed Alteration Agreement from the CDFW. With mitigation, impacts would be similar and less than significant.

Similar to the Project, the GPLUA would result in no impacts to migratory wildlife corridors or wildlife nursery sites because the Project area lacks migratory wildlife corridors and wildlife nursery sites, and does not occur within MSHCP Cores or Linkages.

The No Project/General Plan Land Use Alternative also would not conflict with any local policies or ordinances protecting biological resources; therefore, and similar to the Project, the GPLUA would have no impact with regard to such policies and ordinances. With adherence to the Applicable City Regulations and Design Requirements (including payment of Western Riverside County MSHCP fees) and required mitigation measures discussed above, the GPLUA would result in similar less-than-significant impacts to biological resources in comparison to the Project.

D. Cultural Resources

As discussed in EIR Subsection 4.4, *Cultural Resources*, the Project site does not contain any significant historical resources as defined in California Code of Regulations (CCR), § 15064.5. Therefore, and similar to the Project, the GPLUA would result in less-than-significant impacts to historical resources.

As discussed in EIR Subsection 4.4, *Cultural Resources*, the Project site does not contain any significant archaeological resources pursuant to CEQA Guidelines § 15064.5. The Project includes mitigation requiring controlled grading within the area surrounding Site CA-RIV-9288 and Site CA-RIV-9289 and mitigation to ensure the on-site resources are preserved in perpetuity. Similarly, the GPLUA would be required to implement mitigation to reduce impacts to a level below significance. Site P-33-028165 would be located within designated open space and would not be subject to any impacts with Project implementation. However, under the GPLUA Site P-33-028165 would be impacted and would cause a substantial adverse change in the significance of an archeological resource. The GPLUA would be required to reduce potential impacts to a level below significance. Potential mitigation measures would include preservation or avoidance of the resource. Under both the Project and the GPLUA, there is a high potential that archaeological resources may be present beneath the Project site's subsurface, and may be impacted by future ground-disturbing construction activities associated with both the Project and this Alternative. As with the Project, the GPLUA would similarly be subject to mitigation measures to protect cultural resources pursuant to CEQA requirements which would reduce potential impacts to archaeological resources to a level below significance. Potential mitigation measures would include retention of an archaeological monitor during ground disturbance activities; controlled grading in the areas surrounding existing known resources on-site; training construction workers how to recognize potential archaeological resources; development and implementation of a treatment plan for any significant archaeological resources identified during grading activities; processing and curation of significant archaeological resources encountered at the Project site; and submittal of a final archaeological report to the City of Menifee to document any significant archaeological findings. With implementation of such mitigation

measures, the GPLUA would result in similarly less-than-significant impacts to cultural resources as compared to the Project.

The Project site does not contain known human remains. However, there are known human remains identified within the vicinity of the Project. Both the Project and the GPLUA would have the potential to uncover human remains during construction activities. Both the Project and the GPLUA would be subject to the provisions of California Health and Safety Code, § 7050.5 and California Public Resources Code § 5097 et. seq., which is applied to the Project as a mitigation measure, and applicable regulatory requirements (i.e., the exemption in California Government Code 6254 (r) related to the withholding of public disclosure information related to reburial of Native American human remains or grave goods). Implementation of required mitigation and compliance with regulatory requirements would reduce potential impacts associated with human remains to below a level of significance.

E. Energy

As with the Project, construction and operational activities under the GPLUA would not result in the inefficient, wasteful or unnecessary consumption of energy. Further, the energy demands of the Project and GPLUA can be accommodated within the context of available resources and energy delivery systems. Neither the Project nor the GPLUA would cause or result in the need for additional energy producing or transmission facilities. The Project and GPLUA would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservations goals within the State of California. As such, impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during construction or operation would be less than significant requiring no mitigation for both the Project and GPLUA. Impacts would be similar.

The Project and GPLUA both would implement energy-saving features and operational measures. Notably, the Project and GPLUA would comply with the California Green Building Standards Code (CALGreen; CCR, Title 24, Part 11) as implemented by the City of Menifee. The Project and GPLUA would provide for, and promote, energy efficiencies beyond those required under other applicable federal and State of California standards and regulations, and in so doing would meet or exceed all California Building Standards Code Title 24 standards. Moreover, energy consumed by the operational activities of the Project and GPLUA would be comparable to, or less than, energy consumed by other uses of similar scale and intensity that are constructed and operating in California. On this basis, neither the Project nor the GPLUA would conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Impacts would be less than significant, and would be similar to the impacts associated with the Project.

F. Geology and Soils

The Project site is not located within an Alquist-Priolo Fault Zone, but as with all areas of southern California, future buildings, residents, and visitors have the potential to be exposed to ground shaking. The potential impact would be the same for the Project and the GPLUA, and would be reduced to less-than-significant levels with adherence to standard regulatory requirements and the mitigation presented in EIR Subsection 4.6.7.

Both the Project and the GPLUA would be subject to mandatory regulatory requirements, including the preparation and implementation of a water quality management plan (WQMP) for post-development Project operation, a future SWPPP for construction activities, and compliance to applicable City ordinances, which would reduce erosion impacts on- and off-site during construction to less-than-significant levels for both the Project and the GPLUA.

There is a remote chance the Project site could be subject to hazards associated with landslides, lateral spreading, or liquefaction. This is evaluated as a potentially significant impact prior to mitigation for both the Project and the GPLUA. Impacts due to subsidence would be low, however due to the unpredictability of ground subsidence factors, impacts would be considered significant for both the Project and GPLUA. Additionally, the Project site has a slight potential for hydro-collapse, and would be potentially significant prior to mitigation. Mandatory compliance with standard regulatory requirements and the mitigation set forth in EIR Subsection 4.6.7 would reduce impacts due to unstable geologic units to below a level of significance. Both the Project and the GPLUA have the potential to be impacted by expansive soils, but such impacts would be similar and would be reduced to less-than-significant levels with implementation of the mitigation measures set forth in EIR Subsection 4.6.7.

Similar to the Project, the GPLUA would not involve the use of septic tanks or alternative wastewater disposal systems, nor are any such septic tanks or alternative wastewater disposal systems present on-site under existing conditions. No impact would occur under the Project or GPLUA.

Because the Project site was identified as containing paleontologically significant soils with a high potential for uncovering fossil resources and the physical disturbance area under the Project and the GPLUA would be identical, impacts to paleontological resources would be identical under the Project and the GPLUA and would be reduced to less-than-significant levels with the application of mitigation measures requiring monitoring during ground-disturbing activities.

G. Greenhouse Gas Emissions

The Project would involve the construction of up to 1,061 single-family dwelling units, 225,000 s.f. of freeway-oriented commercial land uses, a 12.9-acre community park/community center, a 1.9-acre private recreation center, paseo/neighborhood parks on 7.9 acres, conserved open space on 6.3 acres, detention/water quality basins on 26.4 acres, and roadways on 38.6 acres. Under the GPLUA, the Project site would be developed with up to 1,588 dwelling units, up to 71,176 s.f. of commercial retail uses, up to 108,311 s.f. of commercial office uses, up to 51,989 s.f. of light industrial uses, an 11.7-acre elementary school site, 47.6 acres of open space, and 38.4 acres of roadways. Due to the increase in the number of proposed structures/buildings, near-term construction-related greenhouse gas emissions (GHGs) associated with the GPLUA would be increased in comparison to the Project. Under long-term operating conditions, the GPLUA would also result in an increase of GHG emissions associated with the site in comparison to the Project because it proposes more dwelling units and commercial square footage than the Project, and thus would result in more average daily vehicular trips. Thus, when the GHG emissions associated with the GPLUA are taken into account, it is likely that the GPLUA would generate an increased amount of $MTCO_2e$ per SP as the Project, and any such emissions would still likely exceed the SCAQMD Threshold for 2025 of 4.2 $MTCO_2e$ per SP. Impacts due to GHG emissions and due to a conflict with the reduction targets of SB 32 would thus be significant and unavoidable under both the GPLUA and the Project, and the level of impact would be similar under both.

In conclusion, the GPLUA would result in increased impacts overall to greenhouse gas emissions as compared to the Project.

H. Hazards and Hazardous Materials

Land uses that would occur on-site under the GPLUA would have the same or similar potential to handle and store hazardous material as the Project during both construction and operation, with the exception that the 51,989 s.f. of light industrial uses proposed under the GPLUA would likely entail storage and/or usage of greater quantities of hazardous materials compared to the residential and freeway-oriented commercial land

uses proposed by the Project. With mandatory regulatory compliance, neither the GPLUA nor the Project would pose a significant hazard to the public or the environment during construction or long-term operation.

Land uses under the Project and the GPLUA generally would not expose the nearby Hans Christenson Middle School to significant risk associated with hazardous materials, although such risks would be slightly greater under the GPLUA due to the 51,989 s.f. of light industrial uses proposed under the GPLUA.

The Project site is not located on any list of hazardous materials sites compiled pursuant to Government Code § 65962.5; thus, no impacts would occur under the Project or the GPLUA.

The Project site is located within the AIA for the MARB, and the Project was revised by the ALUC on October 26, 2017, which found that the Project would not conflict with the MARB ALUCP, subject to several conditions that would be enforced by the City as part of the City's conditions of approval for the Project. Because the land uses under the GPLUA are similar to the Project, it also can be concluded that the GPLUA also would be consistent with the AIA for the MARB, subject to standard conditions of approval. Additionally, neither the Project nor the GPLUA would be exposed to hazards associated with private airport operations, including the Perris Valley Airport.

The Project and the GPLUA would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. No emergency facilities exist on the Project site, and the site does not serve as an emergency evacuation route. Thus, no impact would occur under either the Project or the GPLUA.

The northeastern portion of the Project site is located within a "High Fire Hazard Severity Zone," while the rest of the Project site is not located within a Fire Hazard Zone. Both the Project and the GPLUA would reduce wildfire-related impacts to less-than-significant levels through mandatory compliance with fire protection requirements. Thus, with mandatory regulatory compliance, the Project and the GPLUA would have similar less-than-significant impacts related to hazards and hazardous materials.

In conclusion, the GPLUA would result in increased impacts overall to hazards and hazardous materials as compared to the Project.

I. Hydrology and Water Quality

Construction and operational characteristics of the Project and the GPLUA would be similar. Thus, with implementation of the BMPs from the SWPPP for construction activities and a project-specific WQMP for post-development Project operation, as well as implementation of drainage plans that include water quality/detention basins, both the Project and GPLUA would result in less-than-significant impacts with respect to water quality.

Neither the Project nor the GPLUA would involve the direct extraction of groundwater. Both the Project and the GPLUA would result in similar amounts of impervious surface area; however, it is not expected that the Project or GPLUA would result in adverse impacts to groundwater recharge.

Implementation of the BMPs from a Project-specific SWPPP during construction and a site-specific WQMP during post-development Project operation, as well as construction of on-site water quality/detention basins would ensure that construction and operation of the Project and GPLUA would not result in substantial erosion or siltation on- or off-site, contribute runoff storm water which would exceed the capacity of existing or

planned storm water drainage systems, or provide substantial additional sources of polluted runoff. Accordingly, impacts under the Project and the GPLUA would be similar and would be less than significant.

Both the Project and the GPLUA would be required to implement storm water detention basins in order to ensure that peak storm water flow rates are reduced in comparison to existing conditions, and would reduce potential impacts associated with flooding to less-than-significant levels.

The Project site is not subject to 100-year flood hazards. Thus, no impact would occur due to flood hazards under either the Project or GPLUA.

The western portion of the Project site has been identified as occurring within a dam inundation zone. Both the Project and the GPLUA would be required to comply with the City of Menifee General Plan "Implementation Actions" applicable to dam inundation as well as the construction of on-site storm water quality/detention basins on-site, which would ensure that any potential dam inundation hazards associated with future development would be less than significant. Thus, impacts under the Project and GPLUA would be similar and would be less than significant.

Based on the 4.5-mile distance of Canyon Lake (the nearest large body of water) from the Project site, the Project and GPLUA would not be subject to inundation by seiches associated with the body of water. Impacts associated with inundation by seiche would be less than significant for both the Project and GPLUA. Additionally, due to the approximately 33-mile distance of the Project site from the Pacific Ocean, there is no potential for a tsunami to affect the Project site, and no impact would occur under either alternative. With implementation of the BMPs from the Project-specific SWPPP during construction and a site-specific WQMP during post-development Project operation, as well as Mitigation Measure MM 4.5-1 (refer to EIR Subsection 4.6.7) requiring implementation of the recommendations from the Project-specific "Preliminary Geotechnical Evaluation" (EIR *Technical Appendix F1*), hazards associated with mudflows would be less than significant for the Project and GPLUA.

In conclusion, the GPLUA would result in increased impacts overall to hydrology and water quality as compared to the Project.

J. Land Use and Planning

Neither the GPLUA nor the Project would result in the physical division of an established community; thus, impacts would be similar and would be less than significant.

Both the Project and the GPLUA would entail changing the site's existing zoning classifications. Both the Project and the GPLUA would be consistent with the Menifee General Plan land use designation of Specific Plan (SP); however, the Project includes the proposed Legado Specific Plan (SP 2017-187) which would entail a different land use plan than the existing Fleming Ranch Specific Plan that pertains to the site's General Plan land use designation of SP. The Project and the GPLUA would result in similar insignificant environmental effects due to an inconsistency or incompatibility associated with the existing or proposed zoning classifications or land use designations.

Additionally, both the Project and the GPLUA would be consistent with all applicable policies of the Menifee General Plan, and impacts would be less than significant. Although impacts would be less than significant under the Project and the GPLUA, the GPLUA would more effectively meet the needs of the City's affordable housing sites in the Housing Element as identified for the Project site. Under the GPLUA, 344 units would be

provided to meet the City's Very Low and Low income housing requirements and 1,384 units to meet the City's Moderate and Above Moderate income housing requirements. The Project would provide 1,061 units to meet the City's Moderate and Above Moderate income housing requirements and would not provide any units to meet the City's Very Low and Low income housing requirements. Thus, although impacts under the Project and the GPLUA would be less than significant, the GPLUA would reduce impacts as compared to the Project.

K. Noise

During near-term construction, the types of construction activities conducted on the site would be similar under the GPLUA and the Project; however, given the greater development intensity proposed by the GPLUA, it would result in the construction of more building area on-site. Therefore, it is anticipated that the duration of noise impacts during the building construction and architectural coating phasing would increase under the GPLUA as compared to the Project. Regardless, the types of construction equipment used and the types of construction activities conducted on-site would be similar under the GPLUA and the Project, and the peak daily noise levels generated during the construction phase would also be similar and are expected to be less than significant.

As noted, construction activities under the Project and GPLUA would be similar. Based on the FTA vibration standard of 80 VdB for annoyance, the construction activities under the Project and GPLUA would exceed the standard at receiver locations R1 and R9. Therefore, vibration impacts at locations R1 and R9 represent a temporary significant impact during construction activities under both the GPLUA and Project, and would be reduced to less-than-significant levels with incorporation of mitigation measures.

Under long-term operational conditions, noise generated by both the Project and the GPLUA primarily would be associated with vehicles traveling to and from the site, on-site vehicle idling, maneuvering, parking, landscape maintenance, barking dogs, and other amplified sounds typically found in a master-planned community. Under the Project, a total of 1,061 residential units, 225,000 s.f. of commercial retail space, and 38.6 acres of roadways would be constructed and operated, which would be less intense compared to the GPLUA which would result in the development of up to 1,588 dwelling units, 71,176 s.f. of commercial retail uses, 108,311 s.f. of commercial office uses, 51,989 s.f. of light industrial uses, an 11.7-acre elementary school site, and 38.4 acres of roadways. Accordingly, the Project would result in a decrease in traffic as compared to the GPLUA, and it can reasonably be assumed that long-term operational-related noise on the local roadway system under the GPLUA would be increased as compared to the Project.

Both the Project and the GPLUA would contribute unmitigated, worst-case construction noise level increases resulting in significant impacts to nearby sensitive receptors. Mitigation would be required under both the Project and GPLUA requiring the construction of temporary noise barriers adjacent to impacted receiver locations, which would reduce impacts to less-than-significant levels. Due to the higher intensity of construction under the GPLUA, such impacts would be slightly increased in comparison to the Project.

Both the Project and the GPLUA would be located within the Airport Influence Area for the March Air Reserve Base and would not expose people residing or working in the Project area to excessive noise levels; thus, a similar less-than-significant impact would occur. The Project and GPLUA are not located within the vicinity of a private airstrip; thus, a similar less-than-significant impact would occur.

In conclusion, the GPLUA would result in increased impacts overall to noise as compared to the Project.

L. Public Services

The Project proposes the development of 1,061 homes, 225,000 s.f. of freeway-oriented commercial land uses, a 12.9-acre community park/community center, and 7.9 acres of paseos/neighborhood parks. As previously stated, the GPLUA would develop the Project site with up to 1,588 dwelling units, up to 71,176 s.f. of commercial retail uses, up to 108,311 s.f. of commercial office uses, up to 51,989 s.f. of light industrial uses, and an 11.7-acre elementary school site. Thus, the GPLUA would result in increased demand for police, fire, library, school, and health services as compared to the Project. However, the GPLUA would provide an elementary school site, which would reduce the GPLUA's demand on elementary school services and would provide a beneficial public service to the community. Although the GPLUA would provide an 11.7-acre elementary school site, the increased number of proposed dwelling units would result in a higher student population as compared to the Project. Therefore, impacts to public services under the GPLUA would be increased compared to the less-than-significant impacts that would occur under the Project due to the increased number of dwelling units, increased non-residential square footage, and the addition of the elementary school site.

Thus, a greater impact to public services would occur under the GPLUA as compared to the less-than-significant impacts that would occur as a result of the Project.

M. Recreation

The GPLUA would have a higher demand for recreation facilities than the Project. Based on the population rates listed in City Council Resolution No. 15-143 (3.164 persons/household), the GPLUA would result in a total future population of 5,024 persons (1,588 homes × 3.164 persons/household = persons). Specifically, the 5,024 residents that would be generated by the GPLUA would result in a demand for 25.1 acres of parkland (5,024 residents × 5.0 acres of parkland/1,000 residents = 25.1 acres of parkland), as compared to the 16.8 acres of parkland demand that would occur under the Project (as discussed in EIR Subsection 4.13, *Recreation*). The Project would provide 20.8 acres of parkland (exceeding the parkland requirement by 4.0 acres) and the GPLUA would provide 40.2 acres of parkland (exceeding the parkland requirement by 15.1 acres); therefore, both the Project and the GPLUA would provide adequate parkland to support the population density. Although the Project and the GPLUA would provide adequate parkland to support the population density, it should be noted that the GPLUA would provide 15.1 acres of additional parkland above the parkland requirement, whereas the Project would provide 4.0 acres of additional parkland above the parkland requirement. Based on the foregoing, the GPLUA would result in similar less-than-significant impacts as compared to the Project with respect to the topic of recreation; however, it should be noted the GPLUA would provide a greater amount of excess parkland as compared to the Project.

N. Transportation

Implementation of the GPLUA would result in the construction and operation of 1,588 dwelling units, up to 71,176 s.f. of commercial retail uses, up to 108,311 s.f. of commercial office uses, up to 51,989 s.f. of light industrial uses, and an 11.7-acre elementary school site. By comparison, implementation of the Project would result in 1,061 homes, 225,000 s.f. of freeway-oriented commercial land uses, and a 12.9-acre community park/community center. Thus, due to the greater quantity of dwelling units, non-residential square footage, and the addition of an elementary school, the GPLUA would generate more vehicle trips and thus result in more traffic compared to the Project. Because the GPLUA would result in more overall traffic as compared to the Project, it would likely result in the need for more off-site improvements than is required for the Project. As with the Project, the GPLUA would result in a number of cumulatively-considerable and unavoidable impacts to intersections, roadway segments, signal warrant locations, freeway segments, and freeway

merge/diverge locations, although impacts under the GPLUA would be greater than the Project due to the increased intensity of use associated with the GPLUA. Neither the Project or the GPLUA would conflict with adopted policies, plan, or programs regarding alternative modes of transportation.

Improvements under both the GPLUA and the Project would not substantially increase hazards due to a design feature or result in inadequate emergency access. Impacts to these issues would be similar under the GPLUA and the Project.

In conclusion, the GPLUA would result in increased impacts overall to transportation as compared to the Project.

O. Tribal Cultural Resources

Implementation of the GPLUA would result additional areas of physical impacts as compared to the Project, including grading in the 6.8-acre area designated for open space by the Project. Two tribal cultural resources were found on-site (Site CA-RIV-9289 and Site P-33-028165), and impacts to these tribal cultural resources would be significant prior to mitigation with implementation of the Project; however, these tribal cultural resources would be preserved within the Project's on-site open space area pursuant to Mitigation Measure MM 4.4-7 and the area surrounding the tribal cultural resources would be subject to controlled grading pursuant to Mitigation Measure MM 4.4-8. However, under the GPLUA Site CA-RIV-9289 and Site P-33-028165 would be impacted and would cause a significant impact to tribal cultural resources. The GPLUA would be required to reduce potential impacts to a level below significance. Potential mitigation measures would include preservation or avoidance of the resource in consultation with Native American Tribes; and controlled grading in the areas surrounding existing known resources on-site. Although there is a high potential for uncovering tribal cultural resources that may be buried beneath the site's surface, both the Project and the GPLUA would be required to implement mitigation measures (MM 4.4-1 through MM 4.4-9 with implementation of the Project), which would preclude the potential for significant impacts to tribal cultural resources. In the event that human remains are discovered during Project grading or other ground-disturbing activities, the Project and the GPLUA would be required to comply with the applicable provisions of California Health and Safety Code § 7050.5 and California Public Resources Code § 5097 et. seq., applied to the Project as Mitigation Measure MM 4.4-9, and applicable regulatory requirements (i.e., the exemption in California Government Code 6254 (r) related to the withholding of public disclosure information related to reburial of Native American human remains or grave goods). Implementation of required mitigation and compliance with regulatory requirements would reduce potential impacts associated with human remains to below a level of significance. Accordingly, impacts would be similar under both the Project and GPLUA, and impacts would be reduced to less-than-significant levels with implementation of the required mitigation.

P. Utilities and Service Systems

The GPLUA would result in an increased demand for water, sewer, and storm water drainage service/facilities than the Project due to the increase in the number of residences, increased non-residential square footage, and the addition of the elementary school. In addition, the GPLUA would result in an increased demand for solid waste collection and disposal services as compared to the Project. Neither the Project nor the GPLUA would result in significant direct or cumulatively-considerable impacts to utilities and service systems; however, impacts would be increased under the GPLUA due to the increased development intensity.

In conclusion, the GPLUA would result in increased impacts overall to utilities and service systems as compared to the Project.

Q. *Wildfire*

Due to temporary lane closures that may occur during the construction phase of both the Project and the GPLUA, construction activities may conflict with emergency access routes and access to nearby uses during frontage improvements along Encanto Drive, Rouse Road, Chambers Avenue, Sherman Road, and Antelope Road. Construction traffic would be required to comply with a temporary traffic control plan that meets the applicable requirements of the California Manual on Uniform Traffic Control Devices. Although it is anticipated a less-than-significant impact would occur with the requirement to implement a temporary traffic control plan during construction, out of an abundance of caution, a significant impact would occur under both the Project and GPLUA. Impacts would be mitigated to less-than-significant levels under both the Project and the GPLUA, and the level of impact would be the same.

The Project site features relatively level topography with a small knoll present in the northeastern portion of the site. Under existing conditions, the majority of Project site is not identified as being subject to wildfires, while the northeastern corner is identified as a "high fire hazard severity zone". With development of the Project site under either the Project or the GPLUA, the site would be developed with urban land uses. Proposed buildings would be constructed in accordance with relevant fire codes, frontage improvements that would create buffers, and the property would contain irrigated landscaped elements that would have a low potential for causing or exacerbating wildfire risks. Although there is a potential for major fire events in the local area, the potential for residents and/or workers to be exposed to excessive pollutant concentrations from wildfires is no different from much of the Southern California region. Additionally, there are no components of the Project or the GPLUA that would have the potential to result in or contribute to the uncontrolled spread of a wildfire; on the contrary, development of the Project site as proposed under either alternative would reduce the risk of wildfire hazards in the local area. As such, impacts would be less than significant under both the GPLUA and the Project, and the level of impact would be similar.

Both the Project and the GPLUA would involve frontage improvements along Encanto Drive, Rouse Road, Chambers Avenue, Sherman Road, and Antelope Road, and would construct local connections to infrastructure for water, sewer, electricity, natural gas, and telecommunications. Additionally, neither the Project nor the GPLUA proposes or requires any fuel modification zones to address fire hazards. Proposed improvements along Encanto Drive, Rouse Road, Chambers Avenue, Sherman Road, and Antelope Road would reduce fire risks in the local area, while all of the infrastructure connections would occur within improved roadway rights-of-way within the immediate vicinity under both the Project and the GPLUA. There are no components of the proposed infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. As such, impacts under the GPLUA and the Project would be less than significant, and the level of impact would be similar.

The northeastern portion of the Project site, consisting of a small knoll is located within a "High Fire Hazard Severity Zone," while the rest of the Project site is not located within a Fire Hazard Zone The Project would provide buffer distance of 100 feet as provided by roadways surrounding the Project site and irrigated landscaped parkways would reduce the site's potential for fire hazards to below a level of significance. However, because the NDA would not introduce any structures on site, impacts would be reduced under the NDA in comparison to the Project. As such, both the Project and GPLUA would result in less-than-significant impacts due to the exposure of people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes, and the level of impact would be similar.

R. Conclusion

As compared to the Project, the GPLUA would result in increased impacts to the following issue areas: air quality, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise (long-term), public services, transportation, and utilities/service systems. The GPLUA would result in similar impacts as the Project in the following issue areas: aesthetics, biological resources, cultural resources, geology and soils, land use and planning, noise (short-term), paleontological resources, and recreation. The GPLUA would not result in reduced impacts in comparison to the Project under any issue area.

The GPLUA would meet some of the Project's objectives, though in most cases less effectively than the Project. The GPLUA would efficiently develop the underutilized Project site with a complementary mix of land uses (residential, commercial, light industrial, school, and open space) that would include residential, commercial, recreational, and open space land uses in a manner that would be generally as effective as the Project. The GPLUA would establish a mixed-use master-planned community (residential, commercial, light industrial, school, and open space land uses) that would be visually and functionally compatible with the surrounding existing and proposed land uses, and with a design that takes topographic, geologic, hydrologic, and environmental opportunities and constraints into consideration. The GPLUA would effectively increase the available housing supply within the region by providing detached single-family homes in traditional subdivision layouts that will be marketable within the evolving economic profile of the City of Menifee and surrounding communities; however, the GPLUA would not meet the Project's objective of providing single-family housing because it would also include high density multi-family dwelling units throughout the Project site. The GPLUA would include recreational facilities, and therefore would accomplish Project Objective E. The GPLUA would require a Specific Plan document and would thus accomplish Project Objective F requiring project design elements such as architecture, landscaping, color, paving, walls, fencing, signage, entry treatments, and other similar design features that would ensure the community is developed in a manner that is aesthetically pleasing manner as effectively as the Project. The GPLUA would likely be developed in a phased manner, thus the GPLUA would accomplish Project Objective G (to establish development phasing that results in logical coordinated growth). The GPLUA would accomplish Project Objective H as effectively as the Project, because it would provide public benefits and long-term planning considerations with implementation of the required Specific Plan document. The GPLUA would accomplish Project Objective I as effectively as the Project, because it would achieve consistency with the provisions of the March Air Reserve Base Airport Comprehensive Land Use Plan Compatibility Zone policies related to maximum building height and residential density since the Project site is located within Compatibility Zone E of the existing mapped March Air Reserve Base/Inland Port Airport Land Use Compatibility Map which does not have any restrictions on residential density, building heights, or number of people per acre.

6.3.3 Reduced Project Alternative (RPA)

The Reduced Project Alternative (RPA) would develop the Project site with a reduced number of dwelling units and commercial square footage in order to reduce the Project's significant and unavoidable impacts to transportation and due to air quality and GHG emissions. The RPA would develop the Project site with 720 dwelling units (a reduction in the number of dwelling units proposed by the Project [1,061 dwelling units] by approximately one-third) and 180,000 s.f. of freeway-oriented commercial land uses (a reduction in the square footage of freeway-oriented commercial land uses proposed by the Project [225,000 s.f.] by approximately 20%). As with the Project, the RPA would include 26.4 acres of water quality/detention basins, 7.9 acres of paseos/neighborhood parks, a 12.9-acre community park/community center, a 1.9-acre private recreation center, 6.3 acres of open space, and 38.6 acres of roadways. This Alternative was selected by the Lead Agency to compare the environmental effects of the Project against an alternative that would reduce the Project's

significant and unavoidable impacts to transportation and due to air quality GHG emissions by reducing the total number of dwelling units and commercial square footage on the Project site.

A. Aesthetics

Similar to the Project, the RPA would not result in damage to any scenic resources on-site that are visually prominent from off-site locations. The Project and RPA also would not obstruct distant views of hills and mountains that frame the Project's viewshed. Additionally, future development on-site under both the Project and RPA would be required to comply with the Design Guidelines of the proposed Legado Specific Plan, which have been crafted specifically to ensure future development on-site is not aesthetically offensive. Thus, under both the Project and RPA, impacts to scenic vistas would be less than significant and similar.

The Project site is not located within the viewshed of any officially designated scenic highways, and would not be visually prominent from any County Eligible facilities. Therefore, the RPA would result in similar less-than-significant impacts to scenic resources or scenic vistas as compared to the Project.

Under the RPA, the visual character and quality of the site would be changed from relatively flat, undeveloped land historically utilized for dryland farming, to that of a master-planned residential community. The Project and the RPA would be required to comply with the design guidelines required of the adopted specific plan, which would ensure that future development on-site is aesthetically pleasing and not offensive. As such, impacts under the RPA would be similar to the Project and would result in less-than-significant impacts to the existing visual character or quality of the site and its surroundings.

Both the Project and the RPA would be subject to the lighting provisions of the City of Menifee Municipal Code Chapter 6.01 and the outdoor lighting design guidelines specified in the Legado Specific Plan, which would minimize effects to daytime and nighttime views in the area associated with the Project or the RPA. Light and glare impacts would be similar under the RPA and the Project and would be less than significant.

B. Air Quality

Construction characteristics associated with the RPA would be similar to the Project, because the total physical disturbance area would be identical to the Project; thus, air quality impacts associated with the construction of the RPA would be similar to the Project, though slightly reduced due to the reduced number of homes, and non-residential square footage on the site under the RPA. Grading would be required over the same area of the Project site (i.e., approximately 331.0 acres of physical impacts); thus, near-term grading-related air quality and odor impacts would be similar to the Project. Additionally, during construction, neither the RPA nor the Project would result in significant impacts due to the exposure of sensitive receptors to substantial pollutant concentrations. Regardless, due to the reduction in the number of dwelling units and commercial square footage under the RPA, air quality impacts during construction under the RPA would be slightly reduced in comparison to the Project.

Under long-term operating conditions, the primary source of air quality pollutants from both the Project and the RPA would occur as a result of vehicular traffic. Due to the decrease in number of dwelling units as well as commercial retail area, the RPA would result in a reduction in vehicle trips in comparison to the Project by approximately 35.7%, and therefore would result in decreased vehicular-related air quality pollutant emissions as compared to the Project. Based on this level of reduction, the RPA would avoid the Project's long-term direct and cumulatively-considerable impact due to PM_{10} emissions, but would continue to result in significant and unavoidable impacts due to operational emissions of VOCs, NO_X, CO, and $PM_{2.5}$.

Additionally, due to decreased operational-related emissions, the RPA would result in a reduced impact due to a conflict with the 2016 SCAQMD AQMP, as compared to the Project, although impacts still would be significant and unavoidable.

Both the Project and the RPA have the potential to expose sensitive receptors to substantial pollutant concentrations during construction, and would be required to implement construction mitigation measures to reduce impacts localized emission impacts to less-than-significant levels. However, due to the reduced duration and intensity of construction activities under the RPA, impacts would be slightly reduced.

Odor impacts under both the RPA and Project would be similar, as the operation of residential and/or commercial land uses would not result in the generation of substantial amounts of odor. Construction-level odors would occur but would be less than significant under both the Project and the RPA. However, due to the reduced duration and intensity of construction activities under the RPA, impacts would be slightly reduced.

C. Biological Resources

The RPA would have a similar development footprint compared to the Project and would involve similar limits of physical disturbance that could impact sensitive plant and animal species. Thus, the Project and the RPA would result in direct and cumulatively-considerable impacts due to the removal of burrowing owl habitat, which requires mitigation to ensure impacts do not occur to nesting burrowing owls. Additionally, the Project and the RPA also have the potential to impact active native bird nests protected by the MBTA if vegetation is removed during the nesting season (February 1 to August 31). With mitigation, impacts would be reduced to less-than-significant levels under both the Project and RPA.

The Project and the RPA would similarly impact 0.68 acre of ACOE, RWQCB, and CDFW jurisdictional waters and MSHCP unvegetated riverine features on-site. Additionally, the Project may have the potential to impact 0.02 acre of ACOE/RWQCB jurisdiction associated with potential off-site improvements. As such, both development scenarios would trigger the need for a DBESP (under the Western Riverside County MSHCP) requiring a minimum 3:1 ratio through off-site mitigation, targeting in-lieu fee mitigation with a local RCD, or other approved mitigation bank; a Section 404 Permit from the ACOE; a Section 401 Permit from the RWQCB; and a Section 1602 Streambed Alteration Agreement from the CDFW. With mitigation, impacts would be similar and less than significant.

Similar to the Project, the RPA would result in no impacts to migratory wildlife corridors or wildlife nursery sites because the Project area lacks migratory wildlife corridors and wildlife nursery sites, and does not occur within MSHCP Cores or Linkages.

The RPA also would not conflict with any local policies or ordinances protecting biological resources; therefore, and similar to the Project, the RPA would have no impact with regard to such policies and ordinances. With adherence to the Applicable City Regulations and Design Requirements (including payment of Western Riverside County MSHCP fees) and required mitigation measures discussed above, the RPA would result in similar less-than-significant impacts to biological resources in comparison to the Project.

D. Cultural Resources

As discussed in EIR Subsection 4.4, *Cultural Resources*, the Project site does not contain any significant historical resources as defined in CCR, § 15064.5. Therefore, and similar to the Project, the RPA would result in less-than-significant impacts to historical resources.

As discussed in EIR Subsection 4.4, *Cultural Resources*, the Project site does not contain any significant archaeological resources pursuant to CEQA Guidelines § 15064.5. The Project includes mitigation requiring controlled grading within the area surrounding Site CA-RIV-9288 and Site CA-RIV-9289 and mitigation to ensure the on-site resources are preserved in perpetuity. Similarly, the RPA would be required to implement mitigation to reduce impacts to a level below significance. Site P-33-028165 would be located within designated open space and would not be subject to any impacts with Project implementation. Similarly, Site P-33-028165 would be located within designated open space and would not be subject to any impacts with implementation. Under both the Project and the RPA, there is a high potential that archaeological resources may be present beneath the Project site's subsurface, and may be impacted by future ground-disturbing construction activities associated with both the Project and this Alternative. As with the Project, the RPA would similarly be subject to mitigation measures to protect cultural resources pursuant to CEQA requirements which would reduce potential impacts to archaeological resources to a level below significance. Potential mitigation measures would include retention of an archaeological monitor during ground disturbance activities; controlled grading in the areas surrounding existing known resources on-site; training construction workers how to recognize potential archaeological resources; development and implementation of a treatment plan for any significant archaeological resources identified during grading activities; processing and curation of significant archaeological resources encountered at the Project site; and submittal of a final archaeological report to the City of Menifee to document any significant archaeological findings. With implementation of such mitigation measures, the RPA would result in similarly less-than-significant impacts to cultural resources as compared to the Project.

The Project site does not contain known human remains. However, there are known human remains identified within the vicinity of the Project. Both the Project and the RPA would have the potential to uncover human remains during construction activities. Both the Project and the RPA would be subject to the provisions of California Health and Safety Code, § 7050.5, and California Public Resources Code § 5097 et. seq., which is applied to the Project as a mitigation measure, and applicable regulatory requirements (i.e., the exemption in California Government Code 6254 (r) related to the withholding of public disclosure information related to reburial of Native American human remains or grave goods). Implementation of required mitigation and compliance with regulatory requirements would reduce potential impacts associated with human remains to below a level of significance.

E. Energy

The RPA proposes similar land uses as the Project, but at a reduced intensity. As with the Project, construction and operational activities under the RPA would not result in the inefficient, wasteful or unnecessary consumption of energy. Further, the energy demands of the Project and RPA can be accommodated within the context of available resources and energy delivery systems. Neither the Project nor the RPA would cause or result in the need for additional energy producing or transmission facilities. The Project and RPA would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservations goals within the State of California. As such, impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during construction or operation would be less than significant requiring no mitigation for both the Project and RPA. Impacts would be slightly reduced under the RPA due to the reduction in development intensity.

The Project and RPA both would implement energy-saving features and operational measures. Notably, the Project and RPA would comply with the California Green Building Standards Code (CALGreen; CCR, Title 24, Part 11) as implemented by the City of Menifee. The Project and RPA would provide for, and promote, energy efficiencies beyond those required under other applicable federal and State of California standards and

regulations, and in so doing would meet or exceed all California Building Standards Code Title 24 standards. Moreover, energy consumed by the operational activities of the Project and RPA would be comparable to, or less than, energy consumed by other uses of similar scale and intensity that are constructed and operating in California. On this basis, neither the Project nor the RPA would conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Impacts would be less than significant, although impacts would be slightly reduced under the RPA due to the reduction in development intensity.

F. Geology and Soils

The Project site is not located within an Alquist-Priolo Fault Zone, but as with all areas of southern California, future buildings, residents, and visitors have the potential to be exposed to ground shaking. The potential impact would be the same for the Project and the RPA, and would be reduced to less-than-significant levels with adherence to standard regulatory requirements and the mitigation presented in EIR Subsection 4.6.7.

Both the Project and the RPA would be subject to mandatory regulatory requirements, including the preparation and implementation of a WQMP for post-development Project operation, a future SWPPP during construction, and compliance to applicable City ordinances, which would reduce erosion impacts on- and off-site during construction to less-than-significant levels for both the Project and the RPA.

There is a remote chance the Project site could be subject to hazards associated with landslides, lateral spreading, or liquefaction. This is evaluated as a potentially significant impact prior to mitigation for both the Project and the RPA. Impacts due to subsidence would be low, however due to the unpredictability of ground subsidence factors, impacts would be considered significant for both the Project and RPA. Additionally, the Project site has a slight potential for hydro-collapse, and would be potentially significant prior to mitigation. Mandatory compliance with standard regulatory requirements and the mitigation set forth in EIR Subsection 4.6.7 would reduce impacts due to unstable geologic units to below a level of significance.

Both the Project and the RPA have the potential to be impacted by expansive soils, but such impacts would be similar and would be reduced to less-than-significant levels with implementation of the mitigation measures set forth in EIR Subsection 4.6.7.

Similar to the Project, the RPA would not involve the use of septic tanks or alternative wastewater disposal systems, nor are any such septic tanks or alternative wastewater disposal systems present on-site under existing conditions. No impact would occur under the Project or RPA.

Because the Project site was identified as containing paleontologically significant soils with a high potential for uncovering fossil resources, and the physical disturbance area under the Project and the RPA would be identical (331.0 acres), impacts to paleontological resources at the site would be identical under implementation of the Project and the RPA.

G. Greenhouse Gas Emissions

The Project would involve the construction of up to 1,061 single-family dwelling units, 225,000 s.f. of freeway-oriented commercial land uses, and a 12.9-acre community park/community center. Under the RPA, the Project site would be developed with up to 720 dwelling units, 180,000 s.f. of freeway-oriented commercial land uses, and a 12.9-acre community park/community center. Due to the reduction in the number of proposed structures/buildings, near-term construction-related GHGs associated with the RPA would be decreased in comparison to the Project. Under long-term operating conditions, the RPA would also result in reduced GHG emissions in comparison to the Project because it proposes fewer dwelling units and less commercial square

footage than the Project, and thus would result in fewer average daily vehicular trips. Although GHG emissions would be reduced overall, it is likely that the RPA still would not achieve the SCAQMD Threshold for 2025 of 4.2 $MTCO_2e$ per Service Population. This is because while the amount of GHG emissions under the RPA would be less, the number of residents and workers (i.e., Service Population) also would be reduced. Thus, although the RPA would result in reduced GHG emissions as compared to the Project, impacts would nonetheless remain significant and unavoidable even following implementation of mitigation. Impacts due to a conflict with the reduction targets of SB 32 would also be significant and unavoidable under both the RPA and the Project, although the level of impact would be reduced under RPA.

H. Hazards and Hazardous Materials

Land uses that would occur on-site under the RPA would have the same or similar potential to handle and store hazardous material as the Project during both construction and operation. With mandatory regulatory compliance, neither the RPA nor the Project would pose a significant hazard to the public or the environment during construction or long-term operation.

Land uses under the Project and the RPA would not expose the nearby Hans Christenson Middle School to significant risk associated with hazardous materials, and impacts under both the RPA and the Project would be less than significant.

The Project site is not located on any list of hazardous materials sites compiled pursuant to Government Code § 65962.5; thus, no impacts would occur under the Project or the RPA.

The Project site is located within the AIA for the MARB, and the Project was revised by the ALUC on October 26, 2017, which found that the Project would not conflict with the MARB ALUCP, subject to several conditions that would be enforced by the City as part of the City's conditions of approval for the Project. Because the land uses under the RPA are similar to the Project, it also can be concluded that the RPA also would be consistent with the AIA for the MARB, subject to standard conditions of approval. Additionally, neither the Project nor the RPA would be exposed to hazards associated with private airport operations, including the Perris Valley Airport.

The Project and the RPA would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. No emergency facilities exist on the Project site, and the site does not serve as an emergency evacuation route. Thus, no impact would occur under either the Project or the RPA.

The northeastern portion of the Project site is located within a "High Fire Hazard Severity Zone," while the rest of the Project site is not located within a Fire Hazard Zone. Both the Project and the RPA would reduce wildfire-related impacts to less-than-significant levels through mandatory compliance with fire protection requirements, although the RPA would expose fewer structures on-site to wildland fire hazards.

I. Hydrology and Water Quality

Construction and operational characteristics of the Project and the RPA would be similar. Thus, with implementation of the BMPs from the SWPPP during construction and a project-specific WQMP for post-development Project operation, as well as implementation of drainage plans that include water quality/detention basins, both the Project and RPA would result in less-than-significant impacts with respect to water quality, although impacts would be slightly reduced under the RPA due to a reduction in impervious surface area.

Neither the Project nor the RPA would involve the direct extraction of groundwater. The RPA would result in a decrease in impervious surface area as compared to the Project; however, it is not expected that the Project or RPA would result in adverse impacts to groundwater recharge.

Implementation of the BMPs from a project-specific SWPPP during construction and a site-specific WQMP during post-development Project operation, as well as construction of on-site water quality/detention basins would ensure that construction and operation of the Project and RPA would not result in substantial erosion or siltation on- or off-site, contribute runoff storm water which would exceed the capacity of existing or planned storm water drainage systems, or provide substantial additional sources of polluted runoff. Accordingly, impacts under the Project and the RPA would be similar and would be less than significant.

Both the Project and the RPA would be required to implement storm water detention basins in order to ensure that peak storm water flow rates are reduced in comparison to existing conditions, and would reduce potential impacts associated with flooding to less-than-significant levels.

The Project site is not subject to 100-year flood hazards. Thus, no impact would occur due to flood hazards under either the Project or RPA.

The western portion of the Project site has been identified as occurring within a dam inundation zone. Both the Project and the RPA would be required to comply with the City of Menifee General Plan "Implementation Actions" applicable to dam inundation as well as the construction of on-site storm water quality/detention basins on-site, which would ensure that any potential dam inundation hazards associated with future development would be less than significant. Thus, impacts under the Project and RPA would be similar and would be less than significant.

Based on the 4.5-mile distance of Canyon Lake (the nearest large body of water) from the Project site, the Project and RPA would not be subject to inundation by seiches associated with the body of water. Impacts associated with inundation by seiche would be less than significant for both the Project and RPA. Additionally, due to the approximately 33-mile distance of the Project site from the Pacific Ocean, there is no potential for a tsunami to affect the Project site, and no impact would occur under either alternative. With implementation of the BMPs from the Project-specific SWPPP during construction and a site-specific WQMP during post-development Project operation, as well as Mitigation Measure MM 4.5-1 (refer to EIR Subsection 4.6.7) requiring implementation of the recommendations from the Project-specific "Preliminary Geotechnical Evaluation" (EIR *Technical Appendix F1*), hazards associated with mudflows would be less than significant for the Project and RPA.

J. Land Use and Planning

Neither the RPA nor the Project would result in the physical division of an established community; thus, impacts would be similar and would be less than significant.

Both the Project and the RPA would entail changing the site's existing zoning classifications. Due to a reduction in the number of single-family homes and commercial area under the RPA, the RPA would not implement the Menifee General Plan land use assumptions for the property because it would not provide for the level of residential density or commercial intensity envisioned by the General Plan. By contrast, the Project would largely implement the General Plan land use assumptions for the site, although at a slightly reduced intensity. The RPA would have a greater impact because the RPA would not provide for the level of residential density or commercial intensity envisioned by the General Plan as compared to the Project, which would

largely implement the General Plan land use assumptions for the site. However, in both cases, impacts due to an inconsistency or incompatibility associated with the existing or proposed zoning classifications or land use designations would be less than significant, but increased under the RPA.

K. Noise

During near-term construction, the types of construction activities conducted on the site would be similar under the RPA and the Project; however, given the greater development intensity proposed by the Project as compared to the RPA, the Project would result in the construction of more building area on-site. Therefore, it is anticipated that the duration of noise impacts during the building construction and architectural coating phasing would increase under the Project as compared to the RPA. Regardless, the types of construction equipment used and the types of construction activities conducted on-site would be similar under the RPA and the Project, and the peak daily noise levels generated during the construction phase would also be similar and are expected to be less than significant.

As noted, construction activities under the Project and RPA would be similar. Based on the FTA vibration standard of 80 VdB for annoyance, the construction activities under the Project and RPA would exceed the standard at receiver locations R1 and R9. Therefore, vibration impacts at locations R1 and R9 represent a temporary significant impact during construction activities under both the RPA and Project, and would be reduced to less-than-significant levels with incorporation of mitigation measures. Due to the decreased intensity of construction under the RPA, impacts would be reduced under the RPA as compared to the Project.

Under long-term operational conditions, noise generated by both the Project and the RPA primarily would be associated with vehicles traveling to and from the site, on-site vehicle idling, maneuvering, parking, landscape maintenance, barking dogs, and other amplified sounds typically found in a master-planned community. Under the Project, a total of 1,061 residential units, 225,000 s.f. of commercial retail space are proposed, which would be more intense compared to the RPA which would result in the development of up to 720 dwelling units and 180,000 s.f. of commercial retail uses. Accordingly, the RPA would result in a decrease in traffic as compared to the RPA, and it can reasonably be assumed that long-term operational-related noise on the local roadway system under the RPA would be decreased as compared to the Project, although impacts would be less than significant under the RPA and the Project.

Both the Project and the RPA would contribute unmitigated, worst-case construction noise level increases resulting in significant impacts to nearby sensitive receptors. Mitigation would be required under both the Project and RPA requiring the construction of temporary noise barriers adjacent to impacted receiver locations, which would reduce impacts to less-than-significant levels. Due to the lower intensity of construction under the RPA, such impacts would be slightly reduced in comparison to the Project.

Both the Project and the RPA would be located within the Airport Influence Area for the March Air Reserve Base and would not expose people residing or working in the Project area to excessive noise levels; thus, a similar less-than-significant impact would occur. The Project and RPA are not located within the vicinity of a private airstrip; thus, a similar less-than-significant impact would occur.

L. Public Services

The Project proposes development of 1,061 single-family homes and 225,000 s.f. of commercial retail space. As previously stated, the RPA would develop the Project site with up to 720 single-family homes and 180,000 s.f. of commercial retail space. Thus, the RPA would result in decreased demand for additional police, fire, library, school, and health services as compared to the Project. Therefore, potential impacts to public services

would be decreased under the RPA compared to Project due to the decreased number of dwelling units and commercial retail square footage (and thus, demand for public services), although impacts would be less than significant under both the RPA and the Project.

M. Recreation

The RPA would have a lower demand for recreation facilities than the Project. Based on the population rates listed in City Council Resolution No. 15-143(3.164 persons/household), the RPA would result in a total future population of 2,278 persons (720 homes × 3.164 persons/household = 2,278 persons). Specifically, the 2,278 residents that would be generated by the RPA would result in a demand for 11.4 acres of parkland (2,278 residents × 5.0 acres of parkland/1,000 residents = 11.4 acres of parkland), as compared to the 16.8 acres of parkland demand that would occur under the Project (as discussed in EIR Subsection 4.13, *Recreation*). The Project and the RPA would provide 16.8 acres of parkland; therefore, both the Project and the RPA would provide adequate parkland to support the population density. Based on the foregoing, the RPA would result in decreased less-than-significant impacts as compared to the Project with respect to the topic of recreation because it would generate less residents and result in a decreased demand for recreational facilities.

N. Transportation

Implementation of the RPA would result in 720 single-family residences, 180,000 s.f. of commercial retail space, a 12.9-acre community park/community center, and 38.6 acres of roadways. By comparison, implementation of the Project would result in 1,061 single-family residential units, 225,000 s.f. of commercial retail space, a 12.9-acre community park/community center, and 38.6 acres of roadways. The RPA's approximately one-third reduction in the number of dwelling units and residents and a 20% reduction in commercial retail square footage would result in a commensurate reduction in daily trip-ends that are generated by the site. Due to the decrease in number of dwelling units as well as commercial retail area, the RPA would result in a reduction in vehicle trips in comparison to the Project would result in decreased impacts to the surrounding vehicular system as compared to the Project. It should be noted that fewer Project residential trips would be captured internally under the RPA due to the reduction in commercial areas on site; thus, there would be more external vehicular trips generated under the RPA on a per-unit basis as compared to the Project even though total overall traffic would be reduced. As a result of the reduction in traffic, the RPA likely would avoid some of the Project's cumulatively-considerable unavoidable impacts to intersections, roadway segments, freeway segments, and freeway merge/diverge locations, although impacts to some facilities likely would remain significant and unavoidable. Neither the Project or the GPLUA would conflict with adopted policies, plan, or programs regarding alternative modes of transportation

Improvements under both the RPA and the Project would not substantially increase hazards due to a design feature or result in inadequate emergency access. Nonetheless, cumulatively-considerable and unavoidable impacts to transportation would occur under both the Project and the RPA, although impacts under the RPA would be substantially lessened. Accordingly, traffic-related impacts under the RPA would be reduced as compared to the Project.

O. Tribal Cultural Resources

Implementation of the RPA would result in the same areas of physical impacts as the Project. Two tribal cultural resources were found on-site (Site CA-RIV-9289 and Site P-33-028165), and impacts to these tribal cultural resources would be significant prior to mitigation with implementation of the Project and RPA; however, these tribal cultural resources would be preserved within the on-site open space area under the Project and RPA pursuant to Mitigation Measure MM 4.4-7 and the area surrounding the tribal cultural resources

would be subject to controlled grading pursuant to Mitigation Measure MM 4.4-8. Thus, and as with the Project, impacts to known tribal cultural resources on site under the RPA would be less than significant. Although there is a high potential for uncovering tribal cultural resources that may be buried beneath the site's surface, both the Project and the RPA would be required to implement Mitigation Measures MM 4.4-1 through MM 4.4-9, which would preclude the potential for significant impacts to tribal cultural resources. In the event that human remains are discovered during Project grading or other ground-disturbing activities, the Project and the RPA would be required to comply with the applicable provisions of California Health and Safety Code § 7050.5 and California Public Resources Code § 5097 et. seq., applied to the Project as Mitigation Measure MM 4.4-9, and applicable regulatory requirements (i.e., the exemption in California Government Code 6254 (r) related to the withholding of public disclosure information related to reburial of Native American human remains or grave goods). Implementation of required mitigation and compliance with regulatory requirements would reduce potential impacts associated with human remains to below a level of significance. Accordingly, impacts would be similar under both the Project and RPA, and impacts would be reduced to less-than-significant levels with implementation of the required mitigation.

P. *Utilities and Service Systems*

The RPA would result in a reduced demand for water, sewer, and storm water drainage service/facilities than the Project due to the decrease in the number of residential homes and commercial retail square footage. In addition, the RPA would result in a decreased demand for solid waste collection and disposal services as the Project. Neither the Project nor the RPA would result in significant direct or cumulatively considerable impacts to utilities and service systems, but impacts would be decreased under the RPA due to the decrease in development intensity.

Q. *Wildfire*

Due to temporary lane closures that may occur during the construction phase of both the Project and the RPA, construction activities may conflict with emergency access routes and access to nearby uses during frontage improvements along Encanto Drive, Rouse Road, Chambers Avenue, Sherman Road, and Antelope Road. Construction traffic would be required to comply with a temporary traffic control plan that meets the applicable requirements of the California Manual on Uniform Traffic Control Devices. Although it is anticipated a less-than-significant impact would occur with the requirement to implement a temporary traffic control plan during construction, out of an abundance of caution, a significant impact would occur under both the Project and RPA. Impacts would be mitigated to less-than-significant levels under both the Project and the RPA, and the level of impact would be the same.

The Project site features relatively level topography with a small knoll present in the northeastern portion of the site. Under existing conditions, the majority of Project site is not identified as being subject to wildfires, while the northeastern corner is identified as a "high fire hazard severity zone." With development of the Project site under either the Project or the RPA, the site would be developed with urban land uses. Proposed buildings would be constructed in accordance with relevant fire codes, frontage improvements that would create buffers, and the property would contain irrigated landscaped elements that would have a low potential for causing or exacerbating wildfire risks. Although there is a potential for major fire events in the local area, the potential for residents and/or workers to be exposed to excessive pollutant concentrations from wildfires is no different from much of the Southern California region. Additionally, there are no components of the Project or the RPA that would have the potential to result in or contribute to the uncontrolled spread of a wildfire; on the contrary, development of the Project site as proposed under either alternative would reduce the risk of wildfire hazards in the local area. As such, impacts would be less than significant under both the RPA and the Project, and the level of impact would be similar.

Both the Project and the RPA would involve frontage improvements along Encanto Drive, Rouse Road, Chambers Avenue, Sherman Road, and Antelope Road, and would construct local connections to infrastructure for water, sewer, electricity, natural gas, and telecommunications. Additionally, neither the Project nor the RPA proposes or requires any fuel modification zones to address fire hazards. Proposed improvements along Encanto Drive, Rouse Road, Chambers Avenue, Sherman Road, and Antelope Road would reduce fire risks in the local area, while all of the infrastructure connections would occur within improved roadway rights-of-way within the immediate vicinity under both the Project and the RPA. There are no components of the proposed infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. As such, impacts under the RPA and the Project would be less than significant, and the level of impact would be similar.

The northeastern portion of the Project site, consisting of a small knoll is located within a "High Fire Hazard Severity Zone," while the rest of the Project site is not located within a Fire Hazard Zone The Project would provide buffer distance of 100 feet as provided by roadways surrounding the Project site and irrigated landscaped parkways would reduce the site's potential for fire hazards to below a level of significance. However, because the NDA would not introduce any structures on site, impacts would be reduced under the NDA in comparison to the Project. As such, both the Project and RPA would result in less-than-significant impacts due to the exposure of people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes, and the level of impact would be similar.

R. Conclusion

As compared to the Project, the RPA would not result in increased impacts to any of the issue areas analyzed above, and would result in similar or decreased impacts to all of the issue areas analyzed above. Because this Alternative would result in similar or decreased impacts to the Project's impacts, the RPA is identified as the environmentally superior alternative. The RPA would meet all of the Project's objectives, though in most cases less effectively than the Project. As with the Project, the RPA would develop the underutilized Project site with a complementary mix of land uses (residential, commercial, and recreational open space), but would fail to utilize the Project site as efficiently as the Project since it would decrease the number of dwelling units by one-third and commercial retail square footage by 20%. Therefore, the RPA would not accomplish Project Objective A as effectively as the Project. As with the Project, the RPA would be subject to the design guidelines set forth in Section 4 of the Legado Specific Plan (SP 2017-187). Therefore, the RPA would establish a mixed-use master-planned community (residential, commercial, and recreational open space land uses) that would be visually and functionally compatible with the surrounding existing and proposed land uses, and with a design that takes topographic, geologic, hydrologic, and environmental opportunities and constraints into consideration as effectively as the Project. The RPA would effectively increase the available housing supply within the region by providing detached single-family homes in traditional subdivision layouts that would be marketable within the evolving economic profile of the City of Menifee and surrounding communities, though not as effectively as the Project because it would develop the Project site with 320 fewer homes compared to the Project. The RPA would include a system of public and community facilities identical to the Project, and therefore would accomplish Project Objective E as effectively as the Project. Because it would be subject to the development standards and design guidelines set forth in the Legado Specific Plan (SP 2017-187), the RPA would accomplish Project Objective F which requires project design elements such as architecture, landscaping, color, paving, walls, fencing, signage, entry treatments, and other similar design features that would ensure the community is developed in a manner that is aesthetically pleasing manner as effectively as the Project. The RPA would accomplish Project Objective G (to establish development phasing that results in logical coordinated growth) as effectively as the Project because it would be subject to the

identical conceptual phasing plan shown in EIR Figures 3-14 through 3-16. The RPA would accomplish Project Objective H as effectively as the Project, because it would provide public benefits and long-term planning considerations with implementation of the Legado Specific Plan (SP 2017-187). The RPA would accomplish Project Objective I as effectively as the Project, because it would achieve consistency with the provisions of the March Air Reserve Base Airport Comprehensive Land Use Plan Compatibility Zone policies related to maximum building height and residential density; the Project site is located within Compatibility Zone E of the existing mapped March Air Reserve Base/Inland Port Airport Land Use Compatibility Map which does not have any restrictions on residential density, building heights, or number of people per acre.

CEQA requires the identification of an "environmentally superior alternative." Implementation of the NDA would result in no physical environmental impacts beyond those that have historically occurred on the undeveloped property. Almost all effects of the Project would be avoided or lessened by the selection the NDA, although a few new impacts, such as flooding impacts, would be increased under this Alternative. Because this Alternative would avoid almost all of the Project's impacts, it warrants consideration as the "environmentally superior alternative." However, pursuant to CEQA Guidelines § 15126.6(e)(2), if a no project alternative is identified at the "environmentally superior alternative" then the EIR shall also identify an environmentally superior alternative among the other alternatives. Accordingly, the RPA, as described above, is identified as the environmentally superior alternative.

Table 6-2 Alternative to the Project – Comparison of Environmental Impacts

Environmental Topic/Objective	Project Significance of Impacts After Mitigation	Level of Impact Compared to the Project/Degree to Which Alternative Meets Project Objectives		
		No Project/No Development Alternative	No Project/General Plan Land Use Alternative	Reduced Project Alternative
Aesthetics	Less-than-Significant	Reduced	Similar	Similar
Air Quality	Significant and Unavoidable Direct and Cumulatively-Considerable Impacts	Reduced	Near-Term: Slightly Increased Long-Term: Increased	Near-Term: Slightly Reduced Long-Term: Reduced
Biological Resources	Less-than-Significant	Reduced	Similar	Similar
Cultural Resources	Less-than-Significant	Reduced	Similar	Similar
Energy	Less-than-Significant	Reduced	Similar	Similar
Geology and Soils	Less-than-Significant	Reduced	Similar	Similar
Greenhouse Gas Emissions	Significant and Unavoidable Cumulatively-Considerable Impacts	Reduced	Near-Term: Increased Long-Term: Increased	Near-Term: Reduced Long-Term: Reduced
Hazards and Hazardous Materials	Less-than-Significant	Reduced	Similar	Similar
Hydrology and Water Quality	Less-than-Significant	Most Issues: Reduced Erosion/Siltation: Increased	Similar	Similar
Land Use and Planning	Less-than-Significant	Reduced	Similar	Slightly Increased
Noise	Less-than-Significant	Reduced	Near-Term: Slightly Increased Long-Term: Increased	Near-Term: Slightly Reduced Long-Term: Reduced
Paleontological Resources	Less-than-Significant	Reduced	Similar	Similar
Public Services	Less-than-Significant	Reduced	Increased	Reduced
Recreation	Less-than-Significant	Reduced	Similar	Reduced
Transportation	Significant and Unavoidable Cumulatively-Considerable Impacts	Reduced	Increased	Reduced
Tribal Cultural Resources	Less-than-Significant	Reduced	Similar	Similar
Utilities and Service Systems	Less-than-Significant	Reduced	Increased	Reduced
Wildfire	Less-than-Significant	Reduced	Similar	Similar
Objective A: To efficiently develop an underutilized property with a complementary mix of land uses, including residential, commercial, recreational, and open space land uses.		No	Yes	Yes, but not as effectively as the Project due to a reduction in residential units and commercial area
Objective B: Establish a master-planned community in a manner that is sensitive to the environment as well as visually and functionally compatible with surrounding existing and proposed land uses.		No	Yes	Yes
Objective C: To develop a mixed-use community with a design that takes topographic, geologic, hydrologic, and environmental opportunities and constraints into consideration to minimize alterations to natural landforms, where practical.		No	Yes	Yes
Objective D: To increase the available housing supply within the region by providing detached single-family homes in traditional subdivision layouts that will be marketable within the evolving economic profile of the City of Menifee and surrounding communities.		No	Yes, but not as effectively as the Project, because it would not include single-family housing; however, it would help	Yes, but not as effectively as the Project due to the reduction in the total number of proposed dwelling units

Environmental Topic/Objective	Project Significance of Impacts After Mitigation	Level of Impact Compared to the Project/Degree to Which Alternative Meets Project Objectives		
		No Project/No Development Alternative	No Project/General Plan Land Use Alternative	Reduced Project Alternative
			meet the Regional Housing Needs Assessment for housing supply.	
Objective E: To provide a system of public and community facilities, including a public community park/community center, paseos/neighborhood parks, bike lanes, and trails to support development in an efficient and timely manner and meet the needs of project residents and residents of surrounding communities.		No	Yes	Yes
Objective F: To require project design elements such as architecture, landscaping, color, paving, walls, fencing, signage, entry treatments, and other similar design features that would ensure the community is developed in a manner that is aesthetically pleasing.		No	No	Yes
Objective G: To establish development phasing that results in logical coordinated growth.		No	Yes	Yes
Objective H: To provide public benefits such as community recreation facilities, as well as long-term planning certainty for the City of Menifee and the Project Applicant.		No	Yes	Yes
Objective I: To establish a land use plan that is consistent with the provisions of the March Air Reserve Base Airport Comprehensive Land Use Plan Compatibility Zone policies related to maximum building height and residential density.		No	Yes	Yes

7.0 REFERENCES

7.1 PERSONS CONTRIBUTING TO EIR PREPARATION

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7.2 DOCUMENTS APPENDED TO THIS EIR

The following reports, studies, and supporting documentation were used in preparing the Legado Specific Plan EIR and are bound separately as Technical Appendices. A copy of the Technical Appendices is available for review at the City of Menifee Planning Division 29844 Haun Road, Menifee, CA 92586.

Appendix A: Initial Study for Fleming Ranch Specific Plan EIR, Notice of Preparation (NOP), and Written Comments on the NOP.

Appendix B: Urban Crossroads, Inc., 2019a. *Legado Specific Plan Air Quality Impact Analysis City of Menifee*. August 16, 2019.

Appendix C1: Glen Lukos Associates, Inc. (GLA), 2019a. *Biological Technical Report for Fleming Ranch Located in the City of Menifee, Riverside County, California*. October 13, 2017 [revised April 26, 2018, September 5, 2018, and August 6, 2019].

Appendix C2: Glen Lukos Associates, Inc. (GLA), 2019b. *Jurisdictional Delineation of Fleming Ranch, City of Menifee, Riverside County, California*. October 13, 2017 [revised April 26, 2018 and August 7, 2019].

Appendix C3: Glen Lukos Associates, Inc. (GLA), 2019c. *Western Riverside County Multiple Species Habitat Conservation Plan Determination of Biologically Equivalent or Superior Preservation For Impacts to Riparian/Riverine Resources Fleming Ranch Project*. November 15, 2017 [revised February 15, 2018, September 5, 2018, August 7, 2019, and December 9, 2019].

Appendix C4: Glen Lukos Associates, Inc. (GLA), 2019d. *Addendum to the Biological Technical Report and the Jurisdictional Delineation Report for the Legado Development Project, City of Menifee, Riverside County*. October 4, 2019.

Appendix D: LSA Associates, Inc. (LSA), 2018. *Cultural Resources Assessment Update Fleming Ranch, Menifee, Riverside County, California*. April 2018.

Appendix E: Urban Crossroads, Inc., 2019e. *Legado Specific Plan Energy Analysis City of Menifee*. August 16, 2019.

Appendix F1: LGC Geotechnical, Inc. (LGC), 2017a. *Preliminary Geotechnical Evaluation for Proposed Approximately 386 Acre "Fleming Ranch" Development, City of Menifee, Riverside County, California*. March 16, 2017.

Appendix F2: LGC Geotechnical, Inc. (LGC), 2017b. *Geotechnical Discussion Regarding Site Hydro-Collapse Potential, Proposed Approximately 386 Acre "Fleming Ranch" Development, City of Menifee, Riverside County, California*. April 10, 2017.

Appendix F3: LSA Associates, Inc. (LSA), 2017. *Paleontological Resources Assessment Fleming Ranch, Menifee, County of Riverside, California*. October 2017.

Appendix G: Urban Crossroads, Inc., 2019b. *Legado Specific Plan Greenhouse Gas Analysis City of Menifee*. August 16, 2019.

Appendix H: Petra Geosciences, Inc., 2016. *Phase I Environmental Site Assessment Approximately 327+/- Acres (Fleming Ranch Project), Assessor Parcel Numbers (APNs) 333-020-003; -004; -006; -007; 333-030-012; -013, and a large portion of -019; Adjacent the South Side of Rouse Road and East Side of Encanto Drive, City of Menifee, Riverside County, California*. July 13, 2016.

Appendix I1: K&A Engineering, Inc. (K&A), 2019a. *Preliminary Drainage Report Legado Development City of Menifee*. April 2019.

Appendix I2: K&A Engineering, Inc. (K&A), 2019b. *Preliminary Project Specific Water Quality Management Plan*. July 2019.

Appendix J: Urban Crossroads, Inc., 2019c. *Legado Specific Plan Noise Impact Analysis City of Menifee*. May 24, 2019.

Appendix K: Urban Crossroads, Inc., 2019d. *Legado Specific Plan Traffic Impact Analysis City of Menifee*. December 5, 2019.

Appendix L1: Eastern Municipal Water District (EMWD), 2017a. *Water Supply Assessment Report Fleming Ranch Project (SP 2017-187)*. September 20, 2017.

Appendix L2: Eastern Municipal Water District (EMWD), 2019. *Fleming Ranch Water Supply Assessment.* July 9, 2019.

Appendix M: Written Correspondence

7.3 DOCUMENTS INCORPORATED BY REFERENCE

The following reports, studies, and supporting documentation were used in the preparation of this EIR and are incorporated by reference within this EIR. A copy of the following reports, studies, and supporting documentation is a matter of public record and is generally available to the public at the location listed.

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7.5 Persons Consulted / Written or Verbal Communication

The following written communications were used in preparing the Legado Specific Plan EIR. The resources cited below are available for review at the City of Menifee Planning Division 29844 Haun Road, Menifee, CA 92586.

Fellows, Gregory. Riverside County Sheriff's Department (RCSD). "Fleming Ranch Specific Plan Request For Information Regarding Sheriff Service Availability." Mailed to Lauren Fujimori, T&B Planning, Inc. December 7, 2017.

Galang, Dexter. Riverside County Fire Department (RCFD) (Cal Fire – Riverside Unit). "RE: City of Menifee – Specific Plan No. 2017-187 Fleming Ranch." Mailed to Lauren Fujimori, T&B Planning, Inc. November 29, 2017.

Gonzalez, Hector. Perris Union High School District (PUHSD). No Title. Mailed to Lauren Fujimori, T&B Planning, Inc. November 27, 2017.

Houseman, Simon. Riverside County Airport Land Use Commission (ALUC). "RE: Airport Land Use Commission (ALUC) Development Review – Director's Determination." Mailed to Lisa Gordon, Planning Manager, City of Menifee Community Development Department. October 26, 2017.

Merlan, Jose. Riverside County Department of Waste Resources (RCDWR). "RE: Response to the Request for Information (RFI) for the proposed Fleming Ranch Specific Plan (Project) Draft Environmental Impact Report (DEIR) in the City of Menifee." Mailed to Lauren Fujimori, T&B Planning, Inc. November 2, 2017.

Raines, Brian. Eastern Municipal Water District (EMWD). "Subject: SAN 53-Will Serve APNS: 333-020-009, -010 & 333-030-012, -013, -021 & -022, TR 37408 & 37409." Mailed to Xavier Pfister, K&A Engineering, Inc. November 27, 2017.

Shaw, Bruce. Menifee Unified School District (MUSD). "RE: MUSD Request Letter." Emailed to Lauren Fujimori, T&B Planning, Inc. December 06, 2017.